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FOREWORD

On 26 February 2026, the Myanmar Academy of Arts and Science (MAAS) was reconstituted to accelerate the implementation of four different strategies:

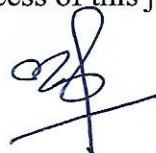
- (a) encouraging universities and colleges to engage in more research activities
- (b) organizing domestic and international research conferences
- (c) publishing research journals and proceedings, and
- (d) fostering research collaboration among local and international universities

Since the year 2001, the MAAS has been making every effort to fulfil these important functions in collaboration with universities and colleges across the country. As a result, the MAAS has published research papers in 23 volumes on diverse academic disciplines in the Journal of the Myanmar Academy of Arts and Science. It is a great honor to say that the 24th research conference was successfully held at the University of Yangon on 9–11 March 2024. The theme of this conference is '*Research and Innovation for Peace, Prosperity and Sustainability*'. A total of 369 research papers presented by both faculty and postgraduates at the conference have been published in Volume XXIII as follows:

Vol. XXIII, No. 1A	Chemistry
Vol. XXIII, No. 1B	Chemistry, Industrial Chemistry
Vol. XXIII, No. 2	Physics, Mathematics and Computer Studies
Vol. XXIII, No. 3	Zoology, Marine Science, Environment and Water Studies
Vol. XXIII, No. 4	Botany, Geology
Vol. XXIII, No. 5	English, History, Philosophy, Geography, Psychology, International Relations, Oriental Studies
Vol. XXIII, No. 6	Myanmar
Vol. XXIII, No. 7	Law, Library and Information Studies, Archaeology, Anthropology, Language and Linguistics
Vol. XXIII, No. 8	Applied Statistics, Management Studies, Statistics, Commerce, Economics, Journalism and Tourism
Vol. XXIII, No. 9A	Educational Theory and Management, Curriculum and Methodology
Vol. XXIII, No. 9B	Educational Psychology

I firmly believe that the empirical research findings from these papers will provide practical assistance for research candidates and those who are interested in research work. I am also hopeful that these findings will significantly contribute to the well-being of the community at large as well as the State's socio-economic development.

On behalf of the members of the MAAS, I would like to offer my special gratitude and thanks to those who have contributed their research papers to this journal. I also do appreciate the editing work done by senior professors and scholars of high standing as well as the members of the MAAS Editorial Board. Finally, my heartfelt thanks go to the members of the Publication Committee and the Department of Higher Education for their great dedication to the success of this journal.



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A STUDY OF STATISTICAL AND THEMATIC ANALYSES OF THE REPORTED EFFECT STRESS ON ADOLESCENTS*

May Kyi Soe¹, Khin Hnin Nwe²

Abstract

The main aim of this study was to examine the situations of stress of adolescents who are in higher education setting from different institutions in Myanmar. In addition, the study explored the causes of stress experiencing among university students by thematic analysis. In this study, mixed method was applied and descriptive and thematic analysis were executed. For quantitative phase, a total of 1100 participants (first year students) from seven universities were selected by using multistage sampling technique. Perceived Stress Scale (Cohen & Williamson, 1988) (Cronbach's alpha = 0.82) was used to measure the students' perception of stress. For qualitative phase, individual semi-structured interview was administrated with 48 severe stress of adolescents. According to the descriptive statistics results, the stress of adolescents in Myanmar were satisfactory. According to the results of independent samples *t*-test, it was found that there were significant differences in adolescents' stress by gender and career choices. Moreover, the ANOVA results revealed that there were also significant differences in adolescents' stress by family types. However, there were no significant differences in adolescents' stress by age according to the ANOVA results. Thematic analysis results highlighted two main themes: learning-life unbalance and fear of failure. These themes are discussed in terms of possible risk factors concerning adolescents' mental health. It is hoped this study to be of assistance in suggesting to offer stakeholders and parents the opportunity to explore areas of focus and improve adolescents' mental health which can benefit in building the nation in which mentally healthy citizens are living.

Keywords: Stress, Adolescence, Thematic, Statistics

Introduction

Importance of the Study

Nowadays, changes in modern society are global phenomenon that has put adversities, stress and pressure on individuals. All these changes have created conditions that made life miserable for every individual. In the era of Knowledge, education is under increasing stressful and pressure for students to create better achievement and successful life. In the current situation of adolescents in higher education, every student experiences various hardships because of the increasing complexity and uncertainty of duties and studies. These situations are the challenges that the adolescents especially university students face today and tend to feel mental health issues such as stress, anxiety. According to Professor Dr. Khin Zaw (2001), mental health must also be defined in terms of the adjustment of society to the needs of man; of its role in furthering or hindering the development of mental health. Whether or not the individual is healthy, is primarily not an individual matter, but depends on the structure of his society. Mental illness become prominent in every aspect of individual' life. In recent year, most of the studies pointed out that adolescents especially university students' mental health has become a rising public concern (Brown, 2018; Ravenwood et al., 2019). From the ages of 12 to 19 years is a period of vulnerable

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time in students' life and for mental ill health onset and for youths, it is when they attend university (Kessler et al., 2007).

University is the social institution for students completing from basic education sector. Besides, university is a life transition that can be distressing for adolescents (Gurbuz et al., 2019). However, for such students, various social and mental health problems such as stress, anxiety, isolation and loneliness come out during the transition period from basic education to higher education. According to Cooke et al., (2006), university students experience high levels of stress throughout their university experiences. Stress includes various hardships in their ecosystem; academic requirements, support systems, peer pressures, poor social relationship, discrimination, bullying, loneliness and transition period from dependence on family to oneself etc.

Stress is major serious issues that affect university students' life and the effects of stress could be reflected in social, mental health and academic performances of students (Ladejo, 2021). For university students, stress has consisted fear of finding motivation to students' learning, experiencing failure in ones' studies, time pressures for assignments and concerns about academic potential. Moreover, students face challenges in terms of academic motivation, personal academic interaction with new companions, different teaching techniques from university teachers, unfamiliar academic institution and other academic pressures (Keeling, 2003). Besides, university students face stressful situations because of changing education system, lifestyle in social and location (Civitci, 2015). Therefore, most of the students from university especially fresher-men find difficulties to get a balance among these situations. As consequences, students who feel the instability emotions and stress can easily initiate unusual behavior that can affect their academic motivation and learning ability.

Adolescents aged 15 to 19 years in Myanmar felt the mental health issues such as stress over the recent years that was identified as a major problem experiencing the whole nation (Nyunt & Soe, 2014; Aung & Maw, 2016; Aung & San, 2020; Soe, 2024). These young people especially university students face various stressful situations from peer influencing, social alienation and conflicts with peers and unpleasant university climate that are the internal and external risk factors influencing their mental health issues (Soe, 2024). Consequently, the risk factors influencing on their mental health take youths beyond their limits to cope. Students who feel the instability emotions and stress can easily initiate unusual behavior that can affect their learning ability. Therefore, stress can negatively impact adolescents' performance and achievement (Auerbach et al., 2016). Although there were previous research concerning stress for university students before COVID-19, it appears that sources of stress of university students to follow up studies are unlimited in Myanmar higher education sector from different institutions. Therefore, this purpose of this study is to examine the situations of stress of adolescents who are in higher education setting from different institutions and to explore the causes of stress experiencing among university students by thematic analysis.

Purposes of the Study

The main purpose of this study was to investigate the adolescents from higher education exploring and discussing the impact university has on their stress.

The specific objectives of this study were described as follows.

1. To explore the stress of adolescents in Myanmar by their demographic variables

2. To investigate the influencing factors which contribute to the deterioration of adolescents' mental health while studying at university

Definitions of Key Terms

Stress: Stress is defined as the feelings that a person has about how much stressed one is under at or over a given period of time (Cohen et al., 1986).

Adolescence: Adolescence is defined as a developmental period straddling the transition from childhood to adulthood, which may be characterized by the biological, cognitive, psychological and social changes that occur during this time (Steinberg, 2014).

Thematic Analysis: Thematic analysis is a method for identifying, analyzing and reporting patterns (themes) within data (Braun & Clarke, 2021).

Statistics: Statistics is defined as the science which deals with the collection, classification, analysis and interpretation and tabulation of numerical facts (Croxtton & Cowden, 2014).

Review of Related Literature

Stress among Adolescents

Adolescents are a period of life, characterized by physiological, social and cognitive changes rapidly that generate stress. Stress is an outcome of an emotional response subjectively to the perceptions of uncontrollable challenges and demands in daily life (Larsen & Buss, 2008). Excessive demands of the daily life to meet the same can lead to stress. The demands which caused stress is known as stressor (Roberson, 1985). The sources of stress are called stressors. Experience of stress can lead to the occurrence of psychiatric symptomatology of clinical significant (Grant et al., 2004). Stress can cause the changing, demanding, difficulties, risky and challenging. According to Cook & Hunsaker (2001), various factors of personal and environment are marked as vital contributors of stress in a person's life. There are number of sources which causes stress among adolescents. In case of students in higher education, individuals have to face lots of pressures related with academic, new social changes, new educational institutes, experiencing several risks, financial problems and other personal problems (Sinrachatanant, 2012). Phoolka and Kaur (2012) claimed that the mental capacities of individuals can vary or differ. Therefore, the perception of stress is unique for every person.

The incompatibility between mental development and physical changes causes deviant behaviors and stressors in institutions environment, interpersonal relationships and family functioning (Kai-wen, 2010). Outcomes of the stressful life events depends on how responds to them and the outcome results can be positive or negative based on the way of response (Naviya & Shahin, 2021). According to Lazarus & Folkman (1984), when adolescents praise it as a challenge some positive outcomes can produce. Appraisal of a stressful event is more threatening and has been associated with self-reported symptoms of stress, anxiety and depression (Sandler et al., 2000). This implies that people can suffer the same level of adversities or the adverse events, however, individuals appraise the impact of these adversities depending on the diverse extents as the result of factors like coping strategy, resiliency level and personality and social and emotional support. Lazarus & Folkman (1984) stated that perceived stress reflects the interaction between a person and his atmosphere that individual appraise as overwhelming or threatening the resources

in such a way. When youth experienced stressful events which are significantly raised, this situation tends to lead to low their academic performance (Williamson et al., 2005).

Excessive assignments, over-workload, competition among adolescents, career choices, fear of failure in educational achievement, poor socialization, interaction with teachers, high expectations of parents, study-life unbalance are the most school related stressors which affect students' academic performance and motivation (Fairbrother & Warn, 2003; Wilks, 2008). When adolescent is unable to cope effectively with academic stress, mental health consequences can result (Macgeorge et al., 2005). Considering the gender differences in stress, females appear to be more vulnerable than males (Stevens et al., 2003). Family atmosphere has a great influence in the development and process of adolescents' stress (Sander & McCarthy, 2005). Adolescent who does not live with their parents are more likely to be at mental health risk due to the emotional distress that they experience in their daily life (Rothenberg et al., 2018). Negative and stressful interaction between mother and adolescents have been viewed as risk factor for their stress (Kane & Garber, 2004). Hammen et al., 2003 reported that stress and environmental context are main factors of adolescents' stress. Moreover, expectation of parents is a predictable factor of stress among adolescents.

Method

This study utilized sequential explanatory mixed method approach for collecting and analyzing both quantitative and qualitative data during the research process. This design was chosen because these two methods not only complement each other but also allow for more complete analysis by combining the quantitative and qualitative method (Tashakkori & Teddlie, 1998).

Participants of the study

For the purpose of the quantitative phase, a multistage sampling procedure was used for selecting the participants of this study. A sample of 1100 adolescents in tertiary education in Myanmar was selected. The participants were selected first year students from Yangon University of Education, Yezin Agriculture University, University of Forestry, University of Veterinary Science, Mandalay University, Taungoo University and Mandalay University of Foreign Languages. Selected participants consist of 469 males and 631 females. Researcher divided participants into high and low groups based on + 1 and – 1 standard deviation from the mean. The participants with scores above the + 1 standard deviation from the sample mean were identified as the high group and the participants with scores below the – 1 standard deviation from the sample mean were identified as the low group. And then, the participants with scores between + 1 and – 1 standard deviation were identified as the moderate group. Then, a purpose sampling method was used for the purpose of the qualitative phase. A sample of 48 adolescents in higher education who met the criteria of high stress based on the quantitative results.

Ethical Consideration

Approval to conduct this study was gained from Yangon University of Education Ethical Research Committee (ERC). Moreover, ethical approval was received from the Department of Higher Education under Ministry of Education, other Ministries and also rectors from each university was obtained prior to the administration of the questionnaires. Then, pseudonyms were

used to protect participants' identity and confidentiality of all information gathered for the research. This message has already been given to all the participants.

Instruments

For survey, the instrument was the Perceived Stress Scale (PSS) which was developed by Cohen and Williamson, in 1988. It was widely used to measure the individual perception of stress. It consists of 10 items which were examined by five-point Likert scale to measure the stress of adolescents by two subscales: perceived helplessness and perceived self-efficacy. The psychometric properties of PSS instrument were satisfactory with its reliability coefficient 0.82. To seek the demographic information of the respondents include gender, age, career choices and family types of adolescents were collected in the present study. For qualitative phase, the interview protocol was initially based on stress interview questions, preliminary analysis of the quantitative data.

Procedure

Firstly, the related literature was studied through intensive reading from a variety of sources such as journals, research paper, and books. Then, research instruments were prepared based on the previous literature to collect data. In order to validate for the content validity of the prepared instruments, expert reviews were requested. According to the content validation of the experts, pilot testing was carried out to assess the reliability coefficient of the respective questionnaires. After that, data collection was done and the researcher analyzed the received data. After that, the researcher followed up with qualitative interviews to help explain the survey responses.

Data Analysis and Findings

Descriptive Analysis

By using the statistical analysis, the collected data were analyzed and the results will be described in the following session.

Table 1. Means and Standard Deviations of Adolescents' Stress

	<i>N</i>	Minimum	Maximum	Mean	Mean %	<i>SD</i>
Perceived Helplessness	1100	0	24	10.32	43.01%	4.39
Perceived Self-Efficacy	1100	0	13	6.86	52.76%	2.25
Stress	1100	0	39	17.09	50.31%	8.21

The results displayed that the mean percentage of the total stress was 50.31%. It can be said that the stress of adolescents was moderate. Then, the mean percentage of perceived self-efficacy scale (52.76%) was higher than the value of the perceived helplessness scale (43.01%).

Differences among Adolescents' Stress by Demographic Variables

This study conducted the independent sample *t*-test and One-way ANOVA to analyze whether stress was affected by demographic factors of adolescents. Table 2 shows the comparison of adolescents' stress by gender. Differences in the gender in each subscale of stress and overall stress were statistically significant [$t = -3.572$, $p < 0.001$], suggesting that females were more stress than males in their daily life. This finding is consistent with previous

investigations found that female reported more stress than male when facing the stressful situation in daily life (Stevens et al., 2003; Naviya & Sultana, 2021; Soe, 2024).

Table 2. Independent Samples *t*-test Result of Adolescents' Stress by Gender

	Gender	N	Mean	SD	<i>t</i>	<i>p</i>
Perceived Helplessness	Male	469	9.37	4.14	-2.463**	.009
	Female	631	10.48	4.87		
Perceived Self-Efficacy	Male	469	6.90	2.37	1.998*	.031
	Female	631	6.01	2.20		
Stress	Male	469	16.57	7.98	-3.572***	.000
	Female	631	18.57	8.67		

Note: * Mean difference is significant at 0.05 level

** Mean difference is significant at 0.01 level

*** Mean difference is significant at 0.001 level

In terms of age, the difference in age groups of participants did not have significant effect on each subscale and overall stress. Therefore, age groups cannot be considered as a factor to identify obvious difference in stress of adolescents. This finding is consistent with previous investigations (Aldwin et al., 1996; Chen et al., 2017).

Table 3. Results of ANOVA of Adolescents' Stress by Age Groups

	Age Groups	N	Mean	SD	<i>F</i>	<i>p</i>
Perceived Helplessness	17 years old	213	11.00	3.91	.336	.714
	18 years old	401	10.79	4.37		
	19 years old	486	10.97	4.40		
Perceived Self-Efficacy	17 years old	213	6.77	2.62	.297	.743
	18 years old	401	6.93	2.20		
	19 years old	486	6.82	2.27		
Stress	17 years old	213	18.00	9.20	2.663	.070
	18 years old	401	17.94	7.93		
	19 years old	486	17.91	8.33		

According to the demographic profile of participants, there are two career choices which are teaching profession from Yangon University of Education and other professions which is career choices from Agriculture University, University of Forestry, University of Veterinary Science, Mandalay University, Taungoo University and University of Foreign Language in this study. Therefore, independent sample *t*-test statistics was performed again to exactly know the difference between adolescents is due to their career choices. As shown in Table 4, differences in the career choices in each subscale of stress and overall stress were statistically significant [$t = -3.863$, $p < 0.001$], suggesting that students teachers were more resilience and have potential than adolescents from other professions to respond the daily challenges.

Table 4. Independent sample *t*-test Result of Adolescents' Stress by Career Choices

	Career Choices	N	Mean	SD	<i>t</i>	<i>p</i>
Perceived Helplessness	Teaching Profession	462	9.13	4.47	-1.724*	.016
	Other Profession	638	10.60	3.25		
Perceived Self-Efficacy	Teaching Profession	462	6.90	2.31	1.541*	.040
	Other Profession	638	6.22	2.15		
Stress	Teaching Profession	462	16.30	7.92	-3.863***	.000
	Other Profession	638	18.23	8.49		

Note: * Mean difference is significant at 0.05 level

*** Mean difference is significant at 0.001 level

The descriptive statistics and ANOVA analysis were analyzed to examine the differences between the adolescents' family types on stress. Concerning the family types, there are also five groups of family types (living with both parents, with adopted parents, with only mother, with only father and with other people) categorized according to the respondents' demographic data. As shown in Table 5, the difference in family types had a significant effect on stress [$F = 2.981$, $p < 0.05$], see in Table 5.

Table 5. Result of ANOVA of Adolescents' Stress by Family Types

	Family Types	N	Mean	SD	<i>F</i>	<i>p</i>
Perceived Helplessness	Both parents	410	10.18	4.32	3.217*	.012
	Adopted parents	138	10.32	4.33		
	Only Mother	186	13.50	3.53		
	Only Father	172	12.02	4.10		
	Other people	194	12.90	4.06		
Perceived Self-Efficacy	Both parents	410	7.50	2.71	2.752*	.022
	Adopted parents	138	7.48	2.63		
	Only Mother	186	7.06	2.12		
	Only Father	172	7.09	2.03		
	Other people	194	7.18	2.25		
Stress	Both parents	410	16.13	7.69	2.981*	.021
	Adopted parents	138	16.16	7.05		
	Only Mother	186	17.11	8.01		
	Only Father	172	16.98	8.16		
	Other people	194	16.85	8.02		

Note: * Mean difference is significant at 0.05 level

*** Mean difference is significant at 0.001 level

Moreover, as the sample size of each family types were different, Tukey HSD post hoc comparison was performed as shown in Table 6. The stress of the subjects who live with only mother were higher than of those living with both parents and adopted parents. This finding

evidently showed that adolescents living with only mother felt more stress than others experiencing the hardships in their daily routines.

Table 6. Post-hoc Analysis of Adolescents' Stress by Family Types by Tukey HSD Method

	(I) Family Types	(J) Family Types	Mean Differences (I-J)	p
Stress	Only Mother	Both Parents	0.974*	.032
		Adopted Parents	0.958*	.033

Note: * Mean difference is significant at 0.05 level

Thematic Analysis

Thematic analysis is used to analyze and identify textual data by reporting patterns within data through generating an array of themes (Clarke & Braun, 2013). After semi-structured interviewing, preliminary exploration of the data by reading thoroughly the transcriptions, by coding the data initially, by grouping similar codes to develop themes, and then by constructing a detailed narrative of each theme with elaboration of major events. Analysis of the interviewing results identified two main themes concerning the reported effect of university has on adolescents' mental health. These themes are learning-life unbalance, and fear of failure. These themes were chosen because of their prevalence amongst adolescents during their university students' life. All themes are comprised of sub-themes which are different points of views of the main themes identified (refer to thematic map in Fig. 1).

Themes

Learning-life unbalance. Study-life unbalance has been identified as a central theme in this study and discussed difficulties balancing university such as assignments, presentations, attending lectures, exams and other personal tasks such as family, socializing with peers, teachers for themselves. Adolescents revealed experiencing feelings of lack of capacities to overcome the stressors during their academic learning process because of lack of management their study-life unbalance. Respondent (1) reported experiencing feelings of her personal and study life unbalancing caused her to stress in her life.

“Finding a balance between my personal life, my mental health state and giving fully focusing all of my time into my studying is the hardest part for me.” (S:1)

Workload and socializing were identified as sub-themes because they were significant risk factors contributing toward learning-life unbalance.

Workload. Workload was found to be a significant aspect of adolescents especially university students. University students reported that workload at university was excessive and had a significant impact negatively on their mental health status. University students stated that feeling overwhelmed by the large amount of study work providing to them while attending at university.

“I am feeling the overload of work within each year of university that I have always facing to break down suddenly and I want to give up to attend this Institution.” (S:2)

Respondents also reported that they devoted most of their time on their assignments, classroom presentations, attending lectures and exams. Sometimes, they dedicated their excessive amount of time on these things and sometimes they neglected their basic needs such as eating, drinking and

sleeping. Most of university students struggled to get motivation to tackle their studying. Because of the stress they faced having to tackle a huge amount of studworks.

"I feel nervous that I have to do lots of assignments and group work presentation within two days". (S:3)

"Classroom presentations and exams had become a great deal to me that I was completely overwhelmed. Moreover, I could not manage my other tasks such as readings, revision my lessons and so on. Therefore, it made me feel very stressful in my daily life at university. At that time, I didn't want to effort for my studying anymore." (S:4).

Socializing. Socializing was found to be a significant effect of university students' mental health. Socializing had not only negative but also positive effect because it gave them a sense of belonging in increasing and reducing feelings of stress. Students stated that sometimes meeting with unfamiliar person caused big deal of difficulty for them.

"I was not a social butterfly which meant that I was an introvert type, so I was very challenging to talk with new people and teachers. This situation led me to severe panic attacks on my own and to speed my stress level up at university." (S:6).

Some students stated that they felt overwhelmed to attend seminars, meeting their teachers and unfamiliar friends at university.

"I found that my stress in a mass scale was due to my university life. It made me to trigger for my study life. When I arrived among unfamiliar atmosphere with nearly 100 students in my lecturer rooms, I felt sweaty and stressful to speak with them, therefore, I used to stay silent in class and sometimes my teachers and most of new people barely knew that I existed in their class. However, I was so lonely and unhappy at that moment." (S:7).

Fear of Failure. Fear of failure has been identified as a main theme in this study. The feeling of failure was pressure on students' academic learning process. Some students reported that there was stressful to achieve good grades in their students' life. When they did not achieve good grades, it brought on a feeling like they had failed. At that time, these students discouraged from seeking help.

"Sometimes, I was feelings of helplessness and hopeless for my studying because there are grades between my bachelor degree and failure." (S:8).

Expectations and fears of future jobs were identified as sub-themes because they were significant risk factors relating to fear of failure of adolescents.

Expectations. Adolescents stated that they felt guilty when they cannot fulfill their parents' needs and hope. Moreover, they felt that their parents and teachers were high expectations for their academic learning process. For these expectations tended to impact on their mental health.

"My mother is very worried and she told me to become a good and smart person more than others in her environment. So, I am very worried that I would not fulfill her expectations." (S:9)

"I am worried that I would not fulfill my parents' need because I am the only person who attend higher education in my family and my parents hope high expectations for me." (S:10)

Fear of future jobs. For most of the university students, university was a steppingstone to achieving jobs after graduation. However, some of the university students felt stressful because those who attend their university may have low chances for jobs.

“After graduation from this university, I have to find a job among people who are my seniors and high qualified persons because of this degree may have low chances for jobs.” (S:11)

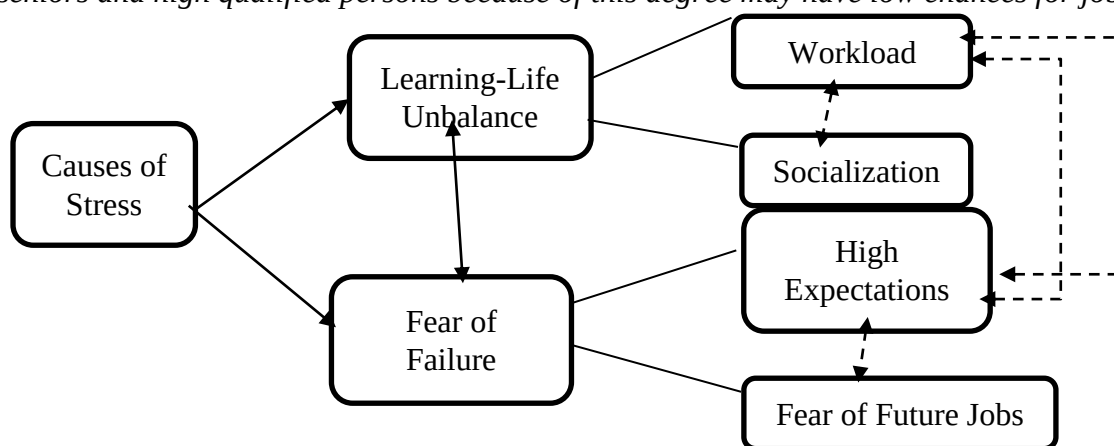


Figure. 1 Thematic Map Displaying Themes and Relationship between Themes

The thematic map displays the two main themes (learning-life unbalance and fear of failure) and sub-themes. The arrows provided reflect the relationship between and within themes. Adolescents who cannot balancing between their personal and studying life are more fear to failure on their academic learning process. Moreover, adolescents who have over-workload such as deadline assignments, presentations and exams are less socializing with their peers. Besides, adolescents who are from high expectations from their parents are more fear to get failure in their learning. In addition, adolescents who get high expectations from their parents devoted most of their time on their studying, so, they are less socializing in everyday life. Furthermore, adolescents who get high expectations from their parents have over-workload in their studying because they wanted excellent grades to pride from their parents.

Discussion

In this study, it was found that most of adolescents in higher education sector in Myanmar are moderate level in stress. This means that majority of adolescents were good situations on stress. The findings of this study provide further support for suggested the stress of adolescents (Soe, 2024; Winding et al., 2023; Dogra, 2020; Mboya et al., 2020; Kalmakis et al., 2020; Yousaf et al., 2016; Nyunt & Soe, 2014; Aung, 2018). This may be due to all the university students in education context survive the current economic recession, complexity of their studies and duties and especially political conflicts in Myanmar. In current condition, study situations may become more challenge and difficult in safety. Moreover, the significant differences in adolescents' stress through the socio-demographic variables were also investigated. The findings of t-test analysis reported that there is significant difference between male and female in stress and each subscale which consistent with previous researches (Stevens et al., 2003; Naviya & Sultana, 2021; Soe, 2024). This result highlights that female adolescents appear to be more vulnerable than male adolescents in experiencing their daily challenges and adversities. This means that the perception of stress and responses to adversities of adolescents may be the different according to the gender (Naviya & Sultana, 2021).

Further, the findings of ANOVA analysis reported that there is no significant difference in adolescents' stress among the age groups which consistent with previous studies (Aldwin et al., 1996; Chen et al., 2017). This may be because the adolescents within these age groups

experience similar stressful events in their university students' life. After that, there is significant difference between career choices in stress and each subscale. This result highlights that adolescents from other professions felt more stress than student teachers. This finding can be concluded that adolescents from other professions felt stressful because those who attend their university may have low chances for jobs. In terms of family types, this finding evidently highlights that adolescents who are living with only mother felt more stress and are more negatively viewing on their academic learning condition in comparing with others. It is probable that stress is an outcome of an emotional response subjectively to the perceptions of uncontrollable challenges and demands in daily life is determined by the family types of a person.

To provide more supportive discussions about the stress of adolescents in higher education setting in Myanmar, a thematic analysis was also conducted in this study based on the results of semi-structured interview. The thematic analysis highlighted that adolescents in this study experienced stress due to two main themes: learning-life unbalance which has two sub-themes that are workload and socializing and fear of failure which has also two sub-themes that are high expectations from their parents and fear of future jobs. This study included only first year students from higher education sector, however, it did not represent overall population of adolescents. In terms of demographic factors, a few factors of personal profiles such as gender, age, career choices and family types were conducted. Future studies may investigate other factors affecting on stress from a more comprehensive perspective. Besides, the data for this study were generated from self-reports. Cohen and Williamson (1988) found that the self-report form of the PSS was valid and reliable, and it can be predicted a perception of stress. However, it could be measured once and any changes over time were not recorded. Therefore, in the case of the study of stress, future research could longitudinal design is more suitable. Moreover, there is still a great need for more research and enhanced practice.

Conclusion

This study contributes to the literature on the situation of stress and causes of stress among adolescents in Myanmar. The findings highlights that career choices and family types of the adolescents are factors that can affect the increasing the stress level. Not only academic but also social risk factors lead adolescents especially university students experiencing stress. Themes such as learning-life unbalancing and fear of failure are to increase feelings of stress and these factors negatively impact on the mental health of adolescents in Myanmar. Therefore, this study recommends that to improve reducing the stress of students, higher education institutions should make mental health and wellbeing of students a priority issue. Stakeholders from higher education sector should consider the quality and implications of their students' mental health procedures and should understand that their students' needs differ. University is believed to be a significant life-changing experience that should hopefully enable adolescents with the skills to transition into adulthood and life after higher education (Gurbuz et al., 2019). Finally, this study can be able to be improved with more understanding of the links between being adolescents and mental health issues.

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REFLECTIVE LEARNING, COGNITIVE STYLES AND ACADEMIC BEHAVIORAL CONFIDENCE OF STUDENT TEACHERS*

Su Thinzar Phyo¹, May Cho Min²

Abstract

This study aimed to investigate reflective learning, cognitive styles and academic behavioral confidence of student teachers in Myanmar. The explanatory sequential design was used in this study. A total of 846 student teachers from Education Degree Colleges participated in the quantitative study. The results of one-way MANOVA indicated that there were significant differences of reflective learning and academic behavioral confidence by cognitive styles. Moreover, the finding of this study revealed that student teachers with integrated style and systematic style were higher in reflective learning and academic behavioral confidence than those with split style, undifferentiated style and intuitive style. The correlation results indicated that reflective learning and academic behavioral confidence were significantly positive inter-correlated in split style, undifferentiated style and integrated style. A qualitative follow-up study was conducted by semi-structured interview with 20 selected student teachers based on the results of quantitative study. The interview results supported prominently the findings of quantitative study and indicated that there was relationship between reflective learning and academic behavioral confidence in each cognitive style.

Keywords: Reflective Learning, Cognitive Styles, Academic Behavioral Confidence, Student Teachers

Introduction

Reflective learning provides a framework that helps make sense of experience, which enables people to learn from experience. In the way of preparation to be a professional teacher, great value is placed on the practicing of being a reflective learner. As a result of being reflective learners, student teachers are able to assess critically their own learning, distinguish areas in which they still need to improve their learning and make themselves more self-regulated learners.

Cognitive styles defined as the way people perceive stimuli and how they use this information to guide their behavior i.e., thinking, feeling, actions (Hayes & Allinson, 1998). There are different cognitive styles for each person. Every student teacher has his own style of learning and thinking. The relation between cognitive styles and reflective learning should be considered and these two variables should be interested in while conducting educational research.

Moreover, noticing a person's own cognitive style can reflect which style shows the good level of confidence in learning. For this reason, another variable, academic behavioral confidence can be continually studied with a consideration of the relation in cognitive style. There is a growing interest about the variation in confidence which the student teachers' possess in their academics because their confidence level can prove how much they perceive their theoretical learning and practicing for their profession.

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Accordingly, reflective learning, cognitive styles and academic behavioral confidence are important variables for student teachers. Doing reflection on learning, knowing their own cognitive styles and their confidence levels will be helpful in their present times and also in their professional life span. In Myanmar education context, there is no study to probe that which cognitive styles provide in reflective learning and show how much feel confident in academic. Therefore, this study was an attempt to explore the relationship of student teachers' reflective learning and academic behavioral confidence by cognitive styles.

Purpose of the Study

The main purpose of the study is to investigate reflective learning, cognitive styles and academic behavioral confidence of student teachers.

The specific objectives are as follows:

- To find out reflective learning and academic behavioral confidence by cognitive styles
- To explore the relationship of reflective learning and academic behavioral confidence by cognitive styles.

Definitions of Key Terms

Reflective learning. Reflective learning (RL) is the process of internally examining and exploring an issue of concern, triggered by experience, which creates and clarifies meaning in term of self and which results in a change of conceptual perspective (Boyd & Fales, 1983).

Cognitive style. Cognitive Style is the preferred way, which an individual processes information (Martin, 1982).

Academic behavioral confidence. Academic behavioral confidence (ABC) refers to the beliefs of student teachers that they can execute competently in a particular learning circumstance. It is conceptualized as being how students behave in the extent to which they have a strong belief, firm trust, or sure expectation in their ability to respond to the demands of studying at school (Sander & Sanders, 2003).

Student teacher. Student teacher is defined as a student who is studying pre-service training in teaching (Ngidi & Sibaya, 2003).

Review of Related Literature

Jarvis (1991) provided a practical and intricate model of reflective learning. In his research model, reflective learning might be described as action learning. According to his model of reflective learning, three of which as reflective learning and he established nine potential pathways. The first one referred to as contemplation. Reflective skills learning was described as the second form of reflective learning. It was concerned with the learning of practical, possibly vocational skills. Reflective skills learning involves the study of grounded knowledge that strengthens practice, it thereby associates with problem solving. The third form of reflective learning is experimental learning (as cited in Grant, 2005).

There are many assumptions or conceptions to define about cognitive styles. Messick (1969) defined cognitive styles as information processing habits which represent the learner's

typical nodes of perceiving, thinking, remembering and problem solving. Goldstein and Blackman (1978) defined cognitive style as an individual's characteristic approach to processing information. Martin (1982) developed a multidimensional model intended to reflect the entire spectrum. This model included two continua: (1) high systematic to low systematic and (2) high intuitive to low intuitive.

Academic behavioral confidence is related to the conviction and confidence of student teachers to handle the challenges in colleges and to their expectations. Academic Behavioral Confidence is conceptualized as a student's belief that they are able to do proficient performance in certain learning situations. It is a concept that how a student behave with strong and firm beliefs, or certain expectations in their abilities that are determined by academic self-efficacy (Sander & Sanders, 2009).

Method

Participants of the Study

Participants were selected by using stratified random sampling technique for quantitative study. A total of 846 student teachers ($M_{age} = 19$ years old, $SD_{age} = 1.58$) from Education Degree Colleges participated in this study. Among the respondents, 380 were males (45%) and 466 were females (55%). For the qualitative study, four student teachers were selected from each cognitive style by using purposive sampling as participants. Thus, semi-structured interview was conducted with a total of 20 student teachers.

Instrumentation

Reflective Learning. The Reflective Learning Questionnaire was developed by the researcher and it was designed with 5-point Likert scale (from 1 = strongly disagree to 5 = strongly agree) consisting of 26 items. Reflective Learning Questionnaire consists of three factors such as self-reflection on learning, connecting experience with knowledge and critical reflection in order to examine reflective learning of student teachers. The Cronbach's alpha of Reflective Learning Questionnaire was .89.

Cognitive Style. The Cognitive Style Inventory (CSI) was developed by Martin (1982) and standardized by Jha (2001). It is a 5-point Likert format and consists of 40 items which measure systematic style and intuitive style consisting of 20 items each. Five responses categorized as from 1 = strongly disagree to 5 = strongly agree. The minimum and maximum score on both dimensions ranges between 20 and 100. The range of the scores for each scale is defined as high is greater than 81, medium high is 71-80, medium low is 61-70 and low is less than 60. The internal consistency of the Cognitive Style Inventory was .82.

Academic Behavioral Confidence. The Academic Behavioral Confidence (ABC) scale (Sander & Sanders, 2003) consists of four subscales: grades, studying, attendance and verbalizing and 17 items. The scale is a 5-point scale (from 1 = not at all confident to 5 = very confident). The reliability coefficient of the ABC was .82.

Results of Quantitative Study

Comparison of Reflective Learning and Academic Behavioral Confidence by Cognitive Styles

To find out reflective learning and academic behavioral confidence by cognitive styles, multivariate analysis of variance was undertaken. The results of MANOVA showed that there was statistically significant difference in reflective learning and academic behavioral confidence in accordance with cognitive styles, Wilks' Lambda = 0.865, $F(4, 841) = 15.852$, $p < .001$, Partial Eta Squared = .07. It means that cognitive styles have significant effect on reflective learning and academic behavioral confidence. Multivariate test eta-squared was above .04 and therefore medium effect size was found. In one-way MANOVA result, the mean score of student teachers with integrated style was the highest in reflective learning and the mean score of student teachers with systematic style was the highest in academic behavioral confidence (see Table 1). Therefore, it can be assumed that student teachers with integrated style were more reflective persons than those with other cognitive styles and student teachers with systematic style had higher range of academic behavioral confidence than those with other cognitive styles.

Again, notably, post-hoc comparisons using Tukey HSD tests indicated that student teachers with integrated style and systematic style were higher in reflective learning and academic behavioral confidence than student teachers with split style, undifferentiated style and intuitive style. It may be due to the fact that the characteristics of cognitive styles such as integrated style person possesses dual cognitive specialties and systematic style person spend a great time on detail and well-defined method. Tukey HSD test also revealed that student teachers with split style were higher in academic behavioral confidence than student teachers with undifferentiated style and intuitive style. The result was related to the fact that a person with split style has approximately equal degrees of systematic and intuitive (Martin, 1982). Therefore, it can be assumed that student teachers with split style could manage behaviors well using these two styles alternatively and so they were higher in confident than other styles.

Table 1 One-way MANOVA Summary Table of Mean Comparison for Reflective Learning and Academic Behavioral Confidence by Cognitive Styles

	Cognitive Styles					<i>F</i>	<i>p</i>	Partial η^2
	Split Style	Undifferentiated Style	Integrated Style	Intuitive Style	Systematic Style			
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)			
RL	98.71 (7.11)	94.95 (9.89)	101.86 (8.69)	93.00 (8.20)	100.03 (5.53)	25.38* **	.000	.108
ABC	66.25 (5.93)	63.05 (8.39)	68.38 (7.09)	59.20 (8.24)	70.51 (7.84)	22.30* **	.000	.096

*** $p < .001$

Note. RL = Reflective Learning, ABC = Academic Behavioral Confidence

Table 2 Results of Tukey HSD Multiple Comparison for Reflective Learning and Academic Behavioral Confidence by Cognitive Styles

Dependent Variable	Cognitive Style (I)	Cognitive Style (J)	MD(I-J)	p
Reflective Learning	Integrated Style	Split Style	3.15***	.000
		Undifferentiated Style	6.91***	.000
		Intuitive Style	8.86***	.000
	Systematic Style	Split Style	6.32***	.000
		Undifferentiated Style	10.08***	.000
		Intuitive Style	12.03***	.000
Academic Behavioral Confidence	Split Style	Undifferentiated Style	3.20***	.000
		Intuitive Style	7.05**	.001
	Integrated Style	Split Style	2.13**	.002
		Undifferentiated Style	5.33***	.000
		Intuitive Style	9.18***	.000
	Systematic Style	Split Style	4.26**	.004
		Undifferentiated Style	7.46***	.000
		Intuitive Style	11.31***	.000

** $p < .01$, *** $p < .001$.

Correlation Between Reflective Learning and Academic Behavioral Confidence in Accordance with Cognitive Styles

In order to examine the relationships between the variables, Pearson product moment correlations were calculated and the criterion $p < .05$ was used to determine statistically significant correlations. As expected, self-reflection, connecting experience with knowledge and critical reflection were significantly positive correlated with academic behavioral confidence in split style, undifferentiated style and integrated style. In systematic style, self-reflection and critical reflection were positively correlated with academic behavioral confidence.

Table 3 Correlation Between Reflective Learning and Academic Behavioral Confidence in Accordance with Cognitive Styles

	Academic Behavioral Confidence				
	Split Style	Undifferentiated Style	Integrated Style	Intuitive Style	Systematic Style
Self-reflection	.277**	.536**	.371**	-.266	.342*
Connecting Experience with Knowledge	.296**	.528**	.385**	-.026	-.048
Critical Reflection	.329**	.539**	.500**	-.405	.349*

* $p < .05$, ** $p < .01$.

Predictive Power of Reflective Learning on Academic Behavioral Confidence in Accordance with Split Style

The results of multiple regression analysis pointed out that the subscales of reflective learning made a predictive contribution to academic behavioral confidence in accordance with split style, $F(3, 364) = 21.636$, $p < .001$ and explained for 14.4% (adjusted R^2) of the variance in academic behavioral confidence.

Table 4 Multiple Regression Analysis for Reflective Learning and Academic Behavioral Confidence in Accordance with Split Style

Predictor	<i>B</i>	Std. Error	β	<i>t</i>	<i>R</i>	R^2	Adjusted R^2	<i>F</i>
Constant	35.139	3.996			.389	.151	.144	21.63** *
Self-reflection (SR)	.206	.096	.120	2.142*				
Connecting Experience with Knowledge (CE)	.288	.102	.156	2.806**				
Critical Reflection (CR)	.545	.137	.218	3.978** *				

* $p < .05$, ** $p < .01$, *** $p < .001$, $R^2 = 0.151$; $F(3, 364) = 21.636$, $p < .001$

The resultant model can therefore be defined as in the following equation:

$$ABC = 35.139 + 0.206 SR + 0.288 CE + 0.545 CR$$

Predictive Power of Reflective Learning on Academic Behavioral Confidence in Accordance with Undifferentiated Style

The results of the predictive contribution of the subscales of reflective learning to academic behavioral confidence showed that the subscales of reflective learning were significantly predictive to academic behavioral confidence $F(3, 169) = 39.892$, $p < .001$, and explained for 40.4% (adjusted R^2) of the variance in academic behavioral confidence.

Table 5 Multiple Regression Analysis for Reflective Learning and Academic Behavioral Confidence in Accordance with Undifferentiated Style

Predictor	<i>B</i>	Std. Error	β	<i>t</i>	<i>R</i>	R^2	Adjusted R^2	<i>F</i>
Constant	11.296	4.783			.644	.415	.404	39.892*
Self-reflection (SR)	.409	.143	.224	2.864**				
Connecting Experience with Knowledge (CE)	.515	.142	.266	3.624***				
Critical Reflection (CR)	.827	.213	.286	3.892***				

* $p < .05$, ** $p < .01$, *** $p < .001$, $R^2 = 0.415$; $F(3, 169) = 39.892$, $p < .001$

By applying multiple regression analysis presented above, the relationships of the subscales of reflective learning with academic behavioral confidence (ABC) were investigated and the following model was as in the equation.

$$ABC = 11.296 + 0.409 SR + 0.515 CE + 0.827 CR$$

Predictive Power of Reflective Learning on Academic Behavioral Confidence in Accordance with Integrated Style

The results of the predictive contribution of the subscales of reflective learning to academic behavioral confidence showed that the subscales of reflective learning were significantly predictive to academic behavioral confidence $F(3, 249) = 31.143, p < .001$ and explained for 26.4% (adjusted R^2) of the variance in academic behavioral confidence.

Table 6 Multiple Regression Analysis for Reflective Learning and Academic Behavioral Confidence in Accordance with Integrated Style

Predictor	<i>B</i>	Std. Error	β	<i>t</i>	<i>R</i>	R^2	Adjusted R^2	<i>F</i>
Constant	28.257	4.532			.522	.273	.264	31.143***
Self-reflection (SR)	.173	.123	.099	1.404				
Connecting Experience with Knowledge (CE)	.223	.139	.115	1.606				
Critical Reflection (CR)	1.049	.186	.384	5.646**				

Note. *** $p < .001$, $R^2 = 0.273$; $F(3, 249) = 31.143, p < .001$

Therefore, the resultant model can be defined as in the following equation:

$$ABC = 28.257 + 1.049 CR$$

Qualitative Study

Participants of the Qualitative Study

Based on the results of quantitative data analysis, high reflective learning (RL) and high academic behavioral confidence (ABC) group, low reflective learning (RL) and low academic behavioral confidence (ABC) group, high reflective learning (RL) and low academic behavioral confidence (ABC) group, low reflective learning (RL) and high academic behavioral confidence (ABC) group and average reflective learning (RL) and average academic behavioral confidence (ABC) group from each cognitive style were categorized and four participants in each style were selected for follow-up qualitative study via semi-structured interview method was conducted. Therefore, a total of 20 student teachers participated in the qualitative study. Semi-structured

interview was administered to attain a complete picture of reflective learning and academic behavioral confidence of student teachers in each cognitive style.

Interview Guide

The instrument for semi-structured interview contained an interview guide of 21 core questions.

Results of Qualitative Study

According to the interview results, it was found that student teachers with split style who had high RL and high ABC, average RL and average ABC and low RL and high ABC expressed that they consciously responded to learning situation and academic area by step by step approach. They had awareness of reflection in their lessons that made them feel confident in academic performance. Student teachers with split style who had low RL and low ABC did not notice how they approach in reflection and learning and could not show what extent to the confident in academic performance.

The interview results indicated that student teachers with undifferentiated style who had high RL and high ABC, average RL and average and high RL and low ABC expressed that they reflected daily experiences and often wrote reflection paper, it made them more confident in academic learning and doing activities. Sometimes they needed the help of elders in their studying. Student teachers with undifferentiated style who had low RL and low ABC sometimes reflected their experiences with peers and it could not make improvement in academic subjects.

It was also found in the interview results that student teachers with integrated style who had low RL sometimes involved in learning process by reflecting on experience. They could not review critically. Student teachers with integrated style who had high RL made a strongly connection a lesson with other or real life to form a concept. They regulated their learning and analyzed the difficulties well. Student teachers with integrated style who had low ABC had average level in confidence to discuss their own point of view in front of class. They knew workable approach for their learning. Student teachers who had high ABC had full of confidence to get good grade and to engage in independent study by revising subjects thoroughly and daily. They were selected as a group leader or presenter in classes.

The interview results indicated that student teachers with intuitive style who had low RL and low ABC sometimes reflected experiences or lesson. By doing it, they noticed that their decisions were more precise. Student teachers who had average RL and ABC reflected lessons, actions or daily experiences most of the time. They sometimes wrote reflection paper for special activities.

It was also found in the interview results that student teachers with systematic style who had high RL and high ABC always reflected their daily lessons and experiences so they could be aware of their strengths and weaknesses in their learning. Student teachers with systematic style who had average RL and ABC sometimes reviewed their actions and lessons. It helped to improve in presentations, making friends and examinations.

Discussion

In the comparison of reflective learning and academic behavioral confidence by each cognitive style, Tukey HSD tests indicated that student teachers with integrated style and systematic style were higher in reflective learning and academic behavioral confidence than student teachers with split style, undifferentiated style and intuitive style. In qualitative results, it was confirmed that student teachers with integrated style who had high/low RL knew their own strengths, act knowledgeable manner and regulated their actions. They always tried to look for opportunities to solve problems and thinking ways to be better. Student teachers with systematic style who had high/low RL reviewed their daily lesson, often reflected with friends, identified their own good points and bad points, critically planned, spent time on details and organized materials well. Therefore, it was proved that student teachers with integrated style and systematic style were more reflective persons than those with other cognitive styles.

Student teachers with integrated style who had high/low ABC were active, alert, and high in participation and involvement in discussions and activities. They had strong attitude for their actions. Student teachers with systematic style who had high/low ABC used well- defined method or overall plan for studying, concrete facts or figures, created lists what should do and were logical and rational. Therefore, it was proved that student teachers with integrated style and systematic style had a greater extent of academic behavioral confidence than other cognitive styles.

The result of this study indicated that student teachers with split style were higher in academic behavioral confidence than student teachers with undifferentiated style and intuitive style. According to Martin (1982), a person with split style had approximately equal degrees of systematic and intuitive and he consciously responded to learning situation by selecting appropriate style. A person with intuitive style is associated with a spontaneous, holistic and visual approach and generally viewed as “bad” when a value is assigned. According to Khin Zaw (1993), mental processes of intuitions tended to be common wherever there were situations too complex for ready logical analysis. A person who had intuitive thinking thought a solution with little awareness of the process to get it which was right or wrong. A person with undifferentiated style relied heavily on rules, suggestions or guidelines and had difficulty in making decisions. Therefore, this finding was possible and reasonable in that the extent of confidence level in academic behavior of student teachers with split style were higher than student teachers with undifferentiated style and intuitive style.

The results of this study indicated that reflective learning and academic behavioral confidence were significantly positive inter-correlated in split style, undifferentiated style and integrated style. It can be due to the fact that these three cognitive styles were characterized with the combination or alternating of the systematic and intuitive styles. A person with split style applied only one style at a time based on the nature of the task. A person with undifferentiated style is a receptive, reflective person and depends on specific directions for actions. A person with integrated style is proactive, creative and innovative and exhibit high degrees of internal

locus of control. Therefore, student teachers with these cognitive styles might be highly successful in reflection and also more confident in academic behavior than others. Hence, a follow up program of semi-structured interview allowed for investigating consistencies in exploring the relationship of reflective learning and academic behavioral confidence in accordance with each cognitive style.

According to the findings of interview, student teachers with split style who had high RL and high ABC reflected daily lessons in class and everyday events. It helped to evaluate methods of solving problems and analyze the difficulties and so it made them confident in activities, presentations and assignments. Student teachers with undifferentiated style who had high RL and high ABC always reflected daily experiences and often wrote reflection paper for some subjects. It made them more confident in academic learning and doing activities. Student teachers with integrated style who had high RL and high ABC could reflect well their lessons and it made them flexible and adaptable to class activities, presentations and assignments.

The results of this study revealed that self-reflection and critical reflection were positively correlated with academic behavioral confidence whereas there was no correlation in connecting experience with knowledge with academic behavioral confidence in systematic style. According to the interview results, student teachers with systematic style who had average RL and ABC sometimes reviewed their actions and lessons. By reviewing facts and information only, it helped them to improve in presentations, making friends and taking examinations. Therefore, student teachers with systematic styles could be weak in connecting experiences for their work and their actions although they were confident in doing activities. Martin (1982) pointed out that people with systematic style were very conscious of approaches in reflection and focused on product.

Multidisciplinary applications of cognitive styles helped researchers to explain individual differences in reflection, receiving information, performance, responding to situation and development of different attitudes (Riding, 1997). Students who lacked awareness of their cognitive style were the least successful than those who were aware, individuals who engage in a learning environment compatible with their cognitive style do better (Baliya, 2016). Therefore, people who made career decisions that aligned with their cognitive styles would have a higher chance of success and vocational satisfaction in comparison to those having diverse cognitive styles with different professional options.

Therefore, educators need to be able to identify the cognitive styles of their students, recommend prescriptions for developmental strategies that students can use to strengthen their own cognitive styles and to improve in styles that they do not generally utilize. They need to be able to recommend personalized educational approaches that is consistent with each cognitive style. Teacher educators from education institutions need to help their student teachers to identify their own cognitive styles and to understand the benefits as well as the drawbacks of all cognitive styles. They also need to be able to notice how to create conducive learning environment, which teaching learning strategies should be used and learning activities that are appropriate for each cognitive style to be high in reflective learning and academic behavioral confidence.

Previous studies pointed out that the result of extreme cognitive specialization in one dimension can drastically impact overall effectiveness in personal professional situations (Wonder & Donovan, 1981). Therefore, split style, undifferentiated style and integrated style were good in functions and effectiveness by combining or alternating each of bipolar elements of the systematic and intuitive styles. Therefore, student teachers with these styles need to learn the benefits and liabilities of their styles particularly as how to communicate, learn or solve problems. By raising their awareness of the significance of cognitive styles in general and of their own in particular, they can improve in reflection and can develop in academic behavioral confidence in professional training.

Extreme specialization might limit an individual's or a group's ability to think, learn, solve problems and interact with others (Martin, 1982). Buzan (1983) said that a synergistic effect took place in all cognitive performance when a person developed one cognitive extreme (either the systematic or the intuitive) that was previously considered to be weak. Therefore, student teachers with systematic style and intuitive style are needed to assist in the development of the abilities, dispositions and behaviors associated with styles. It can be assumed that by doing group works activities in class and assigning them properly in group, student teachers will promote their strengths and confidence in academic performance. And also, it will develop their ability in reflective learning and be more convenient in interaction with others.

Conclusion

To conclude, this study made a contribution to the importance of student teachers' reflective learning, cognitive styles and academic behavioral confidence in their learning and profession. Furthermore, this study recommended that educational personnel such as administrators, teacher educators, teachers and curriculum developers should consider the development of teaching learning strategies and conducive learning environment that were appropriate for student teachers' cognitive styles to promote their reflective learning and academic behavioral confidence.

Limitation and Future Research

This study was a cross-sectional study which showed the relationships among reflective learning, cognitive styles and academic behavioral confidence. The results should be interpreted carefully and longitudinal studies should be carried out to understand the improvement of reflective learning and academic behavioral confidence of student teachers. Based on the findings of this study and literature reviews, some recommendations for future research were made. Future research should address the limitation of this study and replicate the procedure with a large and more diverse sample.

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THE IMPACT OF MULTISENSORY LEARNING ON MYANMAR LITERACY ENGAGEMENT OF GRADE 1 STUDENTS*

Hnin Wai Wai Htet¹, Ei Mon Mon Aung²

Abstract

The main purpose of this study was to investigate the impact of multisensory learning on Myanmar literacy engagement of Grade 1 students. Both quantitative and qualitative research study were used to observe the impact of multisensory learning on Myanmar literacy engagement. Cluster sampling method was used in this study. The participants in this study consisted of 38 Grade 1 students (20 male and 18 female). Firstly, multisensory intervention framework was created to use in the intervention program. Then, Myanmar literacy test was constructed to use as pre-test and post-test. Before the intervention program, pre-test was administered. The intervention period was totally eight weeks. Post-test was administered after the intervention program. The paired samples *t*-test was used to study the differences between pre-test and post-test results. Quantitative data revealed that students' post-test of literacy engagement was significantly higher than those of pre-test. Then, qualitative study was conducted. Through the process of triangulation method, using interviews, field notes and observation checklists, it was discovered that multisensory learning encouraged and promoted Myanmar literacy engagement of Grade 1 students. Multisensory intervention program would make great contributions. The contribution of the study is that it will provide educational personnels with valuable information that to improve the students' literacy engagement.

Keywords: Multisensory Learning, Literacy, Engagement.

Introduction

Literacy is critical in helping us to make sense of our world. Literacy is not only a fundamental human right but also a foundation for lifelong learning and continued human capital development for inclusive and sustainable development (Wilso, 2016).

According to the recent World Development Report, millions of students that have completed primary school in low-income countries lack even the most basic literacy skills (World Bank, 2017). This illiteracy caused millions of students lack to take advantage of extensive benefits of education. It was paramount that children learnt to read around the age of five or six so as to achieve high literacy rates. Findings from neuroscience research showed that the ideal time to develop the basic reading skills that lead to reading fluency was in early childhood (Abadzi, 2017). Ultimately, if a child did not begin learning to read around first grade, the negative effects cascaded and prevented the person from achieving high levels of fluency, learning more advanced cognitive skills, and progressing to higher levels of education (Graham & Kelly, 2018).

In new curriculum of basic primary education in Myanmar, Grade 1 is very important for laying a solid foundation for children's later academic achievement. First graders are taught the fundamentals of literacy, including reading and writing alphabets, words, sentences, etc.

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Therefore, students need to get basic literacy skills at Grade 1. Students need to be taught and engaged in literacy activities enthusiastically in classroom. What matter most during this literacy foundation period was that all children in the classroom need to be engaged in literacy activities. Unfortunately, one of the most important challenges for teacher is how to teach early literacy skills effectively. Nowadays, promoting engagement was one of the challenges for the teachers, especially for the teachers who teach primary students. Primary students tend to have a shorter attention span compared to older learners (Harmer, 2015).

Willis (2007) said that all students learn differently and do not process information the same way. Each student has a special way of acquiring and keeping information that is particularly best for him or her. On account of the fact that different individual has different learning styles, they possess various sensory needs and require dynamic activities that are appealing for them. Whilst many explanations have validated to be more effective in teaching-learning circumstances, some receive deeply by way of the auditory, some by way of the visual and some achieve with the kinesthetic. Accordingly, students' sensory needs have a great effect on their academic attainment. As soon as students' sensory needs are not fulfilled, it make students disrupt their ability to learn and participate in academic activities. Multisensory approach is an approach that can solve problems dealing with diverse sensory needs and enhance student involvement. As the name implies, multisensory learning is the process of learning through the use of two or more senses. This includes combining visual, auditory, tactile-kinesthetic, and/or even olfactory and taste (Scott, 1993). Multisensory approach meets the students' sensory needs.

By teaching through multiple senses, teachers are ensuring that students who learn through visual stimulation, auditory stimulation and movement are all being addressed and reached (Christie, 2000). To summarize, multisensory learning is also a more engaging approach so that it assures for all students by considering their learning preferences are provided with multiple ways to learn and comprehend. This research may help teachers and curriculum developers to review their instructional methods and curriculum in order to foster future education.

Purposes of the Study

- 1.To study the difference between pre-test and post-test in Myanmar literacy engagement of Grade 1 students.
- 2.To study how multisensory learning impacts on Myanmar literacy engagement of Grade 1 students.

Definitions of Key Terms

Multisensory Learning. Multisensory learning is continual use of the two or more senses to teach abstract concepts, making them concrete and accessible for memory, usage, and transference, and using several modalities at one time to strengthen neural pathways (Sprenger, 2008).

Literacy. Literacy is operationally defined as the ability to read, write, communicate, and compute using printed and written materials associated with varying contexts (Wilso, 2016).

Engagement. Engagement is defined as the students' willingness to actively participate in the learning process, as well as a demonstrating of sustained involvement and positive emotional tone toward learning experiences (Miller et al., 2011).

Related Literature Review

Multisensory Approach

Multisensory was one of the methods which had been adopted in the application of teaching and learning strategies. Multisensory teaching was developed by several pioneers in the field of education such as Montessori (1912), Fernald (1943), and Gillingham & Stillman (1997), where they have had to teach toddlers and students with learning disabilities such as dyslexics, late learners and those with inability to focus in learning (Inocian, 2018; Nakra, 2019). This approach was first introduced by Grace Fernald in 1943 and popularized by Maria Montessori (Inocian, 2018; Nakra, 2019). A few principles were applied as part of the technique to integrate all sensory such as application by the professionally trained, testing using appropriate tests, enhanced sensory activities involving audio and visual, safe intervention areas, engaging activities, activities requiring interaction involving the whole body especially through game-playing, the creation of internal motivation, and activities enjoyed by the students (Inocian, 2018).

Literacy

There is no best way to define literacy which changes according to the needs and practices of groups of people. Thames and York (2004) stated that literacy was complex; it is a constantly mediated force that can take on a life of its own in different contexts, cultures, and social and political areas (Kennedy et al., 2012). Because literacy evolves with changes in cultural communicative practices and technological developments, so too do definitions of literacy (Wilso, 2016). A wide range of theoretical perspectives which have evolved and developed over time strengthen research on literacy. These perspectives have a great impact on research, policy and pedagogy (Kennedy et al., 2012). As the years passed, there were numerous theories with respect to literacy. They are maturational theories, cognitive theories, constructivist theories, socio-cultural theories, psycholinguistic theories, emergent literacy, digital literacy, multimodality (Kenned et al., 2012).

Students' Engagement

Student engagement was crucial in the learning process since it was about the students' active participation that helped achieving the learning objectives (Miller et al., 2011). Classification of engagement into three key elements is cognitive, emotional and behavioral. This classification covered the complexity of students' engagement (Fredricks, Reschly, & Christenson, 2019). Involvement of student in class-associated activities is determined as behavioral engagement. Emotional engagement referred to students' affective responses to

learning; and cognitive engagement refers to mental effort to process information in execute classroom tasks (Ng, Bartlett, & Elliott, 2018). Behavioral and emotional engagement are preconditions of cognitive engagement (Ishak & Amjah, 2015).

Method

Sample of the Study

A total of 38 Grade 1 students, 20 male students and 18 female students, from B.E.M.S (19) Paukkaung were chosen by using cluster sampling method.

Research Method

The one group pre-test post-test experimental design was used. Quantitative and qualitative methods were used. Triangulation method, using students' interview, field notes and observation checklist, was used for qualitative study.

Instrumentation

To measure the Grade 1 students' Myanmar literacy engagement, Myanmar literacy test was constructed. DIBELS (Dynamic Indicator for Basic Early Skills) (Good & Kaminski, 2011) was referenced and modified for Myanmar literacy test. The DIBELS measures are indicators of beginning literacy skill development used to assess kindergarten through 6th grade beginning literacy skills (Good and Kaminski, 2011). The essential literacy skills measured and assessed by DIBELS include phonemic awareness, alphabetic principle, fluency, and reading comprehension. Myanmar literacy test was based on basic early literacy skills of DIBELS. In this study, there were nine subtests for Myanmar literacy test: Letter Sound Identification, Letter Name Identification, Rhyme Recognition, Rhyme Production, Nonsense Word Reading, Initial Sound Identification, Words Reading, Oral Reading and Listening Comprehension. The time allowed for Myanmar Literacy Test was 40 minutes.

For the qualitative study, interview questions were created. There were four items of interview questions in this study. Interview questions were stressed on students' reflection and opinions on multisensory lessons. Observation checklist was used with the focus on students' behaviors during multisensory activities. Observation checklist was constructed by following the principles and guidelines of Gay et al. (2012). There were ten items in the observation checklists. Field notes were used to get all relevant information of the students' situation during the intervention program. Field notes were based on the protocol of field notes guided by Gay et al. (2012). Field notes contained two basic types of information: (1) descriptive information about what the observer has directly seen or heard on-site through the course of the study and (2) reflective information that captures the researcher's personal reactions to observations, the researcher's experiences, and the researcher's thoughts during the observation sessions.

Procedure

Firstly, multisensory intervention framework was constructed. Then, multisensory lesson plans for Myanmar subject was created in order to develop multisensory intervention program. The multisensory lesson plans were constructed based on the Grade 1 Myanmar textbook. Then, Myanmar literacy test was constructed for the pre-test and post-test. Next, Grade 1 students from B.E.M.S (19) Paukkaung were selected as the sample by the cluster sampling method. The pre-test was administered to the students before the intervention program. After the pre-test had administered, the intervention program was implemented. The intervention program duration was totally eight weeks. There was one hour of teaching period for a day. During the intervention program, observation checklist was used to observe students' behaviors in multisensory activities. In order to collect data needed and to get the reliability of data, researcher assistant was involved as an observer. Moreover, field notes were written after every a lesson had finished in order to get the data about students' behaviors and activities during the intervention program. After completing the intervention program, post-test was assessed and data were calculated to know about the differences between pre-test and post-test. After administering the post-test, interview was conducted to get the students' feeling and reflection about the multisensory intervention program.

Data Analysis and Research Findings

Quantitative Data Analysis and Research Findings

Comparison of Pre-test and Post-test Results for Myanmar Literacy Test

To evaluate the difference between pretest and posttest in Myanmar literacy engagement of Grade 1 students, paired samples *t* test was calculated. To examine students' Myanmar literacy engagement, Myanmar literacy test was used. The mean scores and standard deviations of Myanmar literacy test of pre-test and post-test were described in Table 1. The results of paired samples *t* test stated that there were significant differences of pre-test and post-test results in letter sound identification ($t = -4.080, p < 0.001$), letter name identification ($t = -6.726, p < 0.001$), listening comprehension ($t = -15.558, p < 0.001$), nonsense word reading ($t = -27.313, p < 0.001$), rhyme production ($t = -15.308, p < 0.001$), words reading ($t = -17.402, p < 0.001$), initial sound identification ($t = -3.582, p < 0.001$), oral reading ($t = -20.004, p < 0.001$), rhyme recognition ($t = -4.839, p < 0.001$), and total Myanmar literacy test ($t = -39.6, p < 0.001$). It may be interpreted that multisensory learning effectively improved student's engagement in Myanmar Subject. Students performed better in post-test of letter sound identification, letter name identification, rhyme recognition, nonsense word reading, rhyme production, word reading, initial sound identification, oral reading, listening comprehension than those of pre-test. It was expected that, because of the multisensory intervention, students were versed in literacy skills such as alphabetic principles, the letter sound and letter names accurately and effectively. Also, it would be supposed that students were conversant in similar sounds and rhyming words through the multisensory approach. As well as, students would attain the ability to recognize and produce

the initial sound accompanying multisensory intervention. Moreover, there was an accelerated progress in nonsense words reading, words reading and oral reading, and it would be assumed that students mastered phonemic awareness, letter-sound correspondence and ability to blend letters into words together with multisensory approaches. Finally, it can be said that students developed listening comprehension skills by engaging in multisensory activities. Mean comparison of visual presentation was shown in Table 1.

Table 1. The Paired Samples *t* test Results for Myanmar Literacy Test

Subtest	Groups	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Letter Sound Identification	Pre-test	38	6.79	.905	-4.080***	37	.000
	Post-test	38	7.45	.504			
Letter Name Identification	Pre-test	38	6.45	.645	-6.726***	37	.000
	Post-test	38	7.39	.638			
Listening Comprehension	Pre-test	38	3.37	.489	-15.558***	37	.000
	Post-test	38	3.84	.370			
Nonsense Word Reading	Pre-test	38	2.21	.664	-27.313***	37	.000
	Post-test	38	7.03	.788			
Rhyme Production	Pre-test	38	2.27	.623	-15.308***	37	.000
	Post-test	38	4.37	.675			
Word Reading	Pre-test	38	1.92	.673	-17.402***	37	.000
	Post-test	38	6.13	1.319			
Initial Sound Identification	Pre-test	38	3.39	.547	-3.582***	37	.000
	Post-test	38	3.79	.413			
Oral Reading	Pre-test	38	2.50	.797	-20.004***	37	.000
	Post-test	38	7.61	1.424			
Rhyme Recognition	Pre-test	38	2.24	0.490	-4.839***	37	.000
	Post-test	38	4.42	0.642			
Total Myanmar Literacy Test	Pre-test	38	30.76	1.992	-39.600***	37	.000
	Post-test	38	52.03	2.410			

Note.*** $p < .001$

Qualitative Data Analysis and Research Findings

Triangulation method was used. Three types of data were collected in this study; students' interviews, observation, and field notes.

Results of Interviews

The first question included in interviews is "Did you enjoy learning with multisensory activities?" "Why/Why not?" All students answered they enjoyed learning with multisensory activities, however their reasons of responses varied. Exactly, students enjoyed because of playing games (75% of participants), proficiency in reading and writing (eg. I can read and write much better than before, 64% of participants), unusual and new activities (eg. I have never

learned with games like this before, 58% of participants), motivation (eg. Sometimes, I used to be lazy and sleepy to learn but I was happy to learn now, 43% of participants), other reasons (25% of participants). Visual presentation was shown in Figure 1.

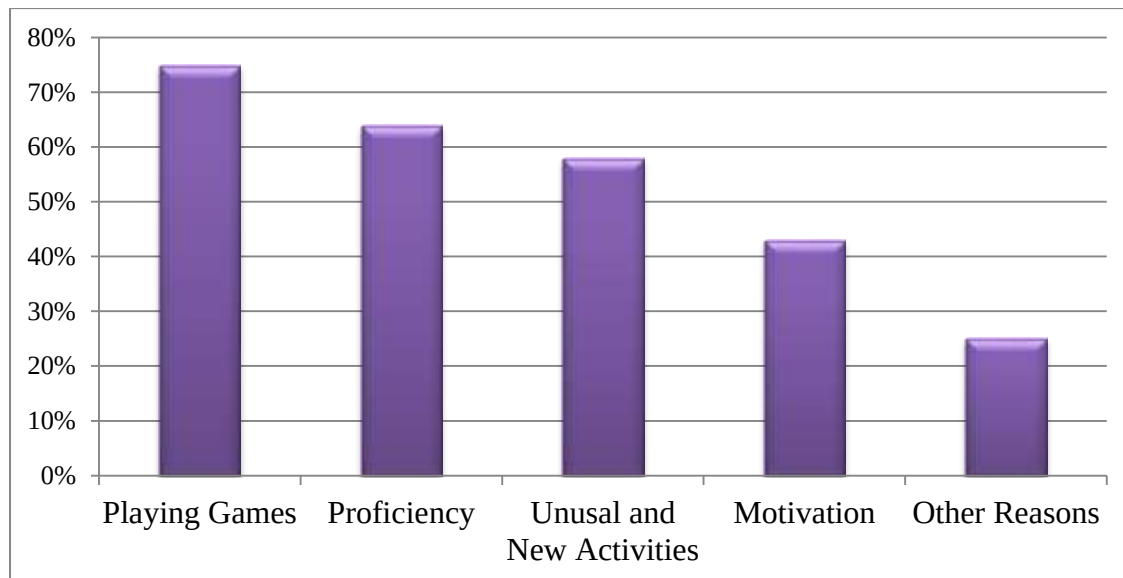


Figure 1 Percentage of Students' Responses Regarding the Reasons for Why They Enjoy Learning with Multisensory Activities

The second question was "Which sensory (kinesthetic, auditory, visual, tactile, gustatory) activities used in the lessons did you like most?" Students answered their favorite activities used in the lessons. Specifically, responses were kinesthetic (98% of participants), tactile (88% of participants), gustatory (67% of participants), visual (62% of participants), auditory (56% of participants). Visual presentation was as shown in Figure 2.

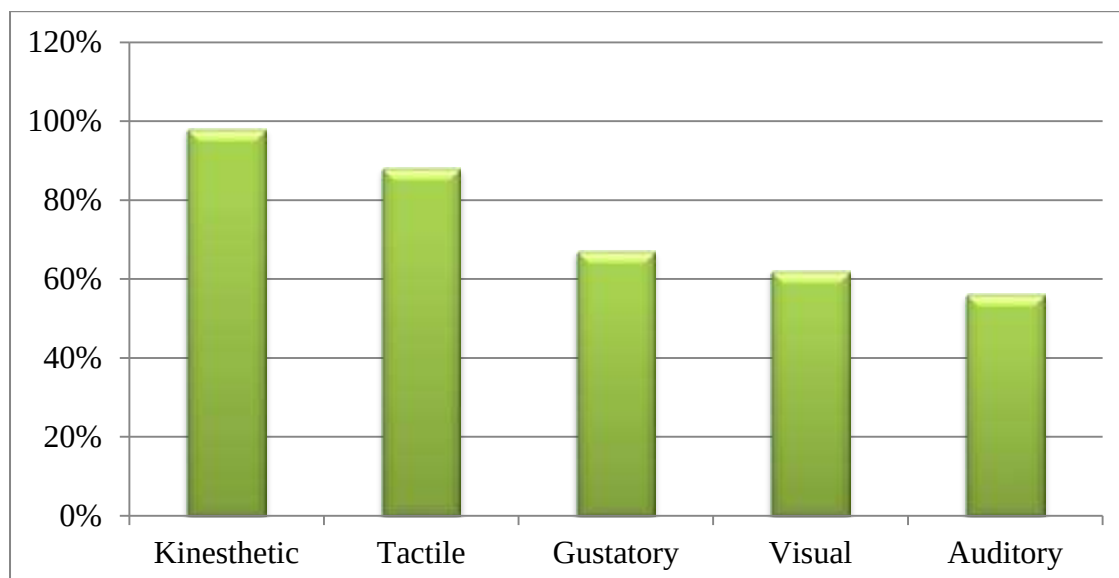


Figure 2 Percentage of Students' Responses Regarding Their Most Favorite Sensory Activities

The third question was "Which sensory (kinesthetic, auditory, visual, tactile) activities used in the lesson did you like least?" Regarding their least preferred sensory activities, most students expressed nothingness that there was no sensory activity that they didn't like (eg. I like

every activities, they all are fun; I like all and I wanted to learn more and more; 85% of participants did not express anything they didn't like). Other responses included tactile (10% of participants, eg. I don't like writing letters on the toothpaste because I didn't like its smell; I don't like writing letters on the sand because it was dirty), Kinesthetic (5% of participants, eg. I don't like shooting phonics sounds cards with hockey sticks and read it activity because I can't shoot the cards rightly; I don't like bouncing the ball to the letters from the wall because my hands were tired to bounce the ball). Visual presentation was viewed in Figure 3.

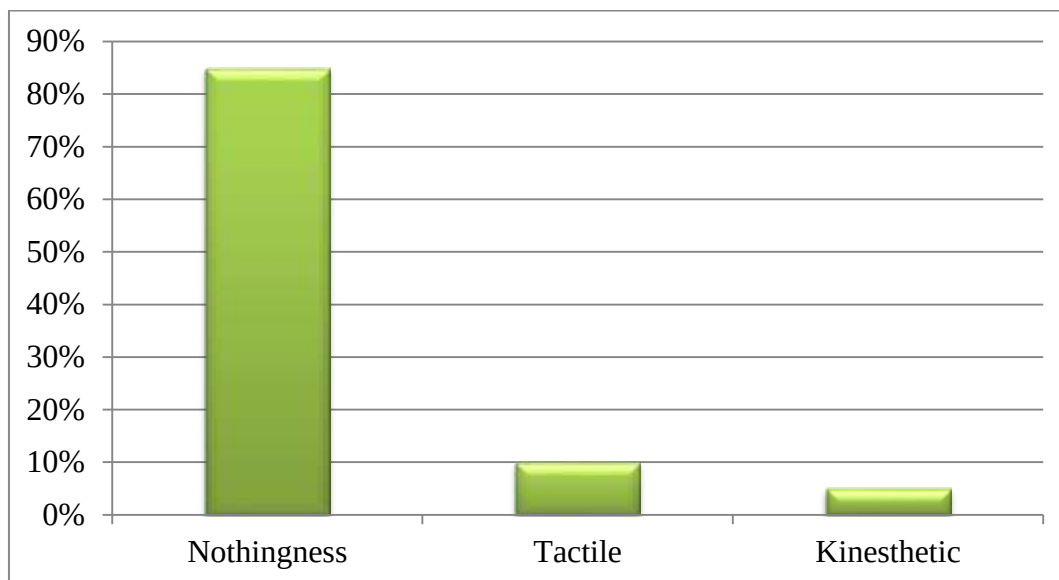


Figure 3 Percentage of Students' Responses Regarding Their Least Favorite Sensory Activities

The fourth question was "Which sensory activities (visual, auditory, kinesthetic, tactile, gustatory) do you think you are powerful or you can do the best? Students answered their powerful sensory activities used in the lessons. Precisely, responses are tactile (84% of participants), kinesthetic (80% of participants), visual (78% of participants), auditory (65% of participants), gustatory (60% of participants). Visual presentation is as shown in Figure 4.

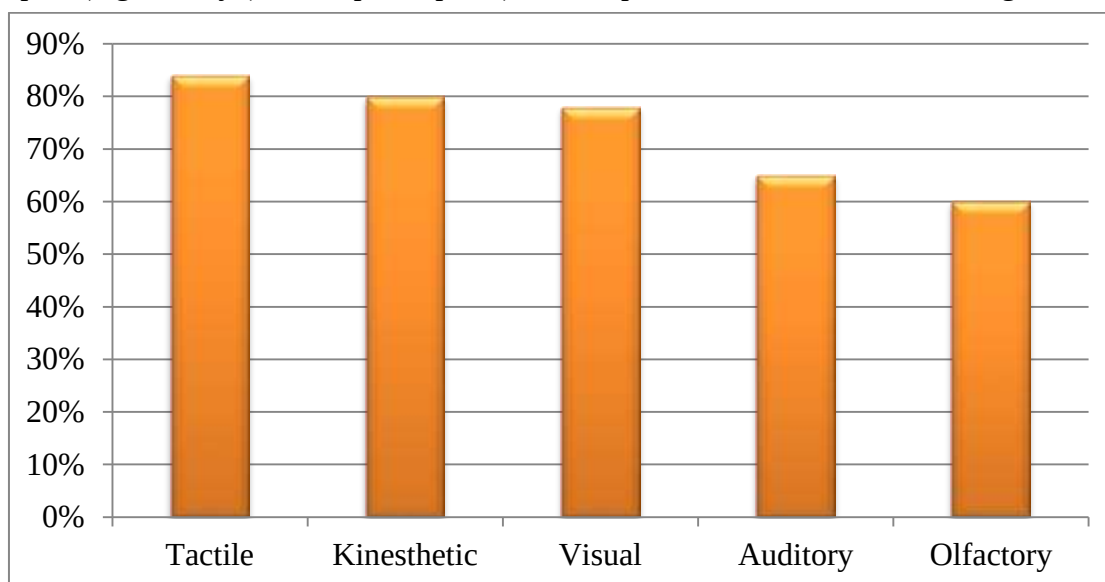


Figure 4 Percentage of Students' Responses Regarding Their Powerful Sensory Activities

To conclude, all students described multisensory lessons as fun and enjoyable. Students were interested in multisensory lessons and wanted to be involved in learning. This finding was consistent of Molenda & Bhavangri (2009), which stated that students become not only cognitively involved but also emotionally involved in multisensory activities in the classroom.

Results of Observation Checklists

The number of total observations was 40 for total 40 lesson plans. Percentages of observation were calculated based on total 40 observations. Students participated in various sensory activities actively and enthusiastically. However, students participated weakly in group work activities. The following table showed summary of results of observations checklists. The following Table 2 revealed the summary of results of observation checklists.

Table 2. Summary of Results of Observation Checklists

No	Students' Behavior	% of total observation
1.	Students looked at the pictures or visual aids .	85%
2.	Students listened to the teacher presentation.	87%
3.	Students wrote on the worksheets or in their notebooks.	95%
4.	Students participated in hands-on activities.	80%
5.	Students engaged in kinesthetic activities.	85%
6.	Students involved in group work activities.	60%
7.	Students involved individual work activities.	75%
8.	Students took part in tactile activities.	80%
9.	Students responded to teacher questions.	70%
10.	Students performed in reading or singing the poems, songs.	80%

Results of Field Notes

The results from the field notes indicated that students were motivated to learn in different ways. Students performed energetically and were passionate in daily multisensory activities through the whole of intervention duration. Overall to say that, from the data in the field notes, it was determined that students engaged in their own learning by using a variety of multisensory approaches.

Conclusion and Suggestion

To summarize, this research has discussed about the application of multisensory approach in Grade 1 Myanmar subject. Owing to the numerous benefits of multisensory learning from the

current study, it is highly recommended that teachers should use multisensory learning in their classrooms. Based on the quantitative and qualitative data results, multisensory approach not only produced high test scores but also encouraged educational fun which fostered motivation and engagement of students. When students have fun in their learning at schools, they become friendly with schools and develop a love of learning. Since the study results showed that students received literacy engagement, and students were emotionally and behaviorally engaged in multisensory activities, teachers and administrators should apply multisensory learning approach and activities as a media to become child friendly school as well as to promote literacy engagement. Based on the findings of this study, some recommendations for future research were made. Supplementary confirmation of the effects of multisensory approach will be provided to the researchers by expanding the utilization of multisensory approach across another subject. A comparative study amongst primary, middle and upper grades should be conducted in order to get more light on the effect of multisensory learning. Again, future research should be operated to study the impact of multisensory learning on special students and special education classroom.

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EXPLORING INTENTIONAL SELF-REGULATION FACTORS INFLUENCING ON YOUTH DEVELOPMENT*

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Abstract

This study was to explore the factors of intentional self-regulation influencing on development of youth in Myanmar. In this study, a total of 25 participants, Grade 10 and Grade 11 students were selected from Basic Education Schools by using purposive sampling technique. Semi-structured interview and thematic analysis were applied. This study was conducted at 6 Regions and 4 States in Myanmar. Interview research questionnaire for intentional self-regulation was developed by researcher based on related review of literature. Interview questionnaire for youth development was developed by researcher based on Youth Interview Questions (Arnett, 2000). Based on the qualitative results, the researcher explored the role of intentional self-regulation in positive youth development of adolescents. Self-management, self-awareness, resilience and motivation were the factors that intentional self-regulation influenced on positive youth development of adolescents. Self-management is the ability to manage behaviors, thoughts and emotions in a conscious and productive way. Strong self-management skills persons have ability to set goals independently and take the initiative to achieve them. Self-awareness is the ability to look inward, think deeply about the behaviors and consider how it aligns with moral standard and values. Self-awareness also gives a deeper understanding of own attitudes, opinions and knowledge. Resilience is the capacity to remain flexible in our thoughts, feelings and behaviors when faced by life disruption, or extended periods of pressure. Motivation is an essential ingredient in effective teaching and learning. Motivated students are much more likely to achieve their potential and find success. Therefore, the reasons for possessing positive youth development were having these skills such as self-management, self-awareness, resilience and motivation related to intentional self-regulation of adolescent.

Keywords: Intentional Self-Regulation, Youth Development, Youth

Introduction

Importance of the Study

All civil societies share a common interest in promoting the development of an individual. The role of youth plays as a crucial part in society. The youth grow into healthy adults who can help improve our society and become the valuable leaders for a bright and prosperous future. Youth include roughly the second decade of life. A adolescence is a critical link between childhood and adulthood, characterized by significant physical, psychological and social transition. During adolescence, young people explore their identities and thinking about pathways into adulthood. Their increasing cognitive and behavioral capacities provide them with the tools for understanding and evaluating possible identities tasks. Many researchers pointed that the importance of having the skills to self-regulate and maintain a positive sense of future. The current study investigated the role of intentional self-regulation or youth's goal-directed skills and youth's hopeful expectations about the future in predicting positive youth development. Intentional self-regulation skills are goal-directed behaviors that maximize

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engagement in behaviors and contribute towards positive future outcomes. It describes how people make choices, plan actions to reach their goals and regulate the execution of their actions.

Aim of the Study

The main aim of this study was to explore the factors of intentional self-regulation influencing on development of youth.

Definitions of Key Terms

Intentional Self-Regulation: Intentional self-regulation is defined as goal-directed action that is aimed at harmonizing an individual's personal goals with demands and resources in the environment. (Gestsdottir & Lerner, 2008)

Youth Development: Development that promotes positive outcomes for young people by providing opportunities and supports to promote outcomes of competence, confidence, connection, character and caring. (Lerner et al., 2006)

Youth: A period of maturation and gradual transition from childhood to adulthood.

Review of Related Literature

Intentional Self-Regulation Theory

Intentional self-regulation describes how individual make choices, plan actions to reach their goals and regulate the execution of their actions, making processes of intentional self-regulation central to healthy human functioning (Lerner et al., 2001; McClelland et al., 2010). Conceptualizing self-regulation in this way implicates a person's sense of self—his or her self-definition or identity as the organizing attribute of the individual. Theories of intentional self-regulation typically focus on goal-directed behaviors, such as goal selections, goal pursuit and goal management. Theories describe how people's evaluations of their own abilities, the opportunities within their environments and the progress they are making towards a goal, directed goal selection and shape self-regulatory behaviors. Research associated with these models has sought to describe, explain and in the service of promoting mutually beneficial exchanges between people and their settings, optimize the cognitive, emotional and behavioral facets of the individual (McClelland et al., 2010). The model of Selection, Optimization and Compensation was a life-span conception. The SOC model is a comprehensive theoretical framework that discusses goal setting and goal pursuit within a life-span perspective about successful development within and across different domains of functioning (Freund & Baltes, 2002; Wiese, Freund & Baltes, 2000).

Developmental System Theory

Developmental system theory is useful in studies of adolescent development (Kiely, 2010). A core factor of developmental system theory represents the mutually influential relations between an individual and their contextual factors (Lerner & Miller, 1993). This model emphasizes that the basic process of human development involves mutually influential relations between individuals and the multiple levels of their complex and changing contexts. These theories focus on relations among variables within and across the integrated levels of organization that comprise the ecology of human development (Bronfenbrenner & Morris, 2006; Overton, 2006). Human development involves organized, systematic and successive changes within a person across life span (Lerner, 2002).

Method

Research Design

Qualitative research design and semi-structured interview were used in this study.

Participants of the Study

In quantitative study, 1110 students from 10 Basic Education High Schools participated. Among them, 25 students were selected by using purposive sampling technique for in-depth qualitative study. Due to the explanatory sequential mixed-method design, participants for the qualitative phase were determined based on the results of the initial quantitative phase. In qualitative phase, participants were classified according to their intentional self-regulation and positive youth development levels; high, moderate and low.

Adolescents were classified according to their intentional self-regulation and positive youth development levels; high, moderate and low as below. Researcher divided participants into high and low groups based on $+1$ and -1 standard deviation from the sample mean. The participants with scores above the $+1$ standard deviation from the sample mean were identified as the high group and the participants with scores below the -1 standard deviation from the sample mean were identified as the low group. And then, the participants with scores between $+1$ and -1 standard deviation from the sample mean were identified as the moderate group.

Levels of Intentional Self-Regulation and Positive Youth Development

Intentional Self- Regulation	Positive Youth Development				Total
		High	Moderate	Low	
	High	70	79	4	153
	Moderate	67	697	94	858
	Low	3	63	33	99
	Total	140	839	131	1110

The four groups such as (high intentional self-regulation, high positive youth development), (high intentional self-regulation, low positive youth development), (low intentional self-regulation, high positive youth development) and (low intentional self-regulation, low positive youth development) were identified according to the categories and presented in the following table.

Categories of Intentional Self-Regulation and Positive Youth Development

	Categories	Numbers
1	High ISR/High PYD	70
2	High ISR/Low PYD	4
3	Low ISR/ High PYD	3
4	Low ISR/ Low PYD	33
	Total	110

In above Table, levels of intentional self-regulation and positive youth development were presented by respective schools.

Levels of Intentional Self-Regulation and Positive Youth Development According to their Basic Education High Schools

Name of School	Levels of Intentional Self-Regulation (ISR) and Positive Youth Development (PYD)			
	High ISR/ High PYD	High ISR/ Low PYD	Low ISR/ High PYD	Low ISR/ Low PYD
BEHS(1), Myitkyinar, Kachin State	12	-	-	1
BEHS(1), Loikaw, Kayah State	5	-	-	7
BEHS(1), Kyeikhto, Mon State	22	1	1	2
BEHS (Kyaythie), Shan State	-	-	-	3
BEHS(25), Aung Myay Thar Zan, Mandalay Region	5	-	2	4
BEHS(1), Magway, Magway Region	5	2	-	4
BEHS (Htantapin), Bago Region	-	-	-	3
BEHS(1), Hinthata, Ayeyarwaddy Region	8	-	-	4
BEHS(1), Hmawbi, Yangon Region	12	1	-	3
BEHS(3), Naypyitaw	1	-	-	2
Total	70	4	3	33

The selected participants of the qualitative study for intentional self-regulation and positive youth development of adolescents were described in Table.

Participants of the Qualitative Study for Intentional Self-Regulation and Positive Youth Development

Intentional Self-Regulation	Positive Youth Development	
	High	Low
High	10	4
Low	3	8

Out of 110 students, twenty five students were selected from four groups of intentional self-regulation and positive youth development levels to investigate the role of intentional self-regulation in positive youth development of adolescents by using purposive sampling technique. The students were ten students of high level of intentional self-regulation and high level of positive youth development, four students of high level of intentional self-regulation and low level of positive youth development, three students of low level of intentional self-regulation and high level of positive youth development and eight students of low level of intentional self-regulation and low level of positive youth development.

Instruments

For the qualitative phase, the interview was planned to conduct individual semi-structured interview format. Interview research questionnaire for intentional self-regulation was developed by researcher based on related review of literature and interview questionnaire for positive youth

development was developed by researcher based on Youth Interview Questions (Arnett, 2000) used in the quantitative study. After preparing the measuring scale, expert review was conducted for the face validity and content validity by eight experts who have special knowledge and well experience in the field of Educational Psychology.

Data Analysis and Findings

According to the quantitative data analysis results, the intentional self-regulation influence on the positive youth development of adolescents. The intentional self-regulation was positively correlated with their positive youth development. In other words, this mean that if the adolescents' intentional self-regulation was higher, their positive youth development would be higher. Based on the quantitative data analysis results, the researcher focused to explore the factors of intentional self-regulation that influenced on youth development. Therefore, qualitative study was conducted again to capture for deeper understanding of the role of intentional self-regulation in positive youth development of adolescents. The qualitative study aims to explore the intentional self-regulation factors influencing on positive youth development of adolescents.

The interviews were conducted individually to allow each participant the maximum opportunities to express his or her views and feelings. To minimize influence on participant's opinions during the interview, the interviewer maintained the participant's responses to reach the main essence of qualitative interview questions with a little guidance. Fifteen participants were interviewed by face to face and ten participants were interviewed by phone. In addition, during the interview, the researcher consciously avoided expressing personal views that might influence participant's opinion.

The researcher also conducted thematic analysis to explore related themes. Thematic analysis is one of the most frequently used qualitative analysis approach. It was used for analyzing qualitative data that involves reading through a set of data and looking for patterns in the meaning of the data to find themes. It emphasizes identifying, analyzing and interpreting qualitative data patterns. The responses of some participants were presented as follows. Based on the responses of the participants from the groups, the researcher conducted the thematic analysis to search for themes and to capture the narrative available in the account of data sets.

Participant ID	- 01
Gender	- Male
Grade	- 11 (STEAMS-1)
Group	- High Intentional Self-Regulation and High Positive Youth Development

Being interviewed, student 01 responded about himself. He had many ambitions. Among them, the highest ambition was to become a surgeon because he would like to care the people's health. To be attainable his ambition, he thought that he must try hard very well and he must read a lot of books. He set up his own timetable to study the homework. In Grade 9, he passed the examination with the highest points and he achieved full mark in Mathematics. He was interested in mathematics and he studied well. He attended the class regularly and paid attention the teachers' instructions. He practiced the lesson and did homework regularly. When he faced the

difficulties in solving the Mathematics problems, he took advice and feedback concerning the problems from his teacher and friends. And then, he read the Mathematics journal which published from Myanmar Board of Examination. Moreover, his parents facilitated and supported the Mathematics books and journals. They encouraged and appreciated him when he achieved the success in academic. When he achieved success in school activities, his parents praised and gave the prize. He studied together the lessons with his friends. He was a leader in the classroom and he was interested and participated in school activities. He was also a good tennis player. He had high self-confidence in class works and home works. He was satisfied in his learning environment.

Participant ID	- 02
Gender	- Female
Grade	- 11 (STEAMS-1)
Group	- High Intentional Self-Regulation and Low Positive Youth Development

Student 02 answered the interviewed questions respectively. She had many ambitions in her life such as to be a doctor, a nurse, a designer, a famous painter and a beauty counselor and so on. Among them, she will choose to attend to National Cultural University to study the painting well. She thought that attending this University would be appropriate to her hobby. In Grade 8, she participated as a representative for their school in painting competition at township level. She attained the outstanding award in painting competition and she was happy and satisfied well. She was interested in painting and attended the painting training in holidays. She collected the accessories concerning the painting and studied the painting from YouTube by using her mother's hand phone. Her mother took her to the painting gallery and she studied and watched the paintings. Her parents encouraged and recognized in her painting and they supported painting pencils, books, brushes, canvas and so on. When she drew a painting, she gave strongly attention in drawing and she neglected the surrounding. She preferred to draw the painting silently. She didn't like in participating to speak more because she was silent type. She felt less confidence in presenting lessons in front of the class. She loved her friends but she had a few friends. She contacted only her close friends in classroom.

Participant ID	- 03
Gender	- Female
Grade	- 10 (STEAMS-1)
Group	- Low Intentional Self-Regulation and High Positive Youth Development

According to participant 03, she told about her ambitions. She had many ambitions but when she will pass the Matriculation exam, she will choose the university according her parents' attitudes. Her parents will choose about her profession. In Grade 5, she participated in Myanmar essay competition celebrated for Union Day. She won the second prize at township level. Her mother was a teacher and she guided and helped in writing essays. Her mother searched the books and collected the data concerning about the Union day. And then, she read the collected data and prepared the essays by using her mother's supports. When she faced the difficulties

concerning lessons and school activities, her mother helped to her by giving appropriate suggestions. She was happy in participating in class activities and school activities with her friends. Her friends loved her and they helped her class activities and homework. She thought that she was a good student for her school because she had excellent remarks from her teachers in academic achievement.

Participant ID	- 04
Gender	- Female
Grade	- 10 (STAMS-1)
Group	- Low Intentional Self-Regulation and Low Positive Youth Development

Student 04 responded the interviewed questions. She had many ambitions and hobbies but she confused that what she would like to be in future. She depended on her parents and she obeyed the parents' instructions well. Her parents directed instructions in her daily activities. And then, she had an elder sister. Her elder sister had been her guide, counselor and friend. When she faced learning difficulties, her parents and her elder sister helped to solve it. They had high expectations for her learning. She tried hard in her learning and achieved high marks in most subjects. In Grade 9, she passed the mid-term examination with the first position. Her sister planned the timetable to study the all subjects and explained the lessons well. She followed her sister's instructions. Her parents and her sister wanted her to achieve the first prize in every examination. So, she felt worry when she faced the examinations. She didn't participate in school activities such as sport competition and other competitions. She had only two best friends who were friends since the primary students. She contacted with her two friends in classroom and they shared the subject knowledge to her.

In this interview study, the twenty five participants were chosen into four groups on the results of the initial quantitative phase. Among them, the first group was high intentional self-regulation and high positive youth development (High ISR/High PYD), the second group was high intentional self-regulation and low positive youth development (High ISR/Low PYD), the third group was low intentional self-regulation and high positive youth development (Low ISR/High PYD) and the fourth group was low intentional self-regulation and low positive youth development (Low ISR/Low PYD). There were 10 participants in first group, 4 participants in second group, 3 participants in third group and 8 participants in fourth group. Based on the interview results of the four groups, thematic analysis was conducted to explore the intentional self-regulation factors affecting on positive youth development. After conducting the thematic analysis, four factors emerge that the intentional self-regulation factors affecting on positive youth development. These four factors were self-management, self-awareness, resilience and motivation.

Based on the responses of the participants from the four groups, the researcher conducted the thematic analysis to search for themes and to capture the narrative available in the account of data sets. And then, four themes were explored that intentional self-regulation influenced on positive youth development of adolescents. As the results of the semi-structured interview, there were some related factors that intentional self-regulation influenced the positive youth development of adolescents. The influencing factors of the intentional self-regulation on positive

youth development of adolescents were self-management, self-awareness, resilience and motivation.

Comparison of Intentional Self-Regulation and Positive Youth Development of among Four Groups for Each Level

Factors of Intentional Self-Regulation Influencing on Positive Youth Development	Group 1 (High ISR/ High PYD)	Group 2 (High ISR/ Low PYD)	Group 3 (Low ISR/ High PYD)	Group 4 (Low ISR/ Low PYD)
Self-Management	- had the ability to set personal goals for them- selves. - could manage time for their learning. - could adapt to new challenges and embrace their strengths in learning. -could solve the problems when they face it. -understood their emotions and prioritized their wellbeing. -could create positive learning environment.	- collected goals and prioritized appropriate goals - could identify and use manage ment strategies in learning. -collected the required resources for learning. - did managing time effectively.	- couldn't set the personal goals for themselves -usually depend on others in doing most activities -weren't interested in thinking and doing initiative things. -always follow others'instructio ns and guidelines. - were weak in planning and organizing in their learning	- couldn't identify and confused concerning the personal goals. -canbe influenced by close persons. -couldn't attempt to find out their strengths and weakness. - usually worry about their actions and less confidence themselves.
Self-Awareness	- accepted and recognized the strengths and weakness themselves. -objectively evaluated their actions themselves and manage their emotions. -had make good decision grounded in	- realized their feelings and hobbies. - thought that what their actions impact their surroundings. - assessed what they want to do and track their	- had less attention themselves and others' feelings. - didn't think deeply what they needs and desires to improve their learning. - had less	- ignored their hobbies and feelings. - rarely paid attention to their duties and responsibilities. - didn't realize their

Factors of Intentional Self-Regulation Influencing on Positive Youth Development	Group 1 (High ISR/ High PYD)	Group 2 (High ISR/ Low PYD)	Group 3 (Low ISR/ High PYD)	Group 4 (Low ISR/ Low PYD)
	their own value	progress.	confidence in making hard decisions	roles in participating in activities.
Resilience	-when they met with an obstacle, they were able to adapt and adjust quickly. -didn't let obstacles or failure stand in the way of accomplishing their goals. -had the power to make the changes necessary. -focused on the good in their life.	-acknowledged past mistakes and found ways to do better moving forward. -searched for the value of having a support system. - controlled their emotions and behaviors that delayed to their goals. - had the power to navigate unpredictable situations.	-couldn't overcome the problems and difficulties. - couldn't adapt to change positively recovered from difficulties. -gave up easily when they face the difficulties and new challenges.	- couldn't accept failure and mistakes. - had worry and anxiety about their misconception . - easily gave up and never find out the solutions concerning their learning problems.
Motivation	-had got supporting from parents and family members. -received praising and encouraged to try better again. -had opportunities to explore their desires independently	- received positive suggestions and feedbacks from their parents and peers. - got the supportive words when they faced failures and depression.	- got strict instructions from their family members. - didn't have positive encouraging from parents.	- had worry about their weakness and mistakes because their parents didn't like to failure.

Self-management is the ability to manage behaviors, thoughts and emotions in a conscious and productive way. People with strong self-management skills know what to do and how to act in

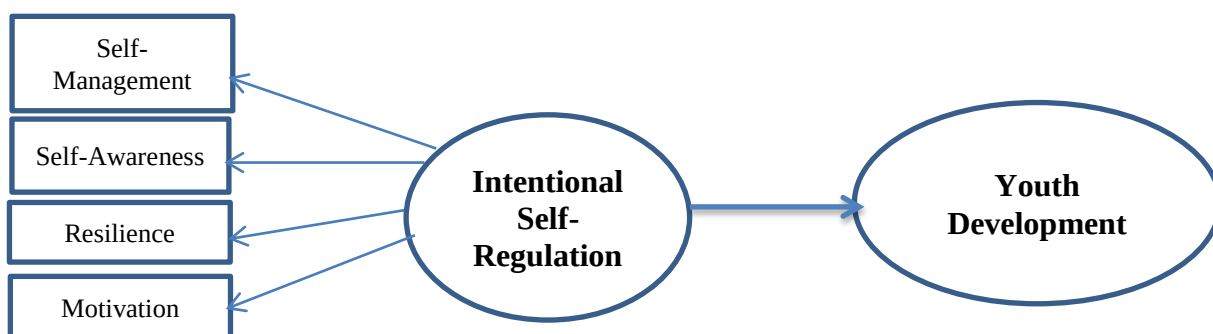
different situations. They know how to handle their anger, how to avoid distractions and what they need to do to achieve their goals. Strong self-management skills persons have ability to set goals independently and take the initiative to achieve their goals. Self-management skills allow adolescents to maximize productivity, improve workplace performance and efficiently achieve professional goals (Jennifer Herrity, 2023).

Self-awareness is the ability to think deeply about your behavior and consider how it aligns with moral standards and values (Shelly Duval & Robert Wicklund, 1970). They argued that when your behavior is out of alignment with your standards, you feel uncomfortable, unhappy and negative. By contrast, when your behavior and values are aligned, you feel positive and self-confident. Self-awareness also provides a deeper understanding of own attitudes, opinions and knowledge. It brings benefits in both personal and professional life. If adolescents are aware of their own strengths and weaknesses, they have the power to use their strengths intentionally and to manage or eliminate their weaknesses. Knowing their strengths and weaknesses also has positive long-term benefits for their career as well as for their long-term health and happiness in life.

Resilience is the capacity to remain flexible in our thoughts, feelings and behaviors when faced by life disruption, or extended periods of pressure, so that we emerge from difficulty stronger, wiser and more able (Pemberton, 2015). Resilient individuals are typically more adaptable, open to new changes and experiences and adopt a healthy perspective they see setbacks as opportunities for learning (Neenan, 2018). Moreover, resilient adolescents generally display four personal characteristics: social competence, problem-solving skills, autonomy and a sense of purpose. The students who possessed resiliency characteristics such as high academic outcomes and social self-confidence were more likely to stay in school and have higher grades than their peers. The most resilient students also reported relatively higher connections with peers, teachers and perceived family support (Howard & Jones, 2007).

Because adolescence is a time of change and preparation for adulthood and because academic achievement at this time can have significant implications on employment or career opportunities is vital to ensuring students achieve their potential in school. Motivated students are much more likely to achieve their potential and find success. Motivation is an essential ingredient in effective teaching and learning. It not only more positive behavior in students but it also contributes to a greater sense of wellbeing (Hannah Hawthorne, 2021). Understanding how to motivate children and adolescents in education is crucial, if the parents and teachers provide them with the best possible start in life.

Based on the qualitative results, the researcher explored the role of intentional self-regulation and optimal attachment in positive youth development of adolescents. Self-management, self-awareness, resilience and motivation were the factors that intentional self-regulation influenced on positive youth development of adolescents.



Results of Intentional Self-Regulation Factors Influencing on Positive Youth Development

Discussion and Suggestions

There are some related factors that emerged from the qualitative analysis of the semi-structured interview. As the findings of the qualitative study, there were some related factors that intentional self-regulation influenced the positive youth development of adolescents. The influencing factors of the intentional self-regulation on positive youth development of adolescents were self-management, self-awareness, resilience and motivation. Adolescents who have high intentional self-regulation possess good self-management and self-awareness skills. Moreover, adolescents also have resiliency skills to overcome various problems and difficulties in their learning process. Besides, adolescents get motivation from their parents and peers when they have success or failure in their learning process. Then, the reasons for possessing positive youth development of adolescents were having these skills such as self-management, self-awareness, resilience and motivation related with intentional self-regulation of adolescent.

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ONLINE LEARNING READINESS OF PRE-SERVICE TEACHERS

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Abstract

The main purpose of this study was to investigate pre-service teachers' online learning readiness. This study was a quantitative survey and a simple random sampling technique was used. A total of 600 pre-service teachers (2022-2023 AY) from Yangon University of Education participated in this study. Online Learning Readiness Scale (Hung, 2010) was used and participants indicated their opinions by using five-point Likert scales. Data from the questionnaires were coded and analyzed by using descriptive statistics, independent samples *t*-test and one-way analysis of variance (ANOVA). Descriptive statistics stated that the mean percentages of pre-service teachers' self-directed learning (78.44%) was found to be the highest and that of pre-service teachers' online communication self-efficacy (69.46 %) was the lowest. Regarding gender, the mean scores of male pre-service teachers is greater than that of females and significant difference was found on overall scale as well as four subscales such as computer/internet self-efficacy, learner control, motivation for learning and online communication self-efficacy. ANOVA results of education level showed that the fifth year pre-service teachers exhibited a great significant readiness in all dimensions of online learning readiness. Moreover, the older pre-service teachers showed significantly higher readiness than younger pre-service teachers in overall online learning readiness, computer/internet self-efficacy, self-directed learning and learner control. Then, the online learning readiness of the pre-service teachers did not differ significantly in the duration of the internet use. Finally, pre-service teachers who have attended the online training possess higher online learning readiness in the computer and internet self-efficacy than the participants who have not attended the online training. This study made the contribution that policy makers in higher education institutions should prepare a comprehensive plan focusing on not only teaching and learning strategies, online activities and examinations but also finding ways to improve the students' readiness for online learning. In addition, government should give support such as establishing infrastructure, professional training and finance to ensure the quality of online education system.

Key words: Online Learning, Online Learning Readiness, Pre-service Teachers

Introduction

An unexpected outbreak of Covid-19 around the world in 2019 posted huge challenges to the society, including the continuity of teaching learning process in the education sector. During this critical period, online learning has become an attractive option for many education institutions worldwide as it is an approach that allows teaching learning activities to be conducted in a more flexible manner.

Online learning system is not a new concept to many educational institutions from the developed countries since it has been adopted, especially in the higher education level, prior to the pandemic (Palvia et al., 2018). However, owing to the limitation of internet access in many rural areas, most of the higher educational institutions in the developing countries implemented blended learning method before the outbreak of Covid-19 (Hanan & Mervat, 2015). In fact, many educational institutions in Myanmar remained traditional learning system, depending mainly on the face-to-face interaction between students and teacher during this period.

Therefore, an overnight shift from conventional physical learning to online learning in this pandemic moment has posed a major challenge of preparedness to most educational

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institutions from the developing countries. Among a number of factors that could lead to the failure of online learning, students' readiness to online learning is one of the crucial factors as the previous studies indicated that lack of online learning experience, low level of self-discipline, poorly preparation, technical difficulties, unequal ICT infrastructure, low self-confidence and direction are key factors that affect the outcome of online learning during the COVID-19 (Bao, 2020; Bao & Zhang, 2021; Dhawan, 2020; Favale, Soro, Trevisan, Drago, & Mellia, 2020).

Borotis and Poulymenakou (2004) defined online learning readiness as being mentally and physically ready for certain online learning experience and actions. Online learning requires communications via computer and quality in learning experiences in this media, efficiency in learning activities, student interaction and active participation (de Bruyn, 2004).

Gunawardena and Duphorne (2001) stressed that when readiness increased, satisfaction from learning experiences increased as well. Davis (2006) also stated that readiness was significant in increasing the achievement of the students. Lau and Shaikh (2012) found in their study that gender, financial aid, ethnicity, and class affected the readiness of students for online learning, however learning style did not. In a study conducted by Demir Kaymak and Horzum (2013), it was also revealed that readiness of students for online learning increased the interaction in learning environment.

Together with the technology advancement in post-pandemic period, pre-service teachers need to be familiar with online learning system as an innovative method of learning and also need to have high level of readiness to online learning. Hence, this study attempted to identify the online learning readiness of pre-service teachers. This finding of this study will provide further insights to the preparedness of online learning of the higher education institutions in Myanmar.

Purposes of the Study

The main purpose of this study is

- to examine pre-service teachers' online learning readiness
- The specific objectives are
- To investigate online learning readiness of pre-service teachers by gender, educational level and age
 - To investigate online learning readiness of pre-service teachers by time spent (online using hours per day) and training

Related Literature Review

Community of Inquiry Model for Online Learning

The community of inquiry model for online learning environments developed by Garrison, Anderson and Archer (2000) is based on the concept of three distinct "presences", namely, cognitive, social, and teaching. Recognizing the overlap and relationship among the three components, their model supports the design of online and blended courses as active learning environments or communities dependent on instructors and students sharing ideas, information, and opinions. Of particular note is that "presence" is a social phenomenon and manifests itself through interactions among students and instructors. Hence, the community of inquiry is one of the more popular models for online learning which emphasizes on the engagement and active participation of learners in the successful implementation of an online learning system.

Online Learning Readiness

The concept of readiness for online learning was firstly proposed by Warner, Christie, and Choy in 1998. They conceptualized the readiness for online learning in terms of three aspects such as (1) students' preferences for the form of delivery as opposed to face-to-face classroom instruction; (2) students' confidence in using electronic communication for learning and, in particular, competence and confidence in the use of Internet and computer-mediated communication; and (3) their ability to engage in autonomous learning. Hashim and Tasir (2014) defined this readiness as the capability of the learners in using a new learning environment as well as the usage of alternative technology. As stated by Ali (2016), assessment of online learning readiness prior to the start of online learning is essential since an individual learner's success in an online course often depends on this readiness. Joosten and Cusatis (2020) also noted that students who enroll online courses have varying levels of readiness and preparedness that likely influence their success.

Method

Research Method

Questionnaire survey method and quantitative research design were used in this study.

Sampling

Simple random sampling technique was used in this study. The participants of this study were first year and final year pre-service teachers from Yangon University of Education during 2022-23 AY. A total of 600 pre-service teachers participated in this study. Among 600 pre-service teachers, 300 are males and the rest 300 are females.

Research Instrumentation

Measurement of online learning readiness scale (OLRS) was used to explore the pre-service teachers' online learning readiness. This instrument was developed by Hung (2010). This instrument is with a total of 18 items questionnaire. Item number 1 to 3 stand for computer/internet self-efficacy subscale. Item number 4 to 8 stand for self-directed learning subscale. Item number 9 to 11 stand for learner control subscale. Item number 12 to 15 stand for motivation for learning subscale and item number 16 to 18 stand for online communication self-efficacy subscale. Five-point Likert scale was used (1= strongly disagree, 2= disagree, 3= uncertain, 4= agree, 5= strongly agree). Sample items were presented as follows:

- I feel confident in performing the basic functions of Microsoft Office programmes (MS Word, MS Excel, and MS Power Point).
- I carry out my own study plan.
- I am not distracted by other online activities when learning online (instant messages, Internet surfing).
- I like to share my ideas with others.
- I feel confident in posting questions in online discussions.

Data Collection Procedure

Measurement of online learning readiness scale (OLRS) designed by Hung (2010) was used. For ensuring the face validity and content validity of this instrument, expert review was done first by the 8 experts from the Department of Educational Psychology, Yangon University of

Education. After reviewing and editing the items, pilot testing was carried out with 30 student teachers from Yangon University of Education during the first week of December, 2022. According to the piloting results, some items of the measuring scale were made necessary changes. Then, with the permission of administrative personnel of institutions, the questionnaire was administered to the student teachers from Yangon University of Education. This study explored student teachers' online learning readiness. Finally, by using the self-reported survey questionnaire, the required data was collected during the first week of January, 2023. The process of collecting data took almost two months in order to get the maximum response rate and to get complete filled in questionnaires back. The data was analyzed by SPSS version 22 for quantitative data analysis. Descriptive statistics and inferential statistics were applied to the data set in order to interpret and report the results. The detailed description of data analysis, findings and interpretation would be presented following.

Data Analysis and Research Findings

Descriptive Statistics of Pre-service Teachers' Online Learning Readiness

Pre-service teachers' online learning readiness was measured by Online Learning Readiness Scale (OLRS), and was divided into five subscales; Computer/Internet Self-efficacy, Self-directed Learning, Learner Control, Motivation for Learning and Online Communication Self-efficacy. Since the numbers of items included in each dimension and each component of online learning readiness were not the same, the mean percentages were calculated in order to enable the accurate comparison among different dimensions.

Looking across five dimensions of online learning readiness, the mean percentages of self-directed learning (78.44%) was found to be highest and on the other hand, the mean percentage of online communication self-efficacy (69.46 %) was the lowest (see Table 1).

Table 1 Descriptive Statistics of Online Learning Readiness

Scale Name	N	Minimum	Maximum	Mean	Mean%	SD
Computer/Internet Self-efficacy (3 items)	600	3	15	10.95	73.00%	3.248
Self-directed Learning (5 items)	600	12	25	19.61	78.44%	4.359
Learner Control (3 items)	600	3	15	10.82	72.13%	3.318
Motivation for Learning (4 items)	600	4	20	15.47	77.35%	3.950
Online Communication Self-efficacy (3 items)	600	3	15	10.42	69.46%	3.079

Note. SD = Standard Deviation

Comparison of Pre-service Teachers' Online Learning Readiness by Gender

Concerning the pre-service teachers' online learning readiness, the gender difference was worthwhile to explore. The subscales of online learning readiness were categorized into five parts; Computer/Internet Self-efficacy, Self-directed Learning, Learner Control, Motivation for Learning and Online Communication Self-efficacy. In order to confirm the gender difference of pre-service teachers' online learning readiness, independent samples *t*-test was applied. The mean scores and standard deviations for both male and female student teachers across five subscales as well as total scale score were reported in Table 2.

Table 2 Means, Standard Deviations and Results of Independent Samples *t*-test for Pre-service Teachers' Online Learning Readiness by Gender

Subscales	Gender	N	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>
Computer/Internet Self-efficacy	Male	300	11.21	1.69	3.710***	598	0.000
	Female	300	10.70	1.71			
Self-directed Learning	Male	300	19.72	2.01	1.375	598	0.170
	Female	300	19.50	1.89			
Learner Control	Male	300	10.98	1.65	2.378*	598	0.018
	Female	300	10.67	1.46			
Motivation for Learning	Male	300	15.71	2.14	2.897**	581	0.004
	Female	300	15.24	1.81			
Online Communication Self-efficacy	Male	300	10.73	1.99	3.805***	598	0.000
	Female	300	10.11	1.99			
Online Learning Readiness	Male	300	68.36	6.48	4.250***	598	0.000
	Female	300	66.23	5.76			

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Regarding the gender, the mean scores of male pre-service teachers were greater than that of females, a significant difference was found on overall scale as well as four subscales such as Computer/Internet Self-efficacy, Learner Control, Motivation for Learning and Online Communication Self-efficacy. Except the Self-directed Learning subscale, gender related difference was found to be on other four subscales as well as overall scale. According to the results, male student teachers possessed higher online learning readiness than that of the females.

Comparison of Pre-service Teachers' Online Learning Readiness by Educational Level

In this study, online learning readiness of pre-service teachers (First year, Second year, Third Year, Fourth year and Fifth Year) from Yangon University of Education were examined. Descriptive statistics and ANOVA was done to investigate the difference by educational level.

Table 3 Means, Standard Deviations and ANOVA Results of Pre-service Teachers' Online Readiness by Educational Level

Subscales	Institutions	N	Mean	SD	F	p
Computer/Internet Self-efficacy	First year	120	10.92	1.59	7.19***	0.000
	Second year	120	10.54	1.79		
	Third year	120	11.00	1.44		
	Fourth year	120	10.71	1.77		
	Fifth year	120	11.63	1.83		
Self-directed Learning	First year	120	19.23	2.29	10.99***	0.000
	Second year	120	18.94	1.75		
	Third year	120	19.93	1.67		
	Fourth year	120	19.54	1.87		
	Fifth year	120	20.40	1.85		
Learner Control	First year	120	10.50	1.48	4.18**	0.002
	Second year	120	10.58	1.44		
	Third year	120	10.85	1.48		
	Fourth year	120	11.02	1.36		
	Fifth year	120	11.19	1.93		
Motivation for Learning	First year	120	15.30	2.26	2.43*	0.045
	Second year	120	15.13	1.87		
	Third year	120	15.63	1.96		
	Fourth year	120	15.45	1.95		
	Fifth year	120	15.87	1.88		
Online Communication Self-efficacy	First year	120	10.18	2.08	3.94**	0.004
	Second year	120	10.14	1.92		
	Third year	120	11.03	1.70		
	Fourth year	120	10.28	1.90		
	Fifth year	120	10.50	2.33		
Online Learning Readiness	First year	120	66.13	6.39	9.65***	0.000
	Second year	120	65.34	5.47		
	Third year	120	68.43	5.34		
	Fourth year	120	67.00	5.85		
	Fifth year	120	69.58	7.04		

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Concerning the education level, a significant difference was found on the overall scale as well as all subscales of online learning readiness such as Computer/Internet Self-efficacy, Self-directed Learning, Learner Control, Motivation for Learning and Online Communication Self-efficacy. To obtain more detailed information, the Post-Hoc Test was carried out by Tukey method (see Table 4).

Table 4 Results of Tukey HSD Multiple Comparison for Pre-service Teachers' Online Readiness by Educational Level

Dependent Variable	(I) Educational Level	(J) Educational Level	Mean Difference (I-J)	Std. Error	p
Computer/Internet Self-Efficacy	Fifth year	First year	0.708*	0.218	0.011
		Second year	1.083***	0.218	0.000
		Third year	0.625*	0.218	0.035
		Fourth year	0.916***	0.218	0.000
Self-directed Learning	Third year	First year	0.700*	0.245	0.036
		Second year	0.992**	0.245	0.001
	Fifth year	First year	1.166***	0.245	0.000
		Second year	1.458***	0.245	0.000
Learner Control	Fifth year	First year	0.691**	0.200	0.005
		Second year	0.608*	0.200	0.021
Motivation for Learning	Fifth year	Second year	0.733*	0.257	0.036
Online Communication Self-efficacy	Third year	First year	0.841**	0.258	0.010
		Second year	0.883**	0.258	0.006
		Fourth year	0.257*	0.258	0.034
Online Learning Readiness	Third year	First year	2.300*	0.781	0.028
		Second year	3.092**	0.781	0.001
	Fifth year	First year	3.450***	0.781	0.000
		Second year	4.242***	0.781	0.000
		Fourth year	2.583**	0.781	0.009

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Concerning Computer/Internet Self-efficacy subscale, there was a significant difference between Fifth year pre-service teachers and pre-service teachers from First year, Second year, Third year and Fourth year. The mean scores of the pre-service teachers from Fifth year were significantly higher than those of pre-service teachers from First year, Second year, Third year and Fourth year on this attribute.

Concerning the learner control subscale, Fifth year pre-service teachers had a significant difference from pre-service teachers from First year and Second Year. The mean scores of Fifth year pre-service teachers were significantly greater than those of pre-service teachers from First year and Second Year on this attribute.

Concerning the Motivation for Learning subscale, there was a significant difference between Fifth year pre-service teachers and pre-service teachers from Second year. The mean scores of the pre-service teachers from Fifth year were significantly higher than those of student teachers from Second year on this attribute.

Concerning the Online Communication Self-efficacy subscale, there was a significant difference with Third year pre-service teachers and pre-service teachers from First year, Second

year, and Fourth year. The mean scores of participant pre-service teachers from Third year were significantly higher than those of pre-service teachers from First year, Second year and Fourth year on this attribute.

Regarding the Self-directed learning subscale and overall online learning readiness, there was significant difference with Third year pre-service teachers and First year, Second year pre-service teachers. The mean scores of participant student teachers from Third year were significantly higher than those of pre-service teachers from First year, Second year on these attributes. In addition, there was also significant difference with Fifth year pre-service teachers and pre-service teachers from First year, Second year, and Fourth year. The mean scores of participant pre-service teachers from Fifth year and Third year were significantly higher than those of pre-service teachers from First year, Second year and Fourth year on these attributes.

Comparison of Pre-service Teachers' Online Learning Readiness by Age

To investigate online learning readiness of pre-service teachers depending on their age, descriptive analysis was done and the differences in mean scores of pre-service teachers according to their age were presented. To make the confirmation of the significant differences of pre-service teachers' online learning readiness by their age, ANOVA was executed.

Table 5 Means, Standard Deviations and ANOVA Results of Pre-service Teachers' Online Readiness by Age

Subscales	Age (X)	N	Mean	SD	F	p
Computer/Internet Self-efficacy	$16 \leq x < 18$ years	113	10.90	1.60	3.636*	0.027
	$19 \leq x < 21$ years	286	10.80	1.60		
	≥ 22 years	201	11.22	1.92		
Self-directed Learning	$16 \leq x < 18$ years	113	19.28	2.32	6.731**	0.001
	$19 \leq x < 21$ years	286	19.46	1.82		
	≥ 22 years	201	20.01	1.87		
Learner Control	$16 \leq x < 18$ years	113	10.50	1.51	5.844**	0.003
	$19 \leq x < 21$ years	286	10.77	1.43		
	≥ 22 years	201	11.10	1.74		
Motivation for Learning	$16 \leq x < 18$ years	113	15.27	2.26	1.267	0.282
	$19 \leq x < 21$ years	286	15.45	1.89		
	≥ 22 years	201	15.63	2.00		
Online Communication Self-efficacy	$16 \leq x < 18$ years	113	10.20	2.10	1.364	0.256
	$19 \leq x < 21$ years	286	10.56	1.87		
	≥ 22 years	201	10.37	2.17		
Online Learning Readiness	$16 \leq x < 18$ years	113	66.15	6.52	5.009**	0.007
	$19 \leq x < 21$ years	286	67.03	5.61		
	≥ 22 years	201	68.33	6.75		

Note. * $p < 0.05$, ** $p < 0.01$.

Concerning the age, a significant difference was found on the overall scale as well as three subscales of online learning readiness such as Computer/Internet Self-efficacy, Self-directed Learning and Learner Control. To obtain more detailed information, the Post-Hoc Test was carried out by Tukey method (see Table 6).

Table 6 Results of Tukey HSD Multiple Comparison for Pre-service Teachers' Online Readiness by Age

Dependent Variable	(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	p
Computer/Internet Self-efficacy	≥ 22 years	$19 \leq x < 21$ years	0.421*	0.158	0.021
Self-directed Learning	≥ 22 years	$16 \leq x < 18$ years	0.726**	0.228	0.004
		$19 \leq x < 21$ years	0.551**	0.179	0.006
Learner Control	≥ 22 years	$16 \leq x < 18$ years	0.726**	0.228	0.004
Online Learning Readiness	≥ 22 years	$16 \leq x < 18$ years	2.177**	.727	.008

Note. * $p < 0.05$, ** $p < 0.01$.

Concerning the Computer/Internet Self-efficacy subscale, there was a significant age indicator in the oldest age group (≥ 22 years) of pre-service teachers with the age group of $19 \leq x < 21$ years. The mean scores of pre-service teachers in the oldest age group (≥ 22 years) were significantly higher than those of pre-service teachers with the age group of $19 \leq x < 21$ on this attribute.

Concerning the Self-directed Learning subscale, there was a significant age indicator in the oldest age group (≥ 22 years) of preservice teacher with the age groups of $16 \leq x < 18$ years and with the age group of $19 \leq x < 21$. The mean scores of preservice teacher in the oldest age group (≥ 22 years) were significantly higher than those of preservice teachers in the age groups of $16 \leq x < 18$ year and $19 \leq x < 21$ on this attribute.

Regarding the Learner Control subscale and overall online learning readiness, there was a significant difference indicator in the oldest age group (≥ 22 years) of preservice teacher with the age groups of $16 \leq x < 18$ years. The mean scores of preservice teacher in the oldest age group (≥ 22 years) were significantly higher than those of preservice teachers in the age group of $16 \leq x < 18$ years on this attribute.

Comparison of Pre-service Teachers' Online Learning Readiness by Time Spent (Online Using Hours per Day)

To investigate online learning readiness of preservice teachers depending on their time spent (Online Using Hours per Day), descriptive analysis was done and the differences in mean scores of pre-service teachers according to their time spent (Online Using Hours per Day) was presented. To make the confirmation of the significant differences of preservice teachers' online learning readiness by their time spent (Online Using Hours per Day), ANOVA was executed.

Table 7 Means, Standard Deviations and ANOVA Results of Pre-service Teachers' Online Learning Readiness by Time Spent (Online Using Hours per Day)

Subscales	Time Spent (Online Using Hours per Day)	N	Mean	SD	F	p
Computer/Internet Self-efficacy	$1 \leq x < 3$ Hours	355	10.90	1.77	1.035	0.356
	$4 \leq x < 6$ Hours	208	10.99	1.57		
	≥ 7 Hours	37	11.32	2.03		
Self-directed Learning	$1 \leq x < 3$ Hours	355	19.78	1.94	4.956**	0.007
	$4 \leq x < 6$ Hours	208	19.27	1.93		
	≥ 7 Hours	37	19.92	2.11		
Learner Control	$1 \leq x < 3$ Hours	355	10.83	1.53	0.017	0.983
	$4 \leq x < 6$ Hours	208	10.83	1.53		
	≥ 7 Hours	37	10.78	2.11		
Motivation for Learning	$1 \leq x < 3$ Hours	355	15.60	1.86	1.704	0.183
	$4 \leq x < 6$ Hours	208	15.29	2.15		
	≥ 7 Hours	37	15.30	2.38		
Online Communication Self-efficacy	$1 \leq x < 3$ Hours	355	10.36	1.95	1.451	0.235
	$4 \leq x < 6$ Hours	208	10.45	2.11		
	≥ 7 Hours	37	10.95	2.07		
Online Learning Readiness	$1 \leq x < 3$ Hours	355	67.47	6.24	1.188	0.305
	$4 \leq x < 6$ Hours	208	66.83	6.00		
	≥ 7 Hours	37	68.27	7.24		

Note. ** $p < 0.01$.

Concerning the time spent (Online Using Hours per Day), significant difference was not found on the overall scale as well as four subscales of online learning readiness such as Computer/Internet Self-efficacy, Motivation for Learning and Online Communication Self-efficacy, except Self-directed Learning subscale.

To obtain more detailed information, the Post-Hoc Test was carried out by Tukey method (see Table 8). Concerning the Self-directed Learning subscale, there was a significant difference between pre-service teachers who use online 1 hour-3 hours and the group of pre-service teachers who use online 4 hours-6 hours. The mean score of pre-service teacher who use online 1 hour-3 hours is higher than that of pre-service teachers who use online 4 hours-6 hours.

Table 8 Results of Tukey HSD Multiple Comparison for Online Learning Readiness Time Spent (Online Using Hours per Day)

Dependent Variable	(I) Time Spent (Online Using Hours per Day)	(J) Time Spent (Online Using Hours per Day)	Mean Difference (I-J)	Std. Error	p
Self-directed Learning	$1 \leq x < 3$ Hours	$4 \leq x < 6$ Hours	0.508**	0.170	0.008

Note. ** $p < 0.01$.

Comparison of Student Teachers' Online Learning Readiness by Training

In order to confirm the pre-service teachers' online learning readiness by Training, independent samples *t*-test was applied. The mean scores and standard deviations for both male and female pre-service teachers across five subscales as well as total scale score were reported in Table 9.

Table 9 Means, Standard Deviations and Results of Independent Samples *t*-test for Pre-service Teachers' Online Learning Readiness by Training

Subscales	Gender	N	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>
Computer/Internet Self-efficacy	No Training	326	10.61	1.78	-5.575***	598	0.000
	Having Training	274	11.38	1.56			
Self-directed Learning	No Training	326	19.51	1.92	-1.416	598	0.157
	Having Training	274	19.73	2.01			
Learner Control	No Training	326	10.75	1.57	-1.362	598	0.174
	Having Training	274	10.92	1.57			
Motivation for Learning	No Training	326	15.43	2.04	-.609	598	0.543
	Having Training	274	15.53	1.95			
Online Communication Self-efficacy	No Training	326	10.30	1.96	-1.631	598	0.103
	Having Training	274	10.57	2.08			
Online Learning Readiness	No Training	326	66.60	6.09	-3.039**	598	0.002
	Having Training	274	68.14	6.29			

Note. ** $p < 0.01$, *** $p < 0.001$.

Although there was a slight variation between the pre-service teachers who have attended the online training and the participants who have not attended the online training, a significant difference was found only on Computer/Internet Self-efficacy subscale and overall online learning readiness scale. Except Computer/Internet Self-efficacy subscale, significant differences were not found in other four subscales of online learning readiness such as Self-directed Learning, Learner Control, Motivation for Learning and Online Communication Self-efficacy. According to the results pre-service teachers who have attended the online training possess higher online learning readiness in computer and internet self-efficacy than that of the participants who have not attended the online training.

Conclusion, Discussion and Recommendation

Conclusion and Discussion

Since online learning has become highly popular in educational institutions during the Covid-19 pandemic, many countries started online learning in all education levels. By taking pre-service teachers' online learning readiness level into account, it will be easier to establish online learning environments. The main purpose of this study is to investigate the online learning readiness of pre-service teachers in Myanmar. Moreover, the other influencing factors such as gender, age, duration of internet use and having computer training on pre-service teachers' online learning readiness were explored. A total of 600 pre-service teachers from Yangon University of Education were chosen as a sample.

To assess online learning readiness of pre-service teachers, online learning readiness scale (OLRS) by Hung et al. (2010) was applied. The OLRS of 18 items consists of five subscales namely, (1) computer and internet self-efficacy with 3 items, (2) self-directed learning with 5 items, (3) learner control with 3 items, (4) motivation for learning (online context) with 4 items, and (5) communication efficacy with 3 items. The internal consistency reliability values of OLRS was 0.76.

Based on the results of descriptive analysis, the mean percentages of pre-service teachers' self-directed learning (78.44%) was found to be the highest and that of pre-service teachers' online communication self-efficacy (69.46 %) was the lowest. It can be assumed that most of the pre-service teachers in this study have the high tendency to claim responsibility for their own learning and meet the learning objectives they set for themselves in the online learning setting. They may be more active in participating in learning tasks such as reading online learning materials, completing classroom tasks, planning and evaluating goals of learning. Because of the lowest mean percentage in online communication self-efficacy, online learning will challenge pre-service teachers to be comfortable and confident when communicating with the lecturer and other classmates through online communication.

Regarding gender differences in online learning readiness of pre-service teachers, the mean scores of male pre-service teachers are greater than that of females and significant difference was found on overall scale as well as four subscales such as computer/internet self-efficacy, learner control, motivation for learning and online communication self-efficacy. This finding is similar to the finding of Kay (2009), male students' perception that interactive classroom communication systems improved the overall learning process was stronger than female students' corresponding perception, regardless of computer-comfort level or computer-use type. However, this finding contradicted with those found by Chung et al., (2020), Hung et al. (2010) and Atkinson and Blankenship (2009) that there were no significant differences in all five dimensions of the online learning readiness scale between males and females.

Concerning the education level, a significant difference was found on the overall scale as well as all subscales of online learning readiness such as Computer/Internet Self-efficacy, Self-directed Learning, Learner Control, Motivation for Learning and Online Communication Self-efficacy. The fifth year pre-service teachers exhibited significantly greater readiness in all dimensions of online learning readiness. This finding is congruent with Hung et al. (2010) finding that grade levels made significant differences in students' readiness for online course.

Regarding age, significant differences were found on the overall scale as well as three subscales of online learning readiness such as Computer/Internet Self-efficacy, Self-directed Learning and Learner Control. The mean scores of older pre-service teachers in were significantly higher than those of younger pre-service teachers in overall online learning readiness, Computer/Internet Self-efficacy, Self-directed Learning and Learner Control. This can be assumed that mature pre-service teachers possess greater readiness for enrolment in online courses and would exhibit, in such an environment, a better learning performance than pre-service teaches with less maturity. This finding is congruent with Wojciechowski and Palmer's (2005) finding that students who were older had few previous course withdrawals and were more likely to be successful in online classes.

In addition, the online learning readiness of the pre-service teachers did not differ significantly depending on the duration of the internet use; however, it was observed that there is a significant difference in the dimension of self-directed learning. The mean score of pre-service teachers who use online 1 hour -3 hours is higher than that of pre-service teachers who use online 4 hours-6 hours. It can be assumed that student pre-service teachers may use internet for different purposes. If they used internet only for social media, they may have less time to plan their own learning and manage their learning. For this reason, it can be concluded that the pre-service teachers who spend more time to use internet could be low in self-directed learning. This finding is consistent with the finding of Zeybek (2022) that participants who had less internet usage time obtained higher mean scores for self-directed learning and learner control.

Although there is a slight variation between the pre-service teachers who have attended the online training and the participants who have not attended the online training, significant difference was found only on Computer/Internet Self-efficacy subscale and overall online learning readiness scale. Pre-service teachers who have attended the online training possess higher online learning readiness in computer and internet self-efficacy than that of participants who have not attended the online training. It can be interpreted that by attending computer trainings, pre-service became more confident in their skills in using computer and internet in order to learn online.

Suggestion and Recommendation

According to the results of this finding, the pre-service teachers in this study had the lowest mean score in the online communication self-efficacy. Therefore, it should be suggested to the teachers to give motivation and encouragement to their pre-service teachers, especially to those with low level of online communication self-efficacy, while delivering the online courses. It can be done by encouraging the pre-service teachers to make an extensive participation in the discussions, to freely and bravely express their ideas, and to ask for immediate assistance from the teacher when facing with technical or other related problems during their online learning. Since motivation is one of the important factors in online learning, teachers should help students stay motivated in online learning (Hung et al., 2010).

Moreover, pre-service teachers' online learning readiness is not only related to one single factor such as their technical skills, but also to many other factors including their perception and attitude towards online learning, their preferences and learning styles. When it comes to readiness for online learning, all these variables should be considered together (Smith, 2005). Hergüner et al. (2020), as an example, revealed that students' online learning attitudes have a positive effect on their readiness for online learning.

The present study reports not only the current situation of online learning readiness of pre-service teachers in Yangon University of Education but also gives a valuable insight for the administrators in implementing online teaching. Policy makers in higher education institutions should prepare a comprehensive plan focusing on not only teaching and learning strategies, online activities and examinations but also finding ways to improve the students' readiness for online learning. Government should give supports such as establishing infrastructure and organizing professional trainings and finance to ensure the quality of online education system.

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ATTACHMENT STYLES AND SOCIAL COMPETENCE OF HIGH SCHOOL STUDENTS

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Abstract

The purpose of this study is to investigate attachment styles and social competence of high school students. Stratified random sampling technique and quantitative approach was used in this study. A total of 658 high school students (330 male and 328 female) from six basic education high schools in Yangon Region and Rakhine State participated in this study. In this study, four attachment styles were measured with Attachment Style Questionnaire (ASQ) conducted by Van Oudenhoven, Hofstra and Bakker (2003). It includes 24 items (7 items for secure attachment style, 5 items for fearful attachment style, 7 items for preoccupied attachment style and 5 items for dismissing attachment style) in which each item is rated with a five-point Likert scale. The Multidimensional Social Competence Scale (MSCS) developed by Trevisan, Tafreshi, Slaney, Yager and Iarocci (2018) was used to measure social competence of high school students including 77 items (11 items for social motivation, 11 items for social inferencing, 11 items for demonstrating empathic concern, 11 items for social knowledge, 11 items for verbal conversation skills, 11 items for nonverbal conversation skills and 11 items for emotion regulation) with five-point Likert scale. Alpha reliability for ASQ and MSCS revealed at 0.545 and at 0.77 respectively. Although there were no significant associations between high school students' attachment styles and gender, age and Grade, it was found that attachment styles were significantly associated with schools and region at 0.001 level. There was significantly associated with high school students' attachment styles and cooperation in group activities at 0.01 level. The results of independent samples *t*-test revealed that there were significant differences on social competence with gender and cooperation in group activities at 0.01 level and with region at 0.001 level. And regarding the Grade and age, there were no significant differences on social competence. Again, ANOVA results showed that there was a significant difference on social competence among schools at 0.001 level. Finally, there was a significant association between high school students' attachment styles and social competence level at 0.001 level. The findings of this study will be desired for parents, teachers and counsellors to help the high school students have secure attachment style and support them to develop social competence.

Keywords: Attachment, Attachment styles, Social competence

Introduction

People interact with their environment for developing social relations. In the process of interaction, people can develop robust relations by acquiring social skills adequately (Deniz, 2002). Moreover, human beings could not live isolated from one another. They always live together in a society and they are dependent on other people for their survival.

Social competence is the ability to interact successfully with peers, teachers, family members and adults. People with higher social competence can make friends easily in everywhere in every time. A lack of social competence is a frequently cited characteristic of aggressive and delinquent children and adolescents (Bender & Loesel, 1997). Therefore, it is necessary for everyone especially adolescent high school students to have a good foundation of social competence to lead their daily life activities properly and successfully.

Cassidy et al. (1996) stated that social skills are related with each other and attachment style is a good predictor of social skills. There are many factors that can affect adolescents' social

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competence such as temperament, attachment and parenting styles (Wikipedia, 2023). Among them, it is attachment style that stands an important point in determining the tempo of the social competence of the adolescent high school students. Each attachment style has a different impact on adolescents' social competence. So, individuals may have different social competence according to types of attachment style they received from their respective parents or primary caregivers.

Attachment is the emotional bonding with someone that endures across time and space (Ainsworth, 1973; Bowlby, 1969). Emotional bonding in life has a profound effect on the individual's development. The process of attachment begins in the first days of our lives. Their parents take care and provide emotional and physical security towards children can effect on child's attachment from early years. Attachment is also formed in early childhood or in adolescence has great effect on later life (Ainsworth, 1970).

Attachment styles are categorized by the behavior exhibited within a threaten relationship (Bowlby, 1969). All attachment styles in adults according to the respective attachment styles in childhood. They are also essential elements in evoking human behavior. The essential social capabilities of adolescents are adapting to positive well-being at home, school and peer adjustments. Mostly, accomplishment of academic pursuits of adolescent students seem to get initiated by the affectionate bond from their parents or from their caregivers. Therefore, the present study examines attachment styles and social competence of high school students. Based on the research, researcher can find out how much high school students have the level of social competence regarding to four types of attachment styles.

Significance of the Study

During the period of adolescent high school students, students face several challenges as they gradually move from their family group to a peer group (Mabey & Sorensen, 1995). They need to adjust to peers and other social members, to make friendships successfully, and to cooperate with them. Adolescents with social competence can form and maintain healthy relationships with peers and adults. So, social competence becomes a vital role in their daily life.

During this time, social competence is related to a wide variety of positive outcomes, such as educational attainment, employment status and lower levels of substance abuse, depression, and self-reported delinquency. Moreover, social competence is a protective factor in good mental health (Alduncin et al., 2014). It helps them to get strong social supports from the adults around them and to work effectively with others.

The social competence promotes adequate interpersonal interactions of individuals as well as facilitates appropriate fitness in organizing social circumstances. And these competencies are greatly significant during the adolescent period in order to have enough social abilities and easily entering into adult social life (Elicker Englund & Sroufe, 1992). In fact, higher social competence promises acceptance and admiration from peers, adaptive behavior, and social skills in the healthy social development of the adolescents (Gresham & Reschly, 1988). Social development is playing a vital role in academic achievement. So, there is a strong need to explore social competence of high school students for today's researchers.

The attachment styles have the greater effects on the adolescents' social relationship. The studying of the life span development of adolescents along with their attachment relationships

has been considered imperative by recent researchers (Kobak & Sceery, 1988; Shulman et al., 1994; Rosenstein & Horowitz, 1996). According to Bowlby (1980), the attachment does not end when the child moves beyond infancy; rather, secure attachment continues in early childhood, but different behaviors based on attachment are observed during infancy, childhood, adolescence, and adulthood (Ward et al., 2000).

Attachment styles are very important in relationships. In fact, understanding the attachment styles is very helpful for the high school students because it offers them insight into how they felt and developed in their childhood. And it let them know what attachment styles they possess and how these relate to their level of social competence. It also clarifies ways that they are emotionally limited as an adolescent and what they need to change for improving their relationship with other people. Therefore, the present study is extremely important for many reasons. One of those is that this study benefits parents in helping them to understand the importance of attachment styles as these factors related to engaging social competence. Moreover, educators and school teachers need to have a broad awareness about the attachment styles of their students. Teachers can attach to their students in the classroom that is more effective in treating challenging students. Thus, this study also contributes the necessary awareness to the entire education society.

Hence, this current study is very beneficial for examining attachment styles and social competence of high school students. It is considered that attachment style of adolescents is an important variable for social competence. Children who experience secure attachment with the caregivers and peers result in positive outcomes such as higher self-esteem, better academic achievement, better emotion regulation and higher social competence (Bergin & Bergin, 2009). In contrast, children who experience poor attachment with their caregivers and friends are more likely to result in negative outcome such as behavioral problems and delinquency (Elgar et al., 2003). Therefore, this study examines attachment styles of high school students and how these patterns of attachment relate to their social competence.

Purposes of the Study

The primary purpose of the study is to investigate attachment styles and social competence of high school students.

Definitions of Key Terms

Attachment. Attachment is the emotional bonding with someone that endures across time and space (Ainsworth & Bowlby, 1973).

Attachment styles. Attachment styles are defined as typical ways of interacting in close relationships (Akhtar, 2011).

Social competence. Social competence is defined as the ability to handle social communications effectively, get along well with others, form and maintain close relationships and respond in adaptive ways in social settings (Orpinas, 2010).

Methodology

Sample of the Study

The population of the study comprised of Grade 10 and Grade 11 students from Minbya Township, Rakhine State and Yangon Region. The sample was chosen from the population by

using stratified random sampling technique. A total of 658 participants (15-20 age groups) from Minbya Township, Rakhine State and Yangon Region participated in the study.

Research Method

In this study, descriptive survey design was used.

Research Instrumentation

To explore attachment styles and social competence of high school students, two instruments were adopted. One instrument was Attachment Style Questionnaire (ASQ) conducted by Van Oudenhoven, Hofstra and Bakker (2003) and another was Multidimensional Social Competence Scale (MSCS) developed by Trevisan, Tafreshi, Slaney, Yager and Iarocci (2018).

Attachment style questionnaire with a five-point Likert scale has 24 items and four subscales consisting 7-item for secure attachment style, 5-item for fearful attachment style, 7-item for preoccupied attachment style and 5-item for dismissing attachment style. The questionnaire contained positive as well as negative items. So, the scoring key for positive items was 1, 2, 3, 4, 5 and that for negative items was reversed 5, 4, 3, 2, 1. Students who scored the highest mean percentage in secure subscale among subscales were identified as secure attachment style. Students who scored the highest mean percentage in fearful subscale among subscales were identified as fearful attachment style. Students who scored the highest mean percentage in preoccupied subscale among subscales were identified as preoccupied attachment style. Students who scored the highest mean percentage in dismissing subscale among subscales were identified as dismissing attachment style. But, among subscales, some students were the same highest mean percentages in two subscales, they were placed in undefined group. The researcher did not take into account the undefined group in data analysis.

Multidimensional Social Competence Scale (MSCS) contains a total of 77 items, with the 7 content domains that represent social competence. Each domain contains 11 items. Each item was scored with five-point Likert-type format (1= strongly disagree, 2= disagree, 3= not sure, 4= agree, 5= strongly agree). The questionnaire contained positive as well as negative items. So, the scoring key for positive items was 1, 2, 3, 4, 5 and that for negative items was reversed 5, 4, 3, 2, 1. High scores on the scale were an indication of high in that subscale of social competence and low scores on the scale were an indication of low in that subscale of social competence.

Data Analysis and Research Findings

Descriptive Statistics of Attachment Styles

Table 1 Frequencies and Percentages of Attachment Styles of High School Students

Attachment Styles	Number of Students (f)	Percentage
Secure	324	49.24%
Fearful	117	17.78%
Preoccupied	77	11.70%
Dismissing	140	21.28%
Total	658	100%

As shown in Table 1, most of the students in this study had secure attachment style. The secure attachment style had the highest frequency 324 and the highest percentage 49.24% when

compared to the other attachment styles. Dismissing attachment style was the next common category with the frequency of 140 and a percentage of 21.28% and fearful attachment style had the frequency of 117 and a percentage of 17.78%. The lowest frequency of 77 and the lowest percentage of 11.70% were belonging to the preoccupied attachment style in the whole sample. The result showed that majority of the students from the sample had secure attachment style. It can be said that most of the high school students in this study got responsive and attuned of their needs from their caregivers that enable them to develop secure attachment style.

Attachment Styles of High School Students by Gender

After analyzing the descriptive procedure, a Chi-square test was conducted to scrutinize whether there were significant differences between male and female students with regard to their preferred attachment styles.

Table 2 Chi-square Analysis of the Attachment Styles of High School Students by Gender

Gender	N	Attachment Styles								χ^2	p
		Secure		Fearful		Preoccupied		Dismissing			
		f	%	f	%	f	%	f	%		
Male	330	166	50.3%	50	15.15%	37	11.22%	77	23.33%	3.971	0.265
Female	328	158	48.17%	67	20.43%	40	12.2%	63	19.2%		
Total	658	324	49.24%	117	17.78%	77	11.7%	140	21.28%		

Table 2 showed the Pearson Chi-square results and indicated that male and female students were no significantly different on whether they have the preferred attachment styles ($\chi^2=3.971$, $df=3$, $n=658$, $p>0.05$). It can be interpreted that there was no association between attachment styles of high school students by gender.

Attachment Styles High School Students by Age

To investigate whether or not there is significant difference in attachment styles of high school students among age groups, a Chi-square statistics was used.

Table 3 Chi-square Analysis of the Attachment Styles of High School Students by Age

Age (years)	N	Attachment Styles								χ^2	p
		Secure		Fearful		Preoccupied		Dismissing			
		f	%	f	%	f	%	f	%		
15-16	393	203	51.66 %	58	14.7 5%	45	11.45 %	87	22.14 %	8.713	0.190
17-18	245	111	45.3 %	52	21.2 4%	31	12.64 %	51	20.82 %		
>18	20	10	50%	7	35%	1	5%	2	10%		
Total	658	324	49.24 %	11 7	17.7 8%	77	11.7%	140	21.28 %		

Table 3 showed the Pearson Chi-square results and indicated that age of students were no significantly different on whether they have the preferred attachment styles ($\chi^2=8.713$, $df=6$,

$n=658$, $p>0.05$). It can be interpreted that there was no association between attachment styles of high school students by age.

Attachment Styles of High School Students by Grade

To investigate whether or not there is significant difference in attachment styles of high school students between grades, Chi-square statistics was used.

Table 4 Chi-square Analysis of the Attachment Styles of High School Students by Grade

Grade	N	Attachment Styles								χ^2	p
		Secure		Fearful		Preoccupi-ed		Dismissing			
		f	%	f	%	f	%	f	%		
Grade 10	333	173	51.95%	49	14.72%	43	12.9%	68	20.43%	5.891	0.117
Grade 11	325	151	46.47%	68	20.91%	34	10.47%	72	22.15%		
Total	658	324	49.24%	117	17.78%	77	11.7%	140	21.28%		

Table 4 showed the Pearson Chi-square results and indicated that Grade 10 and Grade 11 students were no significantly different on whether they have the preferred attachment styles ($\chi^2=5.891$, $df=3$, $n=658$, $p>0.05$). It can be interpreted that there was no association between attachment styles of high school students by Grade.

Attachment Styles of High School Students by Schools

Participants were selected from the six basic education high schools from Region 1 and Region 2. The difference in attachment styles of high school students among schools was analyzed. To investigate whether or not there is significant difference in attachment styles of high school students among schools, a Chi-square statistics was used.

Table 5 showed the Pearson Chi-square results and indicated that the students from different schools were significantly different on whether they have the preferred attachment style ($\chi^2=41.799$, $df=15$, $n=658$, $p<0.001$). It can be interpreted that there was association between attachment styles of high school students by schools. The calculated effect size of 0.146 was considered a moderate effect size, as it falls greater than 0.1 to typical according to Dai et al. (2021).

Table 5 Chi-square Analysis of the Attachment Styles of High School Students by Schools

School	N	Attachment Styles								χ^2	p
		Secure		Fearful		Preoccupi- ed		Dismissing			
		f	%	f	%	f	%	f	%		
School 1	114	55	48.25%	13	11.4%	15	13.1%	31	27.19%	41.799***	.000
School 2	108	45	41.69%	19	17.63%	11	10.23%	33	30.45%		
School 3	107	38	35.51%	31	28.97%	7	6.54%	31	28.98%		
School 4	112	59	52.68%	24	21.42%	14	12.5%	15	13.4%		
School 5	109	65	59.63%	15	13.76%	15	13.76%	14	12.85%		
School 6	108	62	57.4%	15	13.89%	15	13.89%	16	14.82%		
Total	658	324	49.24%	117	17.78%	77	11.7%	140	21.28%		

*** $p<.001$

Attachment Styles of High School Students by Region

Participants in this study were from Region 1 and Region 2, the difference in attachment styles of students between regions was analyzed. To investigate whether or not there is significant difference in attachment styles of high school students between two regions, a Chi-square statistics was used.

Table 6 Chi-square Analysis of the Attachment Styles of High School Students by Region

Region	N	Attachment Styles								χ^2	p
		Secure		Fearful		Preoccupi-ed		Dismissing			
		f	%	f	%	f	%	f	%		
Region 1	329	138	41.95%	63	19.15%	33	10.03%	95	28.87%	25.063***	.000
Region 2	329	186	56.54%	54	16.41%	44	13.37%	45	13.68%		
Total	658	324	49.24%	117	17.78%	77	11.7%	140	21.28%		

*** $p < .001$

Table 6 showed the Pearson Chi-square results and indicated that the students from different regions were significantly different on whether they have the preferred attachment styles ($\chi^2=25.063$, $df=3$, $n=658$, $p<0.001$). It can be interpreted that there was association between attachment styles of high school students by region. The calculated effect size of 0.195 was considered a large effect size, as it falls greater than 0.15 to typical according to Dai et al. (2021).

Attachment Styles by Cooperation in Group Activities

In order to test whether high school students' attachment styles depend on their cooperation in group activities or not, demographic data were collected to get some information deal with participation in group activities and to investigate whether or not there is significant difference in attachment styles of high school students between the two groups, a Chi-square statistics was used.

Table 7 Chi-square Analysis of the Attachment Styles of High School Students by Cooperation in Group Activities

Coopera- tion in Group Activities	N	Attachment Styles								χ^2	p
		Secure		Fearful		Preoccupi- ed		Dismissing			
		f	%	f	%	f	%	f	%		
Yes	482	259	53.73%	80	16.6%	47	9.75%	96	19.92%	15.13**	.002
No	176	65	36.93%	37	21%	27	15.34%	47	26.73%		
Total	658	324	49.24%	117	17.78%	74	11.25%	143	21.73%		

** $p < .01$

Table 7 showed the Pearson Chi-square results and indicated that the students' cooperation in group activities were significantly different on whether they have the preferred attachment styles ($\chi^2=15.13$, $df=3$, $n=658$, $p<0.01$). It can be interpreted that there was association between attachment styles of high school students by cooperation in group activities. The calculated effect size of 0.152 was considered a large effect size, as it falls greater than 0.15 to typical according to Dai et al. (2021).

Descriptive Statistics of Social Competence

Table 8 Mean Comparison for Social Competence of High School Students

	<i>N</i>	Items	<i>M</i>	<i>SD</i>	Minimum	Maximum
Social Motivation	658	11	35.64	6.446	15	52
Social Inferencing	658	11	39.47	5.107	25	75
Demonstrating Empathic Concern	658	11	40.83	4.292	20	50
Social Knowledge	658	11	44.56	5.195	26	86
Verbal Conversation Skills	658	11	37.02	5.654	19	51
Non- Verbal Conversation Skills	658	11	37.77	5.244	20	55
Emotion Regulation	658	11	62.62	8.912	31	88
Social Competence (Total)	658	77	501.98	38.059	360	637

According to the results shown in Table 8, the mean score for emotion regulation of social competence was the highest and the mean score for social motivation of social competence was the lowest among subscales. It could be interpreted that most of the high school students in this study were better in monitoring, evaluating and controlling the intensity of their internal emotion and outward behaviors. But they were less desire to interact with others, to involve actively in activities and to interact social contact.

Mean Comparison for Social Competence of High School Students by Gender

To find out the differences in social competence with regard to gender, descriptive statistics and independent samples *t*-test were applied. The mean scores of male and female students for social competence were reported in Table 9.

Table 9 Results of Independent Samples *t*-test of Social Competence by Gender

	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Social Motivation	Male	330	35.52	6.561	-.473	656	.636
	Female	328	35.76	6.336			
Social Inferencing	Male	330	39.26	5.382	-1.045	656	.296
	Female	328	39.68	4.813			
Demonstrating Empathic Concern	Male	330	40.25	4.204	-3.543***	656	.000
	Female	328	41.42	4.306			
Social Knowledge	Male	330	44.03	5.619	-2.616**	656	.009
	Female	328	45.09	4.680			
Verbal Conversation Skills	Male	330	36.51	5.685	-2.346*	656	.019
	Female	328	37.54	5.584			
Nonverbal Conversation Skills	Male	330	37.06	5.230	-3.513***	656	.000
	Female	328	38.48	5.169			
Emotion Regulation	Male	330	64.60	8.815	5.836***	656	.000
	Female	328	60.64	8.576			
Social Competence (Total)	Male	330	497.68	38.638	-2.924**	656	.004
	Female	328	506.30	37.024			

*** $p < .001$, ** $p < .01$, * $p < .05$

To explore whether the mean differences were significant or not, independent samples *t*-test was calculated. The result of *t*-test showed that there were significant differences in demonstrating empathic concern, nonverbal conversation skills and emotion regulation at 0.001 level by gender. And there was significant difference in social knowledge at 0.01 level by gender. Moreover, there was significant difference in verbal conversation skills at 0.05 level by gender. However, there was no significant gender differences in social motivation and social inferencing. The result of independent samples *t*-test showed that there was significant difference in social competence total at 0.01 level by gender.

Mean Comparison for Social Competence of High School Students by Age

To find out the differences in social competence of high school students with regard to age, One-Way ANOVA was conducted (see Table 10).

Table 10 ANOVA Results of Social Competence by Age

	Age	N	M	SD	F	p
Social Motivation	15-16	393	35.44	6.378	.899	.407
	17-18	245	35.82	6.669		
	>18	20	37.25	4.745		
Social Inferencing	15-16	393	39.37	5.004	.226	.798
	17-18	245	39.64	5.247		
	>18	20	39.35	5.566		
Demonstrating Empathic Concern	15-16	393	41.06	4.016	1.429	.240
	17-18	245	40.51	4.666		
	>18	20	40.25	4.689		
Social Knowledge	15-16	393	44.80	5.113	1.099	.334
	17-18	245	44.21	5.314		
	>18	20	44.00	5.301		
Verbal Conversation Skills	15-16	393	37.09	5.719	.312	.732
	17-18	245	36.85	5.520		
	>18	20	37.75	6.189		
Nonverbal Conversation Skills	15-16	393	37.56	5.098	.800	.450
	17-18	245	38.10	5.437		
	>18	20	37.90	5.748		
Emotion Regulation	15-16	393	62.81	8.738	.288	.750
	17-18	245	62.29	9.237		
	>18	20	63.05	8.550		
Social Competence (Total)	15-16	393	502.06	35.507	.104	.902
	17-18	245	501.56	41.106		
	>18	20	505.55	48.584		

In order to find out whether there were any significant differences in social competence by age or not, One-Way ANOVA was conducted. The results revealed that there were no significant differences in all subscales: social motivation, social inferencing, demonstrating empathic concern, social knowledge, verbal conversation skills, nonverbal conversation skills

and emotion regulation and social competence total. The results revealed that the mean score of above 18 years was the highest and that of 17-18 years was the lowest in social competence total. It could be interpreted that high school students' social competence did not differ according to their age.

Mean Comparison for Social Competence of High School Students by Grade

To find out the differences in two variables with regard to Grade, descriptive statistics and independent samples *t*-test were calculated. The results were mentioned in Table 11.

Table 11 Results of Independent Samples *t*-test of Social Competence by Grade

	Grade	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Social Motivation	Grade 10	333	35.72	6.482	.326	656	.745
	Grade 11	325	35.55	6.418			
Social Inferencing	Grade 10	333	39.41	4.805	-.334	656	.739
	Grade 11	325	39.54	5.405			
Demonstrating Empathic Concern	Grade 10	333	41.32	4.062	2.926**	656	.004
	Grade 11	325	40.34	4.469			
Social Knowledge	Grade 10	333	44.95	5.282	1.982*	656	.048
	Grade 11	325	44.15	5.082			
Verbal Conversation Skills	Grade 10	333	36.80	5.553	-1.015	656	.311
	Grade 11	325	37.25	5.756			
Nonverbal Conversation Skills	Grade 10	333	37.98	5.176	1.032	656	.302
	Grade 11	325	37.56	5.313			
Emotion Regulation	Grade 10	333	62.89	9.214	.761	656	.447
	Grade 11	325	62.36	8.598			
Social Competence (Total)	Grade 10	333	503.90	37.181	1.314	656	.189
	Grade 11	325	500.01	38.896			

* $p < .05$, ** $p < .01$

In order to find out whether there were any significant differences in social competence by Grade or not, independent samples *t*-test was conducted again. The results revealed that there was significant difference in demonstrating empathic concern at 0.01 level by Grade. And there was significant difference in social knowledge at 0.05 level by Grade. It could be interpreted that Grade 10 students have more social competence than Grade 11 students. There were no significant differences in social motivation, social inferencing, verbal conversation skills, nonverbal conversation skills and emotion regulation of social competence by Grade.

The mean score of social competence for Grade 10 students was 503.90 and the mean score of social competence for Grade 11 students was 500.01. So, the mean score of Grade 10 students was slightly higher in social competence than that of Grade 11 students. To explore whether the mean difference was significant or not, independent samples *t*-test was calculated. The result of independent samples *t*-test showed that there was no significant difference in social competence total by Grade.

Mean Comparison for Social Competence of High School Students by Schools

To find out the differences in social competence of high school students with regard to schools, One-Way ANOVA was conducted (see Table 12).

Table 12 ANOVA Results of Social Competence by Schools

	School	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Social Motivation	School 1	114	34.81	6.637	5.089***	.000
	School 2	108	34.69	6.937		
	School 3	107	34.02	6.432		
	School 4	112	35.82	5.678		
	School 5	109	37.07	6.046		
	School 6	108	37.42	6.292		
Social Inferencing	School 1	114	40.07	5.412	1.928	.088
	School 2	108	39.62	5.880		
	School 3	107	38.64	4.903		
	School 4	112	38.63	4.696		
	School 5	109	40.12	4.774		
	School 6	108	39.73	4.753		
Demonstrating Empathic Concern	School 1	114	40.42	5.181	2.530*	.028
	School 2	108	39.79	5.159		
	School 3	107	40.85	3.560		
	School 4	112	41.01	3.745		
	School 5	109	41.47	3.952		
	School 6	108	41.48	3.624		
Social Knowledge	School 1	114	45.40	4.642	1.832	.105
	School 2	108	43.94	5.796		
	School 3	107	44.04	4.696		
	School 4	112	43.96	4.835		
	School 5	109	45.22	4.937		
	School 6	108	44.77	6.032		
Verbal Conversation Skills	School 1	114	37.56	4.899	8.180***	.000
	School 2	108	34.64	5.819		
	School 3	107	36.11	5.778		
	School 4	112	38.08	5.722		
	School 5	109	38.87	5.262		
	School 6	108	36.78	5.525		
Nonverbal Conversation Skills	School 1	114	37.36	5.087	3.314**	.006
	School 2	108	37.09	5.241		
	School 3	107	37.21	4.766		
	School 4	112	37.33	5.705		
	School 5	109	39.44	5.329		
	School 6	108	38.20	4.997		

	School	N	M	SD	F	p
Emotion Regulation	School 1	114	63.67	9.709	2.055	.069
	School 2	108	60.78	9.243		
	School 3	107	61.36	8.859		
	School 4	112	63.34	9.026		
	School 5	109	63.41	8.768		
	School 6	108	63.08	7.438		
Social Competence (Total)	School 1	114	503.14	38.030	7.577***	.000
	School 2	108	489.97	41.717		
	School 3	107	492.29	35.470		
	School 4	112	501.56	33.938		
	School 5	109	516.16	36.842		
	School 6	108	508.48	36.421		

* $p < .05$, ** $p < .01$, *** $p < .001$

From the above Table 12, the mean score of high school students from School 6 was the highest and that from School 3 was the lowest in social motivation. The mean score of high school students from School 5 was the highest and that from School 4 was the lowest in social inferencing. The mean score of high school students from School 6 was the highest and that from School 2 was the lowest in demonstrating empathic concern. The mean score of high school students from School 1 was the highest and that from School 2 was the lowest in social knowledge. The mean score of high school students from School 5 was the highest and that from School 2 was the lowest in verbal conversation skills and nonverbal conversation skills. The mean score of high school students from School 1 was the highest and that from School 2 was the lowest in emotion regulation.

In order to find out whether there were any significant differences in social competence among six high schools or not, One-Way ANOVA was conducted. The results revealed that there was significant difference in social motivation, verbal conversation skills and social competence total by schools at 0.001 level. There was significant difference in nonverbal conversation skills by schools at 0.01 level. And there was significant difference in demonstrating empathic concern by schools at 0.05 level. But there were no significant differences in social inferencing, social knowledge and emotion regulation by schools.

The results revealed that the mean score of high school students from School 5 was the highest in social competence total and that from School 2 was the lowest in social competence total. It could be interpreted that high school students from School 5 were the highest social competence and that from School 2 were the lowest social competence.

Table 13 Results of Tukey HSD Multiple Comparisons for Social Competence of High School Students by Schools

	(I)School	(J)School	Mean Difference (I-J)	p
Social Competence	School 2	School 5	-26.184***	.000
		School 6	-18.509**	.004
	School 3	School 5	-23.866***	.000
		School 6	-16.192*	.018
	School 4	School 5	-14.593*	.042

* $p < .05$, ** $p < .01$, *** $p < .001$

To obtain more detailed information, the significant mean difference of high school students' social competence by schools, Post-hoc Test was conducted by Tukey HSD method (see Table 13). Concerning social competence, high school students from School 5 and School 6 were more social competence than that from School 2 and School 3. And high school students from School 5 were more social competence than that from School 4 (see Table 13).

Mean Comparison for Social Competence of High School Students by Region

To find out the differences in two variables with regard to region, descriptive statistics and *t*-test were calculated. The results were mentioned in the following Table 14.

From above Table 14, the mean scores of students from Region 2 were slightly higher in social inferencing, social knowledge and emotion regulation. But the mean scores of students from Region 2 were higher in social motivation, demonstrating empathic concern, verbal conversation skills, nonverbal conversation skills subscales of social competence than that of students from Region 1. It could be interpreted that students from Region 1 have more social competence than the students from Region 2.

In order to find out whether there were any significant differences in social competence between students by region or not, independent samples *t*-test was conducted again. The results revealed that there was significant difference in social motivation and verbal conversation skills at 0.001 level by region. And there was significant difference in demonstrating empathic concern and nonverbal conversation skills at 0.01 level by region. But there were no significant differences in social inferencing, social knowledge and emotion regulation subscales of social competence by region.

The mean score of social competence total for students from Region 1 was 495.29 and the mean score of social competence total for students from Region 2 was 508.67. So, the mean score of selected students from Region 2 was higher in social competence total than that of selected students from Region 1. To explore whether the mean difference was significant or not, independent samples *t*-test was calculated. The result of *t*-test showed that there was significant difference in social competence total at 0.001 level by region.

Table 14 Results of Independent Samples *t*-test of Social Competence by Region

	Region	N	M	SD	<i>t</i>	<i>df</i>	<i>p</i>
Social Motivation	Region 1	329	34.51	6.661	-4.535***	649.567	.000
	Region 2	329	36.76	6.028			
Social Inferencing	Region 1	329	39.46	5.431	-.061	656	.951
	Region 2	329	39.48	4.769			
Demonstrating Empathic Concern	Region 1	329	40.35	4.713	-2.895**	625.880	.004
	Region 2	329	41.32	3.771			
Social Knowledge	Region 1	329	44.48	5.096	-405	656	.686
	Region 2	329	44.64	5.299			
Verbal Conversation Skills	Region 1	329	36.13	5.617	-4.095***	656	.000
	Region 2	329	37.91	5.558			
Nonverbal Conversation Skills	Region 1	329	37.22	5.023	-2.681**	656	.008
	Region 2	329	38.32	5.410			
Emotion Regulation	Region 1	329	61.97	9.343	-1.889	649.080	.059
	Region 2	329	63.28	8.423			
Social Competence (Total)	Region 1	329	495.29	38.810	-4.577***	656	.000
	Region 2	329	508.67	36.129			

p* < .01, *p* < .001

Social Competence Levels of High School Students

Based on the descriptive analysis, selected high school students in this study were identified into three groups: 15.06% of high school students with scores one standard deviation above the sample mean were considered high level of social competence, 72.64% of high school students with scores around the sample mean were grouped into moderate ones and they were identified as moderate social competence level, and the remaining high school students of 12.30% who scored one standard deviation lower than the sample mean were identified as low level of social competence. In this research, most of the students reported as moderate level of social competence. This made highlight a good sense of social competence of students in this study.

Social Competence Level by Cooperation in Group Activities

In order to test whether social competence level of high school students depend on their cooperation in group activities, demographic data were collected to get some information about it and to investigate whether or not there is significant difference in social competence level of high school students between the two groups, a Chi-square statistics was used.

By cooperation in group activities, 10.37% of students who cooperate in group activities and 17.6% of high school students who do not cooperate in group activities were found to be low level of social competence, 72.2% of students who cooperate in group activities and 73.86% of students who do not cooperate in group activities were found to be moderate level of social competence and 17.43% of students who cooperate in group activities and 8.54% of students who do not cooperate in group activities were found to be high level of social competence (see Table 15).

Table 15 Chi-square Analysis of the social competence level of High School Students by Cooperation in Group Activities

Cooperation in Group Activities	N	Social Competence Level						χ^2	p
		Low		Moderate		High			
		f	%	f	%	f	%		
Yes	482	50	10.37%	348	72.2%	84	17.43%	12.334**	.002
No	176	31	17.6%	130	73.86%	15	8.54%		
Total	658	81	12.3%	478	72.64%	99	15.06%		

** $p < .01$

Table 15 showed the Pearson Chi-square results and indicated that the cooperation in group activities of students were significantly different on whether they have the preferred attachment style ($\chi^2=12.334$, $df=2$, $n=658$, $p<0.01$). It can be interpreted that there was association between attachment styles of high school students by cooperation in group activities. The calculated effect size of 0.137 was considered a moderate effect size, as it falls greater than 0.1 to typical according to Dai et al. (2021).

Social Competence Level by Attachment Styles

To investigate the association between attachment styles and social competence level, a Chi-square test was conducted (see Table 16).

Table 16 Association between Attachment Styles and Social Competence Level of High School Students

Attachment Styles		Social Competence Level			Total	χ^2	<i>p</i>
		Low	Moderate	High			
Secure	Count	23	232	69	324	31.048***	.000
	%	28.4%	48.53%	69.7%	49.24%		
Fearful	Count	21	86	10	117		
	%	25.93%	18%	10.1%	17.78%		
Preoccupied	Count	10	59	8	77		
	%	12.35%	12.34%	8.08%	11.7%		
Dismissing	Count	27	101	12	140		
	%	33.33%	21.13%	12.12%	21.28%		
Total	Count	81	478	99	658		
	%						

*** $p < .001$

Generally, out of 658 students, 324 secure attachment style students (49.24%) in this study produced 28.4% of low social competence, 48.53% of moderate social competence and 69.7% of high social competence. And 117 fearful attachment style students (17.78%) in this study produced 25.93% of low social competence, 18% of moderate social competence and 10.1% of high social competence. Similarly, 77 preoccupied attachment style students (11.7%) in this study produced 12.35% of low social competence, 12.34% of moderate social competence and 8.08% of high social competence. And 140 dismissing attachment style students (21.28%) in this study produced 33.33% of low social competence, 21.13% of moderate social competence and 12.12% of high social competence (see Table 16). Therefore, it could be said that social competence level of high school students were likely to be related with attachment styles. This finding was consistent with the study of Sujana Kumar and John Michael Raj (2016). They found that adolescents with secure attachment style had higher levels of social competence than insecure ones. But, 23 (28.4%) of total secure attached students were low social competence level. This could be said that because of their inborn temperaments and their personalities.

Table 16 showed the Pearson Chi-square results and indicated that the social competence level of high school students were significantly different on whether they have the preferred attachment styles ($\chi^2=31.048$, $df=6$, $n=658$, $p<0.001$). It could be interpreted that there is association between attachment styles of high school students by social competence level. Statistical significance does not provide information about the strength of the relationship. The calculated effect size of 0.154 was considered a strong effect size, as it falls greater than 0.15 to typical according to Dai et al. (2021).

Conclusion

It is important for the teachers and parents to realize how they should nurture their children to have secure attached people besides being physically strong people. There is a strong need to investigate attachment styles as well as how these styles contribute to their social competence of high school students. By helping high school students to develop secure attachment style, they can be more socially competent people in their lives.

Limitations of the Study

Interview methods could be used to measure the different variables as well as self-reported measures. In the case of the study of the attachment styles and social competence, longitudinal design is more desirable. Due to the scarcity of time and resources, such design is impossible for this study.

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A META-ANALYSIS STUDY ON FACTORS INFLUENCING CAREER MATURITY OF ADOLESCENTS

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Abstract

The main purpose of this study was to conduct the systematic review on the factors influencing the career maturity of adolescents. As the initial analysis of the study, related literature and previous studies were searched and reviewed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Then, the systematic review with meta-analysis was accomplished to explore the personal and environmental factors that have significant effect on the career maturity of adolescents. An exhaustive literature search enabled to select 18 studies which were eligible to conduct meta-analysis. In all cases in this study, random-effects model which assumes that there is heterogeneity between ESs in different studies, was used. In each meta-analysis, an average effect size and a 95% confidence interval were calculated with the improved method proposed by Hartung (Sánchez-Meca & Marín-Martínez, 2008). From the results of meta-analysis, career decision making self-efficacy, self-efficacy, self-concept, emotional intelligence and self-esteem were found to be salient personal factors that have significant effect on the career maturity of adolescents. Furthermore, it was found out that parental support, family support and socio-economic status can be considered as the important external or environmental factors that have significant influence on the adolescents' career maturity.

Keywords: Career Maturity, Meta-analysis, Adolescents

Introduction

Career maturity is an important issue in human life, because it covers the individual's development (Ratnaningsih, Kustanti, Prasetyo & Fauziah, 2017) as a result of the information and feedback received on themselves and the profession (Inkson, & Elkin, 2008; Patton, & McMahon, 2006; Perry, & Vanzandt, 2006), which takes place throughout the life span. According to Havighurst, among the several developmental tasks that must be completed during the adolescence period, the most important one that must be achieved by adolescents is the preparation to plan and choose a future career (as cited in Yusuf, 2004). Similarly, Hurlock (2002) also pointed out that as the adolescents begin to think about their future seriously, they learn to distinguish the career choices and tend to choose the preferred and aspired one. Individuals who are not ready and is not appropriate in the career election caused immaturity (Atli, 2017). Unpreparedness and improper phenomenon in the selection of high school students experienced career beckon. Since career maturity is important in selecting careers, it is important for the adolescents to have career maturity so as to choose and determine the direction of his career precisely (Coertse & Schepers, 2004).

Significance of the Study

Indecision in making career decision due to lack of career maturity (Çoban, 2005; Gülbahçe, 2007; Kök, 2013; Sekmenli, 2000; Şahin, 2010; Ürün, 2010) thus making the individual is not ready to undergo a career decision that has been made (Zunker, 2006). Individuals with a high level of career maturity, can make more informed career choices (Patton,

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Creed, & Muller, 2002) and less experienced uncertainty in a career (Creed & Patton, 2002; Patton & Creed Gonzales, 2008). Teenagers develop less vocational maturity owing to various factors, including a lack of understanding or worry about the decisions they will soon confront (Churnia et al., 2021). As the consequences of lacking career maturity, high school students encounter high level of perplexity to follow graduation or completion of their formal schooling.

Career maturity is regarded very vital element in the provision of vocational guidance particularly for the adolescence and is one of the mostly researched construct in career development (Bozgeyikli, Eroglu, & Hamurcu, 2009).

Objectives of the Study

The main objectives of the study are:

- To conduct the systematic literature review on factors influencing adolescents' career maturity by the Preferred Reporting Items for Systematic Review and Meta- Analyses (PRISMA) guidelines
- To explore the factors influencing adolescents' career maturity via Meta-analysis

Definition of the Key Term

Career Maturity. Career maturity is the extent to which an individual is able to master the career developmental tasks that are applicable to the relevant stage of his/her life (Miles 2008).

Meta-analysis. Meta-analysis is a set of techniques used to combine the results of a number of different reports to create a single, more precise estimate of an effect (Ferrer, 1998).

Adolescents. Adolescents are the individuals who are at the age of between 10 and 19 years (WHO, 2015).

Review of Related Literature

Factors Influence Career Maturity of Adolescents

Career maturity is fundamental construct in career development processes (Sneva, 2011; Powell & Luzo, 1998). Super (1957) introduced the concept of career maturity more than 53 years ago, with the initial term of “vocational maturity” which was also interchangeably described as “career readiness” (Chui, 2007). Thus, the term “career maturity” involves the sense of readiness and achieving competency in the career-related developmental task.

Crites (1978) defines career maturity as the extent to which a person has mastered appropriate vocational development tasks such as knowledge of self and knowledge about world of work and developing right attitude relevant for his/her vocational development. Moreover, Gysber, Heppner and Johnson (2003) conceptualized career maturity as the “readiness to engage in the developmental tasks appropriate to the age and level at which one finds oneself”. Interestingly, Donald Super later came up with the term ‘Career Adaptability’ to suggest career maturity for adults (Gysber et al., 2003).

Theoretical Framework of Factors Influences Career Maturities of Adolescents

Super divided the career development into five stages, namely the growth stage (ages 0-14 years), an exploration stage (age 14-24 years), stage of formation (age 24-44 years), the maintenance phase (ages 44-64 years), and the reduction stage (age 65 until death) (Gladding, 2012; Sterner, 2012). Career maturity is the readiness of the individual to complete the task of career development at every stage of career development (Coertse and Schepers, 2004; Dodd et al., 2014; Janeiro, 2010 categorized as the exploratory stage, so that career maturity in

adolescence is defined as how well people make a career choice and level of knowledge about education and job selection (Coertse and Schepers, 2004).).

Content Theories

The Theory of Work Adjustment (TWA) is based on the difference of individuals and vocational behavior (Dawis, 2002, 2005; Dawis & Lofquist, 1984). According to this theory, the two underlying processes that are inseparable in making a career choice is adjustment and accommodation. The theory declares two processes that an individual adheres to. In the adjustment phase, it requires an individual or person (P) to investigate a work environment (E) that can be best suited with his personality and skills. The second phase, accommodation, is from the side of E which searches for P who has enough skills to meet the needs and requirements of the organization. The amount of satisfaction of P depends on his needs and the satisfactoriness of E is based on the operational skills of P.

There are four types of adjustment maintained by person and environment (Dawis, 2005). The person level adjustment in the work environment can be denoted as “flexibility” which is a kind of tolerance an individual brings to his work environment. Next is activeness where P tries to modify E. The third is reactiveness where P adopts a self-modification to the difficult situation without transforming E. The fourth is perseverance in which P determines to adjust before choosing to leave E. The prime strength of TWA is that it measures many variables like satisfaction, satisfactoriness, needs and values, indexes of correspondence, skills and abilities (Dawis, 2005).

Process-Content Theories

Social Cognitive Career Theory (SCCT) (Lent, Brown, & Hackett, 2002; Lent, 2005) proposed a model having three segments of career development that elucidates the vocational interest, career choices, and career performance and stability. This three sections emphasized on personal goals, self-efficacy, and outcome expectations. This theory showed the interaction and influence between the person and the environment upon each other.

Indicators of Career Maturity

In the concept of career maturity theory by Super (in Sharf, 2006), individuals who are ready with their career choices will have 5 conditions which are indicators of one's career maturity, namely: (1) Start thinking about their choice of working field; (2) Have planning and information about work fields of interest; (3) Have a consistent or stable choice of work of interest; (4) Realize self's potential; (5) Having a career choice with comprehensive consideration regarding self-potential and information about the field of work to be chosen. (Cited in Sharf, 2006).

Method and Procedure

With the aim of exploring consistent factors for career maturity of adolescents, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and Quantitative Literature Review with Meta-analysis were done with the following procedures.

Systematic Review on Factors Influencing Career Maturity of Adolescents

According to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, intensive search for the related literature and previous studies related to the influencing factors or antecedents of adolescents' career maturity was systematically carried out. Specifically, reporting and synthesizing literature were done by following four steps such as

(1) the identification of related research and literature from database searches, (2) initial selection of the studies based on inclusion and exclusion criteria, (3) assessment of the full text for eligibility, and (4) coding and reporting the final articles included in the review.

Data Sources and Literature Search

An initial literature search was conducted on the following databases: Google Scholar, Academia, Eric, ResearchGate and bibliographies of related articles. In the electronic searches, the keywords were used; “Factors Influencing career maturity of adolescents”, “Factors affecting on career maturity of adolescents”, “Determinants of adolescents’ career maturity”, and “Antecedents of adolescents’ career maturity”.

Inclusion and Exclusion Criteria

To be included in the systematic review with meta-analysis, each study had to fulfill the following criteria: (1) The major focus of the study was on the influencing factors or predictors or determinants of career maturity; (2) To be an empirical study where sufficient information to calculate the effect size were provided; (3) The study had to be conducted with the participants who are within the adolescence period; (4) Samples of participants from normal population were accepted; (5) The study had to be written in English; and (6) The study had to be published in a peer-reviewed journal, conference, or thesis and (7) Full text was available.

Selection Process of the Studies

The search yielded a total of 2243 records. After removing the duplicate and irrelevant studies, the remaining abstracts and titles were reviewed by screening. Ultimately, 29 articles were eligible for meta-analysis. From these 29 articles, 11 were excluded due to inconsistencies with inclusion criteria or insufficient data. The PRISMA flow chart for selection of studies is shown in Figure 2 (McKenzie, Bossuyt, Boutron, Hoffmann, Mulrow, et al. & The PRISMA Group, 2020).

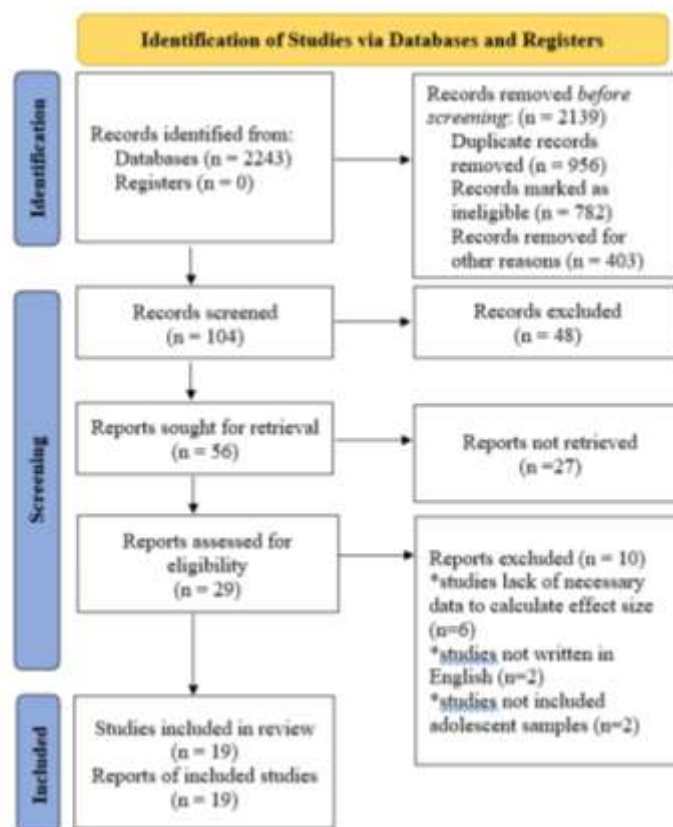


Figure 2 PRISMA Flow Chart of Study Selection

Coding of Studies

The name of the author(s) and year of publication were coded as the study characteristics. The substantive variables such as mean and SD of the age (in years), gender distribution of the sample (% male), target population (middle school students, high school students and college/university students), and geographic location of the study (country) were coded. Regarding methodological characteristics, the following were extracted: research method (survey, case study, review, vs. experimental), and sample size. If the study did not contain sufficient information, the code value was left blank.

Selecting the Factors to be included in Meta-analysis

Table 1 Summary Description of Personal and External Factors from Selected Studies

No	Personal Factors	N	No.	External Factors	N
1.	Self-efficacy	6	12.	Parental support	3
2.	Self-concept	5	13.	Family support	3
3.	Locus of control	4	14.	Socio-economic status	3
4.	Self-esteem	3	15.	Home environment	2
5.	Career decision making self-efficacy	3	16.	Parental Attachment	1
6.	Emotional intelligence	3	17.	Peer support	1
7.	Future time perspective	2	18.	School Achievement	1
8.	Gender	2	19.	Occupational prestige	1
9.	Adversity quotient	1	20.	Work role salience	1
10.	Age	1	21.	Career guidance	1
11.	Core self-evaluation	1			

Note. N = Number of studies

Among these factors from the two above-mentioned groups, factors which appear in at least 3 studies were selectively included in conducting the current meta-analysis.

Statistical Analysis

Meta-Essentials (Microsoft Excel workbooks), which was applied for the synthesis of effect sizes (Ess) from the included studies and provided figures, tables, and statistics for the results of meta-analysis (van Rhee, Suurmond, & Hak, 2015). In all cases in this study, random-effects models which assume that there is heterogeneity between ESs in different studies, was used. In each meta-analysis, an average effect size and a 95% confidence interval were calculated with the improved method proposed by Hartung (Sánchez-Meca & Marín-Martínez, 2008). In each meta-analysis, the heterogeneity of the correlation coefficients was investigated by calculating the Q statistic and the I^2 index.

Results and Discussion

Personal Factors Influencing Career Maturity of Adolescents

Table 2 Mean Effect Size, 95% Confidence Intervals, and Significance Level for the Personal Factors

Factor	N	k	r/g	95% CI		p	Q	I ²
				LL	UL			
Self-efficacy	4454	6	0.46***	0.23	0.7	.000	110.79	91.49%
Self-concept	1668	5	0.38***	0.17	0.58	.000	48.92	91.82%
Locus of control	1129	4	0.14	-0.01	0.3	.105	6.14	51.11%
Self-esteem	829	3	0.13***	0.09	0.17	.000	0.14	0.00%
Career decision making self-efficacy	1080	3	0.48***	0.42	0.54	.000	1.25	0.00%
Emotional intelligence	607	3	0.31***	0.28	0.34	.000	0.42	0.00%

Note. N = total number of participants, k = number of studies, r/g = mean effect sizes for correlation and difference, LL and UL = lower and upper limits of the 95% confidence intervals; Q = Cochran's heterogeneity Q statistic; I² = heterogeneity index, p = significance level

Among the personal factors, career decision making self-efficacy and self-efficacy have large positive effect on adolescents' career maturity ($r = +0.48$ & $r = +0.46$) respectively. For career decision making self-efficacy, the effect sizes were homogeneous and between-study variability was absent in the data ($I^2 = 0.00\%$); the prediction interval showed that the next study result will likely to be an effect size between +0.42 and +0.54. For self-efficacy, the effect sizes were not homogeneous and between-study variability was present in the data ($I^2 = 91.49\%$); the prediction interval showed that the next study result will likely to find an effect size between +0.23 and +0.7.

Again, self-concept and emotional intelligence have moderate positive effect on career maturity of adolescents with $r = +0.38$ and $r = +0.31$ respectively. For self-concept, heterogeneity was present in the data ($I^2 = 91.82\%$); the prediction interval showed that the next study result will likely to find an effect size between +0.17 and +0.58. For emotional intelligence, the effect sizes were homogeneous and between-study variability was not present in the data ($I^2 = 0.00\%$); the prediction interval showed that the next study result will likely to be an effect size between +0.28 and +0.34.

As one of the personal factors, self-esteem has small positive effect on career maturity ($r = +0.13$). The effect sizes were homogeneous and between-study variability was not present in the data ($I^2 = 0.00\%$); the prediction interval showed that the next study result will likely to find an effect size between +0.09 and +0.17.

From this analysis on personal factors, it was found out that although the average effect of locus of control on career maturity was positive ($r = 0.14$), the confidence intervals overlapped with zero and the effect sizes were heterogeneous and between-study variability was present in the data ($I^2 = 51.11\%$); the prediction interval showed that the next study result will likely to find an effect size between -0.01 and +0.3. Thus, locus of control may not influence the career maturity of adolescents.

From these results, it should be concluded that career decision making self-efficacy, self-efficacy, self-concept, emotional intelligence and self-esteem were found to be salient personal factors that have significant effect on the career maturity of adolescents.

External or Environmental Factors Influencing Career Maturity of Adolescents

Table 3 Mean Effect Size, 95% Confidence Intervals, and Significance Level for the External or Environmental Factors

Factor	N	k	r/g	95% CI		p	Q	I ²
				LL	UL			
Parental support	1018	3	0.30***	0.13	0.48	.000	4.99	59.88%
Family support	594	3	0.21***	0.02	0.34	.000	2.86	29.97%
Socio-economic status	1201	3	0.18***	0.06	0.30	.000	0.19	0.00%

Note. N = total number of participants, k = number of studies, r/g = mean effect sizes for correlation and difference, LL and UL = lower and upper limits of the 95% confidence intervals; Q = Cochran's heterogeneity Q statistic; I² = heterogeneity index, p = significance level.

Among the external or environmental factors, parental support has moderate positive effect on adolescents' career maturity ($r = +0.30$). For parental support, the effect sizes were heterogeneous showing the presence of moderate level of between-study variability in the data ($I^2 = 59.88\%$). The prediction interval showed that the next study result will likely to have an effect size within the broad range of +0.13 and +0.48.

Family support and socio-economic status have small positive effect on career maturity of adolescents with $r = +0.21$ and $r = +0.18$ respectively. For family support, moderate level of heterogeneity was found ($I^2 = 29.97\%$); the prediction interval showed that the next study result will likely to find an effect size between +0.02 and +0.34. For socio-economic status, the I^2 index ($I^2 = 0.00\%$) indicated the homogeneity in effect sizes and hence, between-study variability was absent in the data; the prediction interval showed that the next study result will produce an effect size between +0.06 and +0.30.

Form the results of meta-analyses, parental support, family support and socio-economic status can be considered as the important external or environmental factors that have significant influence on the adolescents' career maturity.

Conclusion

Every individual needs to accomplish the career development tasks in each career development stage so as to achieve career maturity. The adolescents in career exploration stage should achieve career maturity of this stage in case they will have a high level of readiness and maturity for the future career pathway. Thus, it is important to consider the relationship between career maturity of adolescents and the predictor variables.

The results of meta-analysis identified the possible predictors of adolescents' career maturity. In this study, the researcher analyzed the quantitative results of 19 studies of career maturity, covering 8588 high school and university students. These studies included both junior and senior high school students as well as the university students, with the mean age range of 14 to 19 years, from over 8 nations. The years of study ranged from 2003 to 2023, so reflecting 20 years of duration.

By reviewing the selected studies, about 21 factors were found as influencing factors on career maturity of adolescents. Among them, factors with five or above studies were selected to be included in data analysis. So, 9 factors were selected and categorized into two groups of factors (Personal Factors and External or Environmental Factors) to investigate how much effect they have on adolescents' career maturity.

As the results, career decision making self-efficacy, self-efficacy, self-concept, emotional intelligence and self-esteem were the influencing personal factors for adolescents' career maturity. Then, parental support, family support and socio-economic status were the influencing external or environmental factors on career maturity of adolescents. In order for the adolescents to achieve career maturity of their ages, the above-mentioned factors should be considered and thus, it is suggested to carry out further studies that can explain the structural model of adolescents' career maturity and its related or influencing factors.

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PSYCHOMETRIC PROPERTIES OF PSYCHOLOGICAL HARDINESS SCALE FOR BASIC EDUCATION TEACHERS

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Abstract

The primary purpose of the study is to investigate the number of items and the dimensions of psychological hardiness scale for basic education teachers. Descriptive survey research method was applied and quantitative data analysis was executed in this study. For psychological hardiness scale, two instruments were used with 44 items. A total of 997 basic education teachers were randomly selected. Basic education teachers in Bago Region and Naypyitaw were examined. And then, exploratory factor analysis (EFA) was used to investigate the number of items and the dimensions of the scale. It was also used to reduce data to a smaller set of summary variables and to postulate that there is a smaller set of unobserved (latent) variables or constructs that underlie the variables that actually were observed. Confirmatory factor analysis (CFA) is a multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs. CFA was conducted to determine the existing structure of the scale and to test how the variables are related to underlying constructs. For psychological hardiness scale, three subscales (commitment, control and challenge) were used with 29-items

Keywords: psychological hardiness

Introduction

In shaping the future of children by creating the foundation for their academic and social development, the basic education teachers play a crucial role. Psychological hardiness is essential for teachers because it equips them with the mental resilience to handle the daily challenges of teaching and the relationships with their colleagues in their workplace environment. Psychological hardiness is the ability to withstand stress, remain positive in difficult situations, and adapt effectively. People with strong psychological hardiness perceive challenging and difficult situations as normal experiences in life. Psychological hardiness is conceptualized as an individual capacity to positively respond to negative events and stressors in life and career (Maddi, 2004). In the educational community, psychological hardiness may be vital for retaining teachers in their workplace and maximizing retention.

Purpose of the Study

The main purpose of the study is to investigate the number of items and the dimensions of psychological hardiness scale for basic education teachers.

Definitions of Key Terms

Psychological Hardiness. The concept of psychological hardiness is conceptualized as an individual capacity to positively respond to negative events and stressors in life and career (Maddi, 2004).

Review of Related Literature

Psychological Hardiness

According to Kobasa et. al. (1982), “Hardiness is an individual trait that acts as a buffer between life stressors and an individual’s reaction to them”. It consists of three dimensions: commitment, control, and challenge. Commitment is the tendency to participate and engage in

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work and confront problems successfully. Control is an individual's capacity to anticipate challenging situations through their understanding of reality, and to create effective strategies to address these challenges and minimize their effects when they arise. Challenge is the ability to alter and cope with serious activities into opportunities for personal growth and development. Hardy persons are perceived as healthy individuals because they possess an increased sense of life and work commitment, are more open to change and challenges in life, and have a greater feeling of control over what happens to them (Bartone, Eid, Johnsen, Laberg, & Snook, 2009).

Method

Research Design

Simple random sampling method was used in this study.

Participants of Study

A total of 997 basic education teachers in Bago Region and Naypyitaw participated in this study.

Instrumentation

In order to study psychological hardiness of basic education teachers, the instrument adapted from the Arabic Scale of Psychological Hardiness developed by Nasser, (2012) and Dispositional Resilience Scale Revised (DRS-R) developed by Bartone et. al. (2007) were used. Total number of items in psychological hardiness scale is 44 items. These items are measured on 5 point Likert scales such as 1 (Strongly Disagree), 2 (Disagree), 3 (Neither Agree nor Disagree), 4 (Disagree) and 5 (Strongly Agree).

Procedure

Firstly, the related literature was studied through intensive reading from a variety of sources such as books, journals, thesis, research papers and internet sources. Next, research instruments were prepared under the guidance of the supervisor to collect data. In order to validate the prepared instruments, expert reviews were requested. According to the validation of the experts, pilot testing was carried out to assess the reliability coefficients of the respective questionnaires. After that, data collection was done and the researcher analyzed the received data.

Exploratory Factor Analysis (EFA) of Psychological Hardiness (PH)

Firstly, exploratory factor analysis was conducted with 44 items for psychological hardiness and some of the results in Extraction of Communalities were found unsatisfactory. Thus, 15 items were excluded from 44 items and 29 items were finally used to continue the subsequent procedures.

Next, Kaiser-Meyer-Olkin (KMO) and Bartlett's test were used for data analysis.

Table 1 KMO and Bartlett's Test of Psychological Hardiness (PH)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.860
Bartlett's Test of Sphericity	Approx. Chi-Square	4767.283
	Df	406
	Sig.	0.000

According to Table 1, the KMO value of 29 items was 0.860; it was greater than 0.80 that is indicating sufficient items for each factor. The Bartlett's test was found to be significant. This meant that the variables were highly correlated enough to provide a reasonable basis for factor analysis. Thus, the data from psychological hardiness were appropriate to run EFA. To calculate eigenvalue, a scree plot method was used. The result was shown in the following Figure 1.

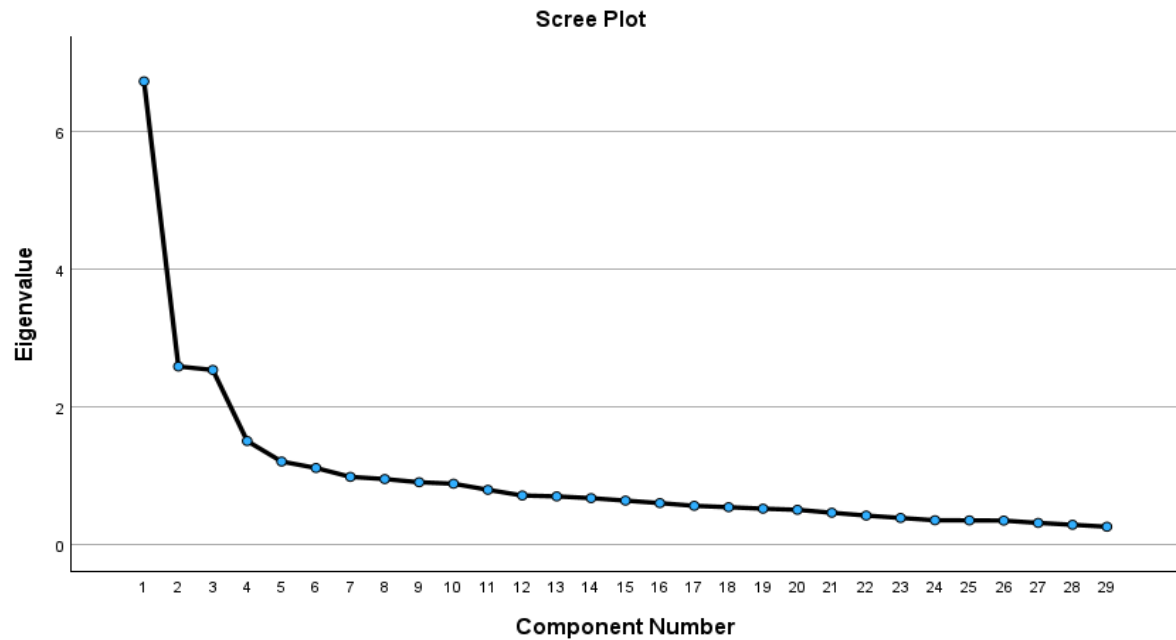


Figure 1 Scree Plot of Psychological Hardiness Scale

One of the reasons for running a factor analysis in this study is to reduce the large number of variables that describe a complex concept such as psychological hardiness to a few interpretable latent variables (factor). Based on Figure 1, eigenvalues of three factors were found to be greater than one.

Table 2 Factor Loadings for Psychological Hardiness (PH)

Factors			
Item	1	2	3
1	.732		
3	.725		
4	.464		
6	.698		
7	.700		
8	.643		
9	.709		
10	.556		
11	.466		
12	.620		
19	.732		
20		.405	
22		.457	

Factors			
Item	1	2	3
24		.493	
25		.394	
35		.634	
36		.618	
37		.618	
38		.639	
39		.730	
40		.734	
41		.601	
21			.460
27			.417
30			.541
34			.459
42			.743
43			.792
44			.728

After factor rotation, the number of items for each factor was determined. The first factor, commitment (C1) included eleven items with factor loadings ranging from 0.464 to 0.732, the second factor, control (C2) included eleven items with factor loadings ranging from 0.405 to 0.734, and the third factor, challenge (C3) included seven items with factor loadings ranging from .417 to 0.792. With these factor loading values of the items, the psychological hardiness scale indicated a good result because according to Hair et al. (2014), if the factor loading value of the item greater than 0.4, it is an indicator of a good result.

Confirmatory Factor Analysis (CFA) of Psychological Hardiness (PH)

Confirmatory factor analysis (CFA) is a multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs.

Table 3 Model Fit Indices of Psychological Hardiness Factors

Chi-square	p-value	Df	CMIN/Df	CFI	TLI	RMSEA	SRMR
1288.351	< .001	361	2.611	.867	.851	0.057	0.064

If the CFI is higher than **0.80** (Nayir, 2013), the model fit is acceptable. Carlback and Wong recommended that SRMR value below ≤ 0.08 indicates good fit and $TLI \geq 0.85$ indicates good fit. If RMSEA value is $\leq .08$, it could be considered acceptable (Carlback & Wong, 2018), and the data fit to the model. If the CMIN/DF value is ≤ 3 it indicates an acceptable fit (Kline, 2016). If the CMIN/DF value is ≤ 5 it indicates a reasonable fit (Marsh & Hocevar, 1985) and similarly, CMIN/Df (Chi-square/Df) was not exceeded 3, the data fit to the model (as cited in Al-Mamary, Shamsuddin, 2015). Therefore, the model fit psychological flexibility with 29-items for the measurement psychological hardiness of basic education teachers. The confirmatory factor analysis of psychological hardiness was expressed in Figure 2.

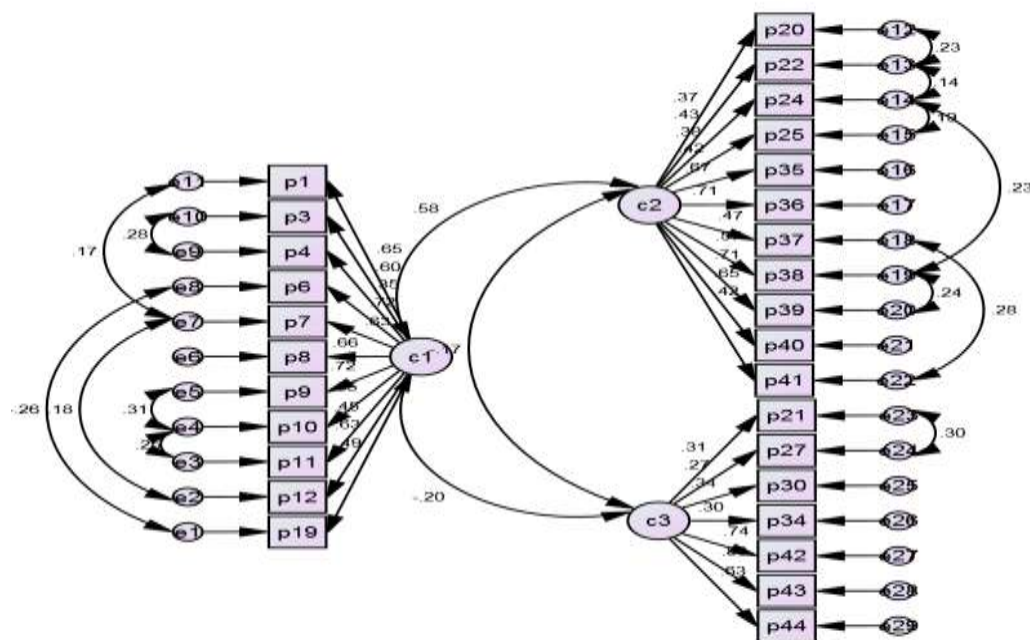


Figure 2 The Confirmatory Factor Analysis of Psychological Hardiness Factors

And then, the evaluated fit indices were also calculated. These indices involved the unstandardized estimates (b), standard errors (S.E), critical ratio (C.R) and standardized estimates (β). At the significant level of 0.05, the magnitude of C.R is higher than 1.96, it could be considered as significant (as cited in Arbuckle, 2012). The significant level (p values) and R^2 values were also calculated.

Convergent Validity of Psychological Hardiness (PH)

Convergent validity is also an evidence to test construct validity. To establish convergent validity, factor loadings of the indicator variables, composite reliability (CR) and average variance extracted (AVE) were used.

Table 4 Composite Reliability (CR) and Average Variance Extracted (AVE) of Psychological Hardiness Scale

Factors	No. of items	(CR)	(AVE)
Commitment	11	0.89	0.42
Control	11	0.85	0.45
Challenge	7	0.80	0.40
Total	29		

The AVE values range from 0.40 to 0.45. The CR values range from 0.80 to 0.89. According to Hunang et al., (2013), AVE should be above 0.5 and CR should be 0.7 and above. If AVE values were below the acceptable minimum cutoff point of 0.5, convergent validity may be adequate because all latent factors had CR values above 0.7 (as cited in Hamid, Samiz &

Sidek, 2017). So, psychological hardiness scale was assumed that it was a valid instrument to measure the psychological hardiness of basic education teachers.

Discriminant Validity of Psychological Hardiness (PH)

Discriminant validity was used to show that the construct is actually differing from one another empirically. Discriminant validity was evaluated with square root of AVE with correlations of latent constructs.

Table 5 Square Root of AVE with Correlations of Latent Factors of Psychological Hardiness (PH)

Factors	Commitment	Control	Challenge
Commitment	.648		
Control	.453	.670	
Challenge	-.183	-.169	.632

The diagonal numbers *in italic* are the square root of AVE values

According to Table 5, all the square root of AVE values was greater than 0.5 and these values were greater than all the inter-latent factor correlations for all factors in the relevant rows and columns. Thus, the results of the discriminant validity of psychological hardiness were congruent with Hair et al., (2011). Overall, discriminant validity can be accepted for the measurement model and the discriminant validity between the constructs.

Reliability Coefficients of Psychological Hardiness (PH)

Table 6 Number of Items and Reliability Coefficients in Each Subscale of Psychological Hardiness (PH)

Factors	No. of items	Cronbach's alpha
Commitment	11	0.850
Control	11	0.815
Challenge	7	0.706
Total	29	0.781

Based on Table 6, reliability coefficient of each subscale ranged from 0.706 to 0.850. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. However, there is actually no lower limit to the coefficient. Thus, psychological hardiness scale was reliable to measure the psychological hardiness of basic education teachers.

Conclusion and Suggestions

This study tried to investigate the psychometric properties of psychological hardiness scale with 44 items for basic education teachers. These items are analyzed and reduced by calculating exploratory factor analysis and confirmatory factor analysis. After running these, 29 items were finally left in psychological hardiness scale. The instrument for psychological hardiness is valid to measure. And then, this study adapted the instrument which is reliable to find out the psychological hardiness of basic education teachers in Myanmar societies. So, this instrument should be used in the future researches of educational psychology fields.

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PEER PRESSURE AND DECISION MAKING STYLES OF STUDENT TEACHERS

Thazin Mon¹

Abstract

The main purpose of this study was to investigate peer pressure and decision making styles of student teachers from Yangon University of Education. Quantitative approach was used in this study and the required sample was selected by using random sampling technique. A total of 473 student teachers (First year to Final year student teachers) from Yangon University of Education in 2023-2024 academic year participated in this study. As research instruments, the Peer Pressure Questionnaire-Revised (PPQ-R) developed by Sunil Saini and Sandeep Singh (2016) and General Decision Making Style Questionnaires (GDMS) developed by Scott and Bruce (1995) were adapted to measure peer pressure and decision making styles of student teachers in this study. The results showed that the student teachers experienced moderate level of peer pressure and most of them tended to use rational decision making styles. In this study, it was found that there were significant differences in peer pressure of student teachers by gender, age and education level. It was observed that there was significant difference in student teachers' decision making styles by gender but there were no significant differences by age and education level. The result of this study revealed that student teachers who had high peer pressure were most likely to use dependent and spontaneous decision making styles rather than rational decision making style. Moreover, student teachers' decision making styles had a significant association with their level of peer pressure at 0.001 level. To sum up, the findings of this study have implications in assisting student teachers, administrators and educators by highlighting the importance of peer pressure and decision making styles of student teachers.

Keywords: Peer, Peer Pressure, Decision Making Styles, Student Teachers

Introduction

The development of a nation depends much on today's generation, especially the student teachers who are college or university students who choose teaching profession as a career (Balyer & Özcan, 2014). When the student teachers interact with their peers, they might rely on their peers more than necessary, resulting in peer pressure. Hu et al. (2021), Ungar (2000) and Clasen & Brown (1985) defined peer pressure as pressure from peers to make choices consistent with the preferences of influential groups, irrespective of what an individual personally wants. Under this pressure, they may decide to take part in antisocial activities that may ruin their lives. They are very curious about everything in their surroundings and show risky behaviors to maintain their social relationship. It can be observed from these behaviors that peer pressure affects decision making.

Decision making is inseparable from every human being's life. Some people make decisions based on reasons or their own preferences whereas others need help from their peers. This sometimes results in good decisions while sometimes results in bad decisions, depending on the source they are relying to seek guidance to make decisions. Some people always have to take advice from peers even when making important decisions that will have an immense effect on their life. In addition, because of regularly relying on peers, they can't decide for themselves and their decision making will become weaker than before. As decision making is an important aspect of everyone's life, it is necessary to realize how peer pressure influences decision making. Therefore, this study proposes to examine the association between peer pressure and decision making styles among student teachers.

Purposes of the Study

The main purpose of the present study was

- to investigate the peer pressure and decision making styles of student teachers
- The specific objectives were
- To investigate the peer pressure among student teachers

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- To study the level of peer pressure among student teachers
- To observe the difference in the peer pressure of student teachers by their gender, age and education level
- To explore the decision making styles of student teachers
- To clarify the difference in the decision making styles of student teachers in terms of gender, age and education level
- To find out the association between peer pressure and decision making styles of student teachers

Definitions of Key Terms

Peer. People of the same age group, like classmates, or workmates are called peers (Steinberg & Monahan, 2007).

Peer Pressure. It means the influence exerted by a peer group or an individual encouraging other individuals to change their attitudes, values or behaviors in order to conform to group norms (Trynoe, 2009).

Decision Making Styles. Decision making styles have been defined as the learned habitual response pattern exhibited by an individual when confronted with a decision situation. It is not a personality trait, but a habit-based propensity to react in a certain way in a specific decision context (Scott & Bruce, 1995).

Student Teachers. It is defined as the student enrolled in a teacher preparation program who must successfully complete degree requirements including course work and field experience before being awarded a teaching license (Ryan, 2017).

Review of Related Literature

Peer Pressure

It is universally acknowledged that peers are the most influential people in the adolescents' lives; they impact goals, attitudes, and the ways they think and act. Peers have a very prominent position in an adolescent's life. They need their acceptance, support, and approval. For this acceptance, they feel pressure to follow them, it refers as peer pressure. Social identity theory of Tajfel (1979) explained how individual's identification with a social group affects their behavior and self-concept. According to social identity theory, people are more likely to follow the norms and behaviors of their peer group in the context of peer pressure if they want to preserve a positive social identity. Erikson's theory stated that peer pressure is needed for a person to develop, learn and grow and to form into an individual, it is through both positive and negative peer pressure that people form and develop their individuality and social status, this often starts in adolescence. Peer pressure occurs when an individual experiences implied or expressed persuasion to adopt similar values, beliefs and goals or to participate in the same activities as those in the peer group. It is something everyone has to deal with, even adults (Rubin et al., 2006).

Decision Making Styles

Decision making is a construct linked to human behavior and thus receives scientific consideration in the field of psychology. Denis (2011) observed that if a person wants to overcome the problems, that person needs to possess effective decision making skills and self-confidence in making decisions. Decision making is a broad term that applies to the process of making a choice between options as to a course of action (Thomas et al., 1991). In order to achieve personal and professional goals and enrich one's overall quality of lives, the individuals, belonging to all age groups, categories and backgrounds need to ensure that they make decisions in a well-ordered manner (Kapur, 2020). The effectiveness of the decision making process depends on the characteristics of the person who makes the decision. It is because at the decision making step, the methods preferred by the individuals are important (Shiloh et al., 2001).

When substantial theorizing and empirical research in decision making has focused on the aspects of the decision tasks and decision situation that influence decision outcomes, relatively less empirical attention has been paid to characteristics of the decision maker that might

influence decision outcomes (Scott & Bruce, 1995). Scott and Bruce argue that their study on the development of General Decision Making Style as a measure of decision making styles can be used across contexts and decision situations. The General Decision Making Style consists of five decision making styles: (1) rational, (2) intuitive, (3) dependent, (4) avoidant, and (5) spontaneous. These five decision making styles are a result of the thorough research and relevant literature reviews done by Scott and Bruce (1995). It has been widely employed in research to assess decision making style preferences and their relationships with various individual differences.

In everyday life, decision makers may face with partiality and uncertainty while evaluating the choices in order to make the best decisions. The presence and influence of parents, peers or significant others can also play a crucial role that interferes with one's decision making styles and influence the quality and adaptability of decisions.

Method

Research Design

Quantitative design and questionnaire survey method were used in this study.

Participants of Study

A total of 473 student teachers (First Year, Second Year, Third Year, Fourth Year and Fifth Year) from Yangon University of Education in 2023-2024 academic year participated in this study.

Instrumentation

The Peer Pressure Questionnaire-Revised (PPQ-R) developed by Sunil Saini and Sandeep Singh (2016) was used to measure peer pressure of student teachers. It has a total of 25 items. Each item was assessed along a 5-point Likert scale. For measuring decision making styles of student teachers, General Decision Making Style Questionnaire (GDMS) developed by Scott and Bruce (1995) was used. It was adapted by Tasdelen (2002). It is a self-report, Likert-Scale questionnaire with items scored on range of "1 to 5" for strongly disagree to strongly agree respectively. It consists of 25 items and the scale has 5 subscales, namely rational (5 items), intuitive (5 items), dependent (5 items), avoidant (5 items) and spontaneous (5 items).

Procedure

All the measures used in this study were adapted to Myanmar version. Then, expert review was conducted for face validity and content validity of the instruments. Next, the questionnaires were modified according to their suggestions and recommendations. And then, a pilot study was conducted with a sample of 50 student teachers from Yangon University of Education in first week of March, 2024 to test whether the wording of items, statements and instructions had their clarity and were appropriate to student teachers. The internal consistency (Cronbach's Alpha) of the whole inventory for PPQ-R was 0.871 and that of GDMS was 0.746 respectively. Thus, the resultant of Cronbach alpha values showed that the PPQ-R and GDMS had high reliability to measure peer pressure and decision making styles of student teachers.

Data Analysis and Findings

Descriptive Statistics of Peer Pressure

To identify peer pressure of student teachers, descriptive statistics were conducted and the results were shown in Table 1. The mean and standard deviation of peer pressure of student teachers were 63.35 and 12.44 (see Table 1).

Table 1 Mean and Standard Deviation of Student Teachers' Peer Pressure

Variable	N	M	SD	Minimum	Maximum
Peer Pressure	473	63.35	12.44	30	99

Peer Pressure Level of Student Teachers

Based on descriptive statistics of peer pressure, student teachers in this study were identified into three groups. Among 473 student teachers, 79 are identified as high group, 321 are identified as moderate group and 73 are identified as low group in peer pressure. In other words, most of the student teachers (67.9%) are moderate group, 16.7% of student teachers are high group and 15.4% of student teachers are low group in peer pressure. So, it can be concluded that student teachers from Yangon University of Education have moderate level of peer pressure. So, it may be said that as student teachers are forming their professional identities, they may start to rely more on their own judgments and less on peer opinions, which can moderate at level of peer pressure they experience.

Table 2 Three Different Groups for Peer Pressure of Student Teachers

Variable		High Group	Moderate Group	Low Group	Total
Peer Pressure	N	79	321	73	473
	Percentage	16.7%	67.9%	15.4%	100%

Comparison of Student Teachers' Peer Pressure by Gender

In order to examine whether there was a significant difference in peer pressure of student teachers by gender, the independent sample *t*-test was carried out and the data was presented in Table 3.

Table 3 Means, Standard Deviations, and Results of Independent Samples *t*-test of Student Teachers' Peer Pressure by Gender

Variable	Gender	N	M	SD	<i>t</i>	<i>df</i>	<i>p</i>
Peer Pressure	Male	159	67.75	12.57	5.662***	471	.000
	Female	314	61.11	11.78			

*** $p < .001$

The result of independent samples *t*-test stated that there was a significant difference in student teachers' peer pressure by gender, in which male student teachers experienced more peer pressure than female student teachers. This may be due to the fact that boys generally have more freedom of movement in peer groups than the girls do. So, they were more frequently found in public with their peer groups while girls of the same age had a stronger preference for dyadic friendships. This result was consistent with previous studies of Umashankari, Kiran and Daspurkayastha (2020). In their results, there was significant difference in peer pressure of adolescents (15-22 years) by gender indicating that males had a higher level of peer pressure compared to females. It was also consistent with the finding of Khin Win Maw (2019) in which the male students have more peer pressure than female students. However, it was contradicted with the research of Manju et.al (2022) indicating that the mean of the male students is less than that of the female students.

Comparison of Student Teachers' Peer Pressure by Age

To investigate the differences in peer pressure of student teachers by age, descriptive analysis was conducted. The mean and standard deviation for peer pressure of student teachers by age were reported in Table 4. Then, one-way ANOVA was also calculated to examine whether there was any significant difference in peer pressure by age or not.

Table 4 Means, Standard Deviations and ANOVA Results of Student Teachers' Peer Pressure by Age

Variable	Age	N	M	SD	F	p
Peer Pressure	19-20 years	188	62.77	12.59	6.531**	.002
	21-22 years	144	66.26	11.57		
	23-24 years	141	61.14	12.61		

** $p < .01$

According to Table 4, it can be seen that the mean score of 21-22 years was the highest among three age groups and that of 23-24 years was the lowest in peer pressure. Moreover, the results of ANOVA indicated that there was a significant difference in student teachers' peer pressure by their age at the 0.01 level. To obtain more detailed information, Post-Hoc test was executed by Tukey HSD method. According to the result, the mean value of 21-22 years was significantly higher than that of 19-20 years at 0.05 level and that of 23-24 years at 0.01 level (see Table 5). Student teachers might face different kinds of pressure related to conformity, career, family and societal roles. It may be because society's expectations and norms change with age. This result was inconsistent with Umashankari, Kiran Babu and Daspurkayastha (2020) that peer pressure does not depend on age.

Table 5 Results of Tukey HSD Multiple Comparisons for Student Teachers' Peer Pressure by Age

Variable	(I)Age	(J)Age	Mean Difference (I-J)	p
Peer Pressure	21-22 years	19-20 years	3.498*	.028
		23-24 years	5.122**	.001

* $p < .05$, ** $p < .01$

Comparison of Student Teachers' Peer Pressure by Education Level

In order to compare peer pressure of student teachers by their education level, the means and standard deviations of student teachers' peer pressure were reported in Table 6. To make more detailed information on the difference of student teachers' peer pressure by education level, ANOVA was conducted. ANOVA results indicated that there was a significant difference in peer pressure by education level at 0.05 level (see Table 6).

Table 6 Means, Standard Deviations and ANOVA Results of Student Teachers' Peer Pressure by Education Level

Variable	Education Level	N	M	SD	F	p
Peer Pressure	First Year	80	63.19	13.07	2.696*	.030
	Second Year	105	62.44	12.40		
	Third Year	96	65.68	11.64		
	Fourth Year	88	65.18	13.26		
	Fifth Year	104	60.68	11.54		

* $p < .05$

Then, to compare the group differences in detail, Post-Hoc with Tukey method was carried out and the results were shown in Table 7. It can be seen that the mean value of student teachers from third year was significantly higher than that of student teachers from fifth year at 0.05 level in peer pressure. As student teachers navigate college, work and relationships, peer opinions can heavily influence choice in education, career and lifestyle. Moreover, there is a strong need for social validation and fitting into peer groups. This was contradicted with previous study of Khin Win Maw (2019) conducted that there was no significant difference by education level.

Table 7 Results of Tukey HSD Multiple Comparisons for Student Teachers' Peer Pressure by Education Level

Variable	(I) Education Level	(J) Education Level	Mean Difference (I-J)	p
Peer Pressure	Third Year	Final Year	4.994*	.036

* $p < .05$ **Descriptive Statistics of Decision Making Styles**

To examine decision making styles of student teachers, descriptive statistics was carried out and the results were shown in Table 8.

Table 8 Frequencies and Percentages of Student Teachers' Decision Making Styles

Decision Making Styles	Frequency	Percentage
Rational	336	71.1%
Intuitive	63	13.3%
Dependent	55	11.6%
Avoidant	8	1.7%
Spontaneous	11	2.3%
Total	473	100%

According to the descriptive statistics shown in Table 7, it was clearly found that the percentage of student teachers who used rational decision making style was the most among the student teachers. It could be concluded that the student teachers from Yangon University of Education used rational decision making style than other styles. It may be because student teachers who are trained to approach the problems logically, considering various solutions, and selecting the most appropriate one based on the situation. This training encourages them rational approach to decision making.

Decision Making Styles of Student Teachers by Gender

To investigate whether there was significant association in decision making styles of student teachers by gender; the Pearson Chi-square was computed and presented. The results of Pearson Chi-square test pointed out that there was significant association between gender and decision making styles of student teachers $\chi^2 (4, N = 473) = 15.906, p < .01$ (see Table 4.9). The significant level was 0.01 level. This may be due to females are more concerned about the security involved in the decision, they value the available time and money more, they think more about the possible consequences either for themselves or for other people affected than males. This result was consistent with previous studies of Salo and Allwood (2011) that there was a significant gender difference in decision making style.

Table 9 Pearson Chi-square Test Results of Student Teachers' Decision Making Styles by Gender

Gender	N	Decision Making Styles										χ^2	p
		Rational		Intuitive		Dependent		Avoidant		Spontaneous			
		f	%	f	%	f	%	f	%	f	%		
Male	159	112	70.4%	22	13.8%	12	7.5%	4	2.6%	9	5.7%	15.906**	.003
Female	314	224	71.3%	41	13.1%	43	13.7%	4	1.3%	2	0.6%		
Total	473	336	71.0%	63	13.3%	55	11.6%	8	1.7%	11	2.3%		

** $p < .01$, Cramer's V = 0.183

Decision Making Styles of Student Teachers by Age

To investigate the association in decision making styles of student teachers by age, the Pearson Chi-square was conducted (see Table 10).

Table 10 Pearson Chi-square Test Results of Student Teachers' Decision Making Styles by Age

Age	N	Decision Making Styles										χ^2	p
		Rational		Intuitive		Dependent		Avoidant		Spontaneous			
		f	%	f	%	f	%	f	%	f	%		
19-20	188	131	69.7%	22	11.7%	27	14.4%	5	2.7%	3	1.6%	7.181	.517
21-22	144	100	69.4%	20	13.9%	17	11.8%	2	1.4%	5	3.5%		
23-24	141	105	74.5%	21	14.9%	11	7.8%	1	0.7%	3	2.1%		
Total	473	336	71.0%	63	13.3%	55	11.6%	8	1.7%	11	2.3%		

$p = .517$, Crammer's $V = 0.087$

Pearson Chi-square results indicated that there was no significant association between age and decision making styles of student teachers, $\chi^2 (8, N = 473) = 7.181$, $p > 0.05$ (see Table 10). This meant that student teachers' decision making styles do not depend on their age. This is why there was slightly different in money pressure, work pressure and social pressure for all age levels of student teachers. This finding was inconsistent with previous studies of Baiocco, Laghi, and Alessio (2009) that older people execute a more rational decision making style as compared to the younger ones.

Decision Making Styles of Student Teachers by Education Level

To compare decision making styles of student teachers under education level, a Chi-square statistics was used.

Table 11 Pearson Chi-square Test Results of Student Teachers' Decision Making Styles by Education level

Education Level	N	Decision Making Styles										χ^2	p
		Rational		Intuitive		Dependent		Avoidant		Spontaneous			
		f	%	f	%	f	%	f	%	f	%		
First Year	80	50	62.5%	11	13.8%	1	17.5%	3	3.8%	2	2.5%	16.346	.429
Second Year	105	78	74.3%	12	11.4%	10	9.5%	2	1.9%	3	2.9%		
Third Year	96	68	70.8%	9	9.4%	16	16.7%	1	1.0%	2	2.1%		
Fourth Year	88	63	71.6%	17	19.3%	6	6.8%	0	0.0%	2	2.3%		
Fifth Year	104	77	74.0%	14	13.5%	9	8.7%	2	1.9%	2	1.9%		
Total	473	336	71.0%	63	13.3%	55	11.6%	8	1.7%	11	2.3%		

$p = .429$, Cramer's $V = 0.093$

According to Table 11, the Pearson Chi-square results indicated that there was no significant association between decision making styles of student teachers by education level, $\chi^2 (16, N = 473) = 16.346$, $p > .05$. This may be due to universities often teaching similar critical thinking and problem-solving skills across different levels. This approach can lead to similar decision making style among students regardless of their education level. This finding was consistent with previous study of Spicer and Sadler-Smith, (2005) that they observed decision making style was no relationship with year of study.

Comparison of Student Teachers' Peer Pressure by Decision Making Styles

To investigate the difference in peer pressure of student teachers by decision making styles, ANOVA was conducted.

Table 12 Means, Standard Deviations and ANOVA Results of Student Teachers' Peer Pressure by Decision Making Styles

Variable	Decision Making Styles	N	M	SD	F	p
Peer Pressure	Rational	336	61.68	11.81	7.084***	.000
	Intuitive	63	65.02	14.10		
	Dependent	55	68.62	11.57		
	Avoidant	8	69.88	13.09		
	Spontaneous	11	73.73	11.60		

*** $p < .001$

ANOVA results indicated that there was a significant difference of peer pressure by decision making styles at 0.001 level. The results showed that the mean score of spontaneous decision making style was the highest and that of rational decision making style was the lowest (see Table 12). This means that student teachers who experienced high peer pressure tend to use spontaneous decision making style and they are less likely to use rational decision making style. After making mean comparison by decision making styles, the Post-Hoc Test was carried out by Turkey HSD method to obtain more detailed information.

Table 13 Results of Tukey HSD Multiple Comparison for Student Teachers' Peer Pressure by Decision Making Styles

Variable	(I) Decision Making Styles	(J) Decision Making Styles	Mean Differences (I-J)	p
Peer Pressure	Dependent	Rational	6.943**	.001
	Spontaneous	Rational	12.052*	.011

* $p < .05$, ** $p < .01$

According to Table 13, the results revealed that the mean value of student teachers with dependent decision making style was significantly more than that of student teachers with rational decision making style at 0.01 level and the mean value of student teachers with spontaneous decision making style was significantly more than that of student teachers with rational decision making style at 0.05 level in peer pressure.

Peer Pressure Level by Decision Making Styles

To investigate the association between decision making styles and peer pressure level, a Chi-square test was conducted. The result was shown in the following Table 14.

Table 14 Association between Decision Making Styles and Peer Pressure Level of Student Teachers

Decision Making Styles		Peer Pressure Level			Total	χ^2	p
		Low	Moderate	High			
Rational	Count	58	238	40	336	28.208***	.000
	%	79.5%	74.1%	50.6%	71.1%		
Intuitive	Count	10	38	15	63		
	%	13.7%	11.8%	19.0%	13.3%		
Dependent	Count	4	36	15	55		
	%	5.5%	11.2%	19.0%	11.6%		
Avoidant	Count	1	3	4	8		
	%	1.4%	0.9%	5.1%	1.7%		
Spontaneous	Count	0	6	5	11		
	%	0.0%	1.9%	6.3%	2.3%		
Total		Count	73	321	79	473	

*** $p < .001$, Cramer's V = 0.173.

Table 14 showed the Pearson Chi-square results and indicated that the peer pressure level of student teachers were significantly different on whether they have the preferred decision making styles $\chi^2 (8, N = 473) = 28.208, p < .001$. It can be interpreted that there is association between decision making styles of student teachers by peer pressure level. It may be because differences in peer pressure level have consequence for how student teachers make decision. If they trust their peers' opinions, they may rely on them more heavily, affecting their decision making styles to be more reliant on others than self-analysis. This finding is consistent with Dr. Renu Verna & Aditi Bansal (2019). They found that the adolescents who possess more peer pressure have less decision making abilities and vice-versa.

Discussion and Recommendation

As conceded by Singh and Saini (2010), a peer is somebody, who is of the same societal association based on age, class, or rank. Peer pressure is a sense of force from the same age group to do something dangerous for oneself and others. They influence people in either good ways or bad ways. Influence occurs when an individual acts or thinks in ways that he or she might not otherwise act or think, an effect that can be attributed to experiences with friends and affiliates. Moreover, decision making is the intricate process of selecting a particular option from a range of alternatives with the aim of attaining a specific and desired outcome. Wirawan (2013) suggested that this involves a systematic procedure, encompassing the analysis of problems, the identification of various alternative solutions, the careful selection of the most suitable option to address the problems at hand, the active implementation of the chosen decisions, and finally, an evaluation of how well these decisions have been put into practice. In essence, decision making is a multifaceted and dynamic process that requires thoughtful consideration and strategic planning to navigate through the complexities of problem solving and goal achievement.

The decisions made by young adults are influenced by a complex interplay of factors, including peer pressure, particularly during the transition from adolescence to young adulthood. The desire for social acceptance and the fear of rejection influences their choices in various aspects of life, including academics and lifestyle. This developmental period involves a balancing act between asserting autonomy and yielding to social influence, with peer pressure having both positive and negative effects on academic performance and social dynamics. This research will focus on the association between peer pressure and decision making.

For at least one major reason, teachers and educators should be aware of the present findings. Peer pressure can lead to positive outcomes when it encourages beneficial behaviors but it can also lead to negative consequences if it pushes individuals toward harmful actions. Therefore, there is a need to understand peer pressure i.e., how to manipulate peer pressure to bring positive change in the decision making styles of student teachers. Identification and knowledge of peer pressure can help teachers and educators to take proactive step in developing student teachers' decision making. It is important to know about the consequences that the decisions influenced by peers have on one's life, and think carefully and rationally before making a decision. An understanding of the association between peer pressure and decision making styles may encourage student teachers to make more autonomous, confident and competent decision makers in their lives. From the findings of this study, peer pressure levels of student teachers influenced decision making styles. Peer pressure can lead to positive outcomes when it encourages beneficial behaviors but it can also lead to negative consequences if it pushes individuals toward harmful actions. Therefore, there is a need to understand peer pressure i.e., how to manipulate peer pressure to bring positive change in the decision making styles of student teachers. Identification and knowledge of peer pressure can help teachers and educators to take proactive step in developing student teachers' decision making. Individuals join peer groups to learn and cope with new changes brought by modernization such as technological change and the need for new skills. Thus, any individual will more or less encounter peer pressure, just differing in the extent to which they are influenced by their peers. Peer pressure exerts both positive and

negative effects on life. Peer pressure may encourage one to study, make advances in career and improve living standard. It may also have negative effects in that one is forced to smoke, drink alcohol, and steal things. Sometimes, peers are the main culprits in making a person to not study properly and being absent from school. Peers may also induce unbearable burden in a bid to advance in career and live the lifestyle of peers. Thus, knowledge about peer pressure and how it affects people should be paid attention to. Only then, a person can contemplate whether they are influenced by peers or not. If they are, they can take counter measures to reduce the effects that their peers have on them, adjust their mentality and seek individuality. The matter of making decisions happens only when there are alternative solutions to the problems that an individual faces in a situation that demands their decision. Thus, it is an approach in which people have to think consciously and diligently to find the possible and feasible solutions. A decision can lead to unimaginable consequences severely affecting an individual's career, relationship with others professionally, socially and personally. The decision making is full of risk and responsibilities and accountability. Sometimes, a decision a person made affects not only the person that made the decision but also other people's livelihood. Hence, decision making is an important process in which one has to consider all the possibilities before making the final decision. A person's life can change significantly because of a decision they made such as the university they attend, the major subject they study, and the career they choose. These important decisions may be made according to the persuasion from their peers. A number of people are unknowingly making decisions based on peer pressure. It kills and gives rise to a set of people who are merely clones of each other, losing the sense of individuality. Succumbing to peer pressure in making important decisions of one's life can only land one in sorrow. One is likely to encounter huge expenses which they cannot afford. With time, this becomes a burden to the individual and the family at large (Olive, 1999). Therefore, it is important to know about the consequences that the decisions influenced by peers have on one's life, and think carefully and rationally before making a decision.

Conclusion

Since this study spotlighted the current situations of student teachers' peer pressure and decision making styles from Yangon University of Education, the findings of this study can be used as the knowledge base for teachers and educators. This study could be beneficial to the student teachers in order to become aware of their own susceptibility to peer pressure and their decision making styles. Additionally, the findings of this study could also help teachers and educators by reminding them to know the influence of peer pressure on decision making styles of student teachers. Therefore, this study could hopefully help to encourage student teachers to become more autonomous, confident and competent decision makers in their lives.

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A STUDY OF OPTIMISM AND LIFE SATISFACTION OF STUDENT TEACHERS

Yinn Mar Saw¹

Abstract

The main objective of this study was to investigate optimism and life satisfaction of student teachers. Quantitative approach was used in this research. A total of 800 student teachers from Yangon University of Education participated in this study. Student teachers' optimism was assessed by using the Revised Life Orientation Test (LOT-R) which consists of 10 items. Student teachers' life satisfaction was measured by using the Multidimensional Students' Life Satisfaction Scale (MSLSS) which consists of 40 items with five subscales. The internal consistency (Cronbach's Alpha) for LOT-R and MSLSS was 0.4 and 0.85. As the results of the research, most of the student teachers in this study had high level of optimism and life satisfaction. There were significant differences in optimism and life satisfaction by gender and age. It could be seen that female student teachers have more optimism and life satisfaction than male student teachers. And, younger student teachers possess higher optimism and life satisfaction than older one. But, there was no significant difference in optimism by family income. But there was significant difference in life satisfaction by family income. Student teachers with high income were more satisfied in their life. Finally, Pearson product moment correlation result revealed that student teachers' optimism was positively correlated with life satisfaction. According to the findings of the regression analysis, optimism can contribute to student teachers' life satisfaction.

Keywords: Optimism, Life Satisfaction, Student Teachers

Introduction

Nowadays, education plays an important role in human life. Education is a significant factor in the development of children, communities, and countries. Planners, educationalists and administrators are important to improve the quality of education. Especially, in contemplating educational reconstruction, teacher, his personal qualities, his educational qualifications, his professional training and the place that he occupies in the community are crucial factors. As a student teacher who will become a teaching profession in the future, they need to prepare these above factors to fulfill students with knowledge, skills, and attitudes. Teaching learning process will be effective when teachers have good mental health and positive attitude.

Optimism is the positive attitude. A teacher's attitude can have an impact on the students as well as the teachers themselves. To become a perfect teacher, he must possess not only academic qualifications but also a positive mindset. Optimistic thinking helps people to focus on the positive sides of their lives so they do not bother the negative aspects of life. It will be beneficial for them as a supportive life-aiding power which puts together their hidden abilities. Moreover, it will allow them to do their levels best of wish they would otherwise be unable. life is full of surprises and miracles. We never know what is going to happen now and the very next moment as our future is so unpredictable. When something unexpected occurs, we need optimism to confront difficulties. During university life, student teachers face several challenges. They not only separate from their families, adjust to university, make friendships, work on their lessons but also need to make important decisions about future life. So, they need optimism or belief in their capabilities, regardless of the circumstances around them. Optimism is usually

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mixed with a concept of life satisfaction. When a person is optimistic is more likely to perceive life in a positive sense and to feel a higher satisfaction with life.

Life satisfaction is a person's cognitive and evaluation of his or her life. A person who can adjust well with environmental situations is satisfied with his life. Teachers who have an optimistic sense can satisfy in their profession. If they satisfy in their profession, they will satisfy in their life. If a teacher himself has an optimistic sense, he can train his children to be able to face and overcome problems from classroom problems to real life problems, to the world's messy problems with a positive mindset and positive thinking. Similarly, it is important to student teachers to have optimism and life satisfaction in order to perform effective teaching learning process. Student teachers who have optimism in their studying can serve the best in their education and become satisfied in studying. In addition, if the student teachers have an optimistic sense, they will make the best use of their students' hidden talent, abilities, and will create a better teaching-learning process in the future. Therefore, this research investigated optimism and life satisfaction of student teachers.

Purpose of the Study

- To explore the optimism of student teachers.
- To study optimism of student teachers by gender, age and family income.
- To explore the life satisfaction of student teachers.
- To investigate life satisfaction of student teachers by gender, age and family income.
- To explore the relationship between optimism and life satisfaction of student teachers.

Definitions of Key Terms

Optimism. Optimism is a strong emotion and an expectation towards the assumption that everything will be all right against all its difficulties and obstacles (Goleman, 2000).

Life satisfaction. Life satisfaction is an overall assessment of a person's feeling and attitude about his quality of life (Diener et al., 2022).

Student teachers. Student teachers are students who are doing pre-service training in teaching (Jianping, 2002).

Review of Related Literature

Theory Related to Optimism

Optimism is one of the most important factors that will ensure the useful evaluation of one's circumstance. Optimists have high self-confidence and can rationally criticize themselves. They do not focus on the negative side in their thoughts, usually do not engage in conflicts, and lead to psychologically peaceful life. Optimism influences on personal effectiveness, happiness and overall health.

Carver & Scheier introduced the term "dispositional optimism." They argued that it is the presence of positive traits that increases the chances of something good happening to us. The dispositional theory of optimism suggests that optimism leads to positive consequences in life, and pessimism leads to stressful outcomes and increased dissatisfaction. The basic tenets of the dispositional theory of optimism are:

1. Optimism is a built-in trait or personality disposition.
2. Optimism is directly associated with reduced depression, anxiety, and stress.
3. Optimistic individuals are overall healthy – both physically and emotionally.

4. Optimism calls for increased resilience and coping strategies.

Concept of Life Satisfaction

Satisfaction with one's life implies a contentment with or acceptance of one's life circumstances, or the fulfillment of one's wants and needs for one's life as a whole. Achieving a balance and finding fulfillment in different aspects of life typically contributes to overall satisfaction.

Life satisfaction is the assessment of a person's feeling and attitudes about his quality of life. Significantly, there are two main kinds of assessment for life satisfaction: affective evaluation and cognitive evaluation. Assessment of anger, worry and happiness is affective evaluation and assessment of satisfaction with work, health or income is cognitive evaluation. Life satisfaction is often influenced by a combination of internal factors (such as personality, values and mindset) and external factors (such as socioeconomic status, environmental conditions, and life events).

Theoretical Perspectives on Life Satisfaction

There are few theories of life satisfaction. Among them, the most widely cited is Maslow's Theory of Hierarchy of Needs.

Maslow's Theory of Hierarchy of Needs. Abraham Maslow (1970) articulated theory of hierarchy of needs. He divided human needs into five levels and later added two new higher levels in the hierarchical order according to his study on the degree of satisfaction obtained by a certain individual. He believed that an individual has to satisfy the basic needs first before accomplishing his secondary needs. Maslow grouped all the seven types of human needs into two categories, namely, basic existence needs and enrichment needs. Basic existence needs cover physiological, security, love and self-esteem needs. On the other hand, the cognitive, aesthetic and self-actualization needs are grouped under enrichment needs. Human must fulfill the needs to obtain satisfaction. That is, satisfaction is unreachable without meeting the human needs. Life satisfaction is the overall feeling and cognitive assessment about life. A person can obtain life satisfaction if he fulfills his needs (Maslow, 1970).

Previous Studies of Optimism and Life Satisfaction

Optimism and Well-being: Soni & Sousa (2016) studied the relationship between optimism and well-being in undergraduate students. This study demonstrated that as optimism increases even one's well-being increases somewhat. Optimism was found to be more important for maintaining the pleasurable aspects of well-being (emotional well-being).

Optimism, Hope and Coping Styles: May Ye Yint Naing (2018) studied the relationship among optimism, hope and coping styles of student teachers. This study revealed that most of the student teachers are optimistic and possess high hope. The results also showed that there was positive correlation among optimism, hope and coping styles of student teachers.

Life Satisfaction and Socioeconomic Status: Eroglu et al., (2009) discovered the relationship between life satisfaction and socio-economic status (SES) of adolescences. This study revealed that females had higher life satisfaction than males in friend and school subscales. But, males had higher life satisfaction than females in environment subscale. Moreover, this study showed that socioeconomic status was predictive variable for life satisfaction.

Life Satisfaction and Perceived Social Support: Thiri Min Ko (2018) investigated life satisfaction and perceived social support of adolescents. This study explored that younger students have higher life satisfaction than older ones. Moreover, this study showed that students' life satisfaction was positively correlated with perceived social support.

Optimism and Life Satisfaction: Unuvar et al., (2017) investigated optimism and life satisfaction of the undergraduate tourism and hotel management students. This study showed that females had higher levels of optimism and life satisfaction than males. Also, an increase in the income level indicates and increases in optimism and life satisfaction. According to this study, life satisfaction level gets higher as the optimism level increases.

Optimism and Life Satisfaction: Nastase et al., (2019) examined the relationship between optimism and life satisfaction. They did case study. This study showed that older people were more optimistic than younger people. Moreover, males had higher level of optimism and life satisfaction than females. Life satisfaction level was highly correlated with optimism.

Method

Research Design

Quantitative research design and descriptive survey method were used in this study.

Participants of the Study

By using random sampling technique, second year, third year, fourth year and fifth year student teachers from Yangon University of Education (YUOE) were chosen as the participants of the study. A total of 800 student teachers participated in this study.

Instruments

A set of questionnaires consists of two sections. The first section contains personal information of the respondents and demographic variables such as student teachers' age, gender, education level, socioeconomic status, etc. The second section contains optimism and life satisfaction questionnaires. Revised Life Orientation Test Scale (LOT-R) developed by Scheier, Carver and Bridges (1994) was used to measure student teachers' optimism. It consists of 10 items. There are Optimism (Items 1,4,10), Pessimism (Items 3,7,9) and Filler (Items 2,5,6,8). It is 5-point Likert scale. Then, Multidimensional Students' Life Satisfaction Scale (MSLSS) developed by Dew and Huebner (2001) was used to measure student teachers' life satisfaction. It consists of 40 items that have five subscales. It is 4- point Likert scale. The internal consistency (Cronbach's Alpha) values of optimism and life satisfaction were 0.4 and 0.85.

Data Analysis and Findings

Descriptive Statistics of Student Teachers' Optimism

To investigate optimism of student teachers, descriptive statistics were computed. The results were shown in table 1.

Table 1 Descriptive Statistics for Optimism of Student Teachers

Variable	N	Minimum	Maximum	M	SD
Optimism	800	11	28	20.48	2.65

According to the descriptive statistics shown in table 1, the mean value of optimism was above average (20.48). This result pointed out that most of the student teachers in this study were optimistic. This may be due to the fact that they have hope and confidence in success and a positive future and they also see their world with a positive point of view. So, they are optimistic about their future.

Optimism Levels of Student Teachers

Based on descriptive analysis, student teachers were identified into three groups in this study; 21% of student teachers with scores one standard deviation above the sample mean were considered high group, 72.6% of student teachers with scores between (+1) and (-1) standard deviation from the sample mean were grouped into moderate group and the remaining student teachers of 6.4% who scored one standard deviation lower than the sample mean identified as low group (see Table 2).

Table 2 Three different Groups of Optimism Levels

Optimism Levels	Frequency	Percentage
High	168	21%
Moderate	581	72.6%
Low	51	6.4%
Total	800	100%

Mean Comparison of Student Teachers' Optimism by Gender

To explore the differences in student teachers' optimism by gender, descriptive statistics and independent samples *t*-test were applied. The mean scores of male and female student teachers were reported in Table 3.

Table 3 Descriptive Statistics and Results of Independent Sample *t* Test for Student Teachers' Optimism by Gender

Variable	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Optimism	Male	400	20.18	2.52	-3.24**	798	.001
	Female	400	20.79	2.76			

***p* < .01

According to the results of Table 3, the mean score of female student teachers was slightly higher than that of male student teachers in optimism. In order to confirm the gender difference of student teachers, independent samples *t*-test was applied. The result revealed that there was a significant difference in optimism at 0.01 level by gender. This finding could be interpreted that optimism of selected female student teachers was higher than that of selected male student teachers. This finding was consistent with the previous findings of Unuvar et al., (2017) and Nastase et al., (2019).

Mean Comparison of Student Teachers' Optimism by Age

In order to test whether student teachers' optimism depends on their age or not, the descriptive statistics and one-way analysis of variance (ANOVA) were computed. The results were shown in Table 4.

Table 4 Descriptive Statistics and ANOVA Results of Student Teachers' Optimism by Age

Variable	Age	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>
Optimism	19-20	204	20.90	2.94	3.457*	798	.032
	21-22	299	20.39	2.54			
	Above 23	297	20.29	2.54			

**p* < .05

According to the result of Table 4, the mean score of (19-20) age group was the highest in optimism. Moreover, the mean score of (21-22) age group was the second highest in optimism but the mean score of (above 23) age group was the lowest in optimism.

In order to find out whether there were any significant differences in optimism among three age groups or not, One-Way ANOVA was conducted again. The ANOVA results revealed that there was significant difference in optimism ($F = 3.457, p < .05$). To obtain more detailed information, the Post-Hoc test was carried out by Tukey Method. (See Table 5).

Table 5 Post-Hoc Analysis of Student Teachers' Optimism by Age

Variable	(I) Age	(J) Age	Mean Differences (I-J)	<i>p</i>
Optimism	19- 20	Above 23	.604*	.033

* $p < .05$

According to Table 5, it can be clearly seen that the mean score of (19-20) age group was significantly higher than those of (above 23) age group in optimism. It can be concluded that the (19-20) age group was more optimistic than (above 23) age group because (19-20) age group has less stress not only in academic year but also in academic subjects. Furthermore, they may have less responsibilities in the family's financial problems and face less difficulties. This finding was consistent with the study of Mishra (2013) who found that the younger age group displayed a higher level of optimism than the older age group.

Comparison of Student Teachers' Optimism by Family Income

In order to test whether student teachers' optimism depends on their family income, the descriptive statistics and one-way analysis of variance (ANOVA) were computed. The results were shown in Table 6.

Table 6 Comparison of Student Teacher' Optimism by Family Income

Variable	Family Income (MMK)	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>
Optimism	150000-300000	313	20.25	2.58	2.131	798	.119
	300000-500000	274	20.58	2.66			
	above 500000	213	20.70	2.73			

From the above Table, the results revealed that the mean score of student teachers with (above 500000 MMK) family income was the highest in optimism. The mean score of student teachers with (150000-300000 MMK) family income was the lowest in optimism. In order to find out whether there were any significant differences in optimism among three levels of family income or not, ANOVA was calculated again. According to the results, no significant difference was found in optimism among three levels of family income.

Descriptive Statistics of Student Teachers' Life Satisfaction

To study life satisfaction of student teachers, descriptive statistics was carried out. The results were shown in Table 7.

Table 7 Descriptive Statistics for Life Satisfaction of Student Teachers

Variables	N	Minimum	Maximum	M	Mean%	SD
Family Satisfaction	800	11	28	23.58	84.21	3.14
Friend Satisfaction	800	12	35	26.10	72.5	2.70
School Satisfaction	800	9	32	21.05	65.78	3.57
Living Environment Satisfaction	800	15	36	25.96	72.11	3.42
Self-Satisfaction	800	12	28	21.68	77.43	2.56
Life Satisfaction (Overall)	800	85	156	118.37	73.98	9.88

Since the numbers of items included in each subscale of life satisfaction were not the same, the mean scores were transferred to the corresponding mean percentages. According to the results shown in Table 9, the mean percentage (84.21%) of family satisfaction was the highest among five subscales. According to this result, most of the student teachers in this study were satisfied with their family. This may be due to the fact that they possess family qualities such as solidarity, happiness, and a satisfactory relationship among family members. The mean percentage of school satisfaction was the lowest (65.78%). It can be interpreted that student teachers think that they are full of numerous subjects and class activities along the school year. Therefore, they feel bored learning academics and attending the class. The mean percentage (73.98%) of overall life satisfaction was above 50%. According to these results, most of the student teachers in this study possess high life satisfaction.

Life Satisfaction Levels of Student Teachers

Based on descriptive analysis, student teachers were identified into three groups in this study; 16.4% of student teachers with scores was one standard deviation above the sample mean were considered high group; 70.9% of student teachers with scores between (+1) and (-1) standard deviation from the sample mean were grouped into moderate group and the remaining student teachers of 12.8% who scored one standard deviation lower than the sample mean identified as low group (see Table 8).

Table 8 Three Different Groups of Life Satisfaction Levels

Life Satisfaction Levels	Frequency	Percentage
High	131	16.4%
Moderate	564	70.9%
Low	102	12.8%
Total	800	100%

Mean Comparison of Student Teachers' Life Satisfaction by Gender

To investigate the differences in student teachers' life satisfaction by gender, descriptive statistics and independent sample *t* test were carried out. The mean scores and standard deviations for each subscale as well as overall were reported in Table 9.

Table 9 Results of Descriptive Statistics and Independent Samples *t*-test of Life Satisfaction with regard to Gender

Variables	Gender	N	M	SD	<i>t</i>	<i>df</i>	<i>p</i>
Family Satisfaction	Male	400	23.50	3.19	-.800	798	.424
	Female	400	23.67	3.09			
Friend Satisfaction	Male	400	26.17	2.80	.693	798	.489
	Female	400	26.03	2.61			
School Satisfaction	Male	400	21.26	3.82	1.637	798	.102
	Female	400	20.85	3.28			
Living Environment Satisfaction	Male	400	25.79	3.27	-1.429	798	.154
	Female	400	26.13	3.56			
Self-Satisfaction	Male	400	21.87	2.75	2.049*	798	.041
	Female	400	21.50	2.34			
Life Satisfaction (Overall)	Male	400	118.57	9.98	.562	798	.574
	Female	400	118.18	9.74			

**p* < .05

The mean scores of female student teachers were higher than that of male student teachers in family satisfaction and living environment satisfaction subscales. But, the mean scores of male student teachers were higher than that of female student teachers in friend satisfaction, school satisfaction, self-satisfaction subscales and overall satisfaction. In order to confirm the gender difference of student teachers, independent samples *t*-test was applied. (see Table 9).

The result of independent samples *t*-test confirmed that significant gender difference exists in self-satisfaction subscale (*t* = 2.049, *p* = .041). Based on this result, it could be said that male student teachers have significantly higher self-satisfaction than female student teachers.

Mean Comparison of Student Teachers' Life Satisfaction by Age

To find out the differences in student teachers' life satisfaction with regard to age, descriptive statistics and one-way analysis of variance (ANOVA) were applied. The results for each age group concerned with five subscales and overall were reported in Table 10.

Table 10 Descriptive Statistics and ANOVA Results for Student Teachers' Life Satisfaction by Age

Variables	Age	N	M	SD	<i>F</i>	<i>p</i>
Family Satisfaction	19-20	204	23.70	3.00	.175	.839
	21-22	299	23.55	3.13		
	Above 23	297	23.54	3.24		
Friend Satisfaction	19-20	204	25.80	2.58	1.914	.148
	21-22	299	26.13	2.65		
	Above 23	297	26.28	2.83		

Variables	Age	N	M	SD	F	p
School Satisfaction	19-20	204	22.14	3.13	13.33***	.000
	21-22	299	20.73	3.52		
	Above 23	297	20.63	3.75		
Living Environment Satisfaction	19-20	204	26.32	3.25	1.564	.210
	21-22	299	25.87	3.29		
	Above 23	297	25.80	3.65		
Self-Satisfaction	19-20	204	21.13	2.48	7.749***	.000
	21-22	299	21.70	2.59		
	Above 23	297	22.04	2.53		
Life Satisfaction (Overall)	19-20	204	119.08	9.33	.788	.455
	21-22	299	117.97	10.08		
	Above 23	297	118.29	10.04		

*** $p < .001$

Based on the results of ANOVA, the significant differences were found in school satisfaction subscale ($F = 13.33$, $p < .001$) and self-satisfaction subscale ($F = 7.749$, $p < .001$). To realize more details, the Post-Hoc test was carried out by Tukey Method. (See Table 11).

Table 11 Post-Hoc Analysis of Student Teachers' Life Satisfaction by Age

Variables	(I)Age	(J)Age	Mean Differences (I-J)	p
School Satisfaction	19-20	21-22	1.408***	.000
		Above 23	1.508***	.000
Self-Satisfaction	21-22	19-20	.563*	.039
	Above 23		.908***	.000

* $p < .05$, *** $p < .001$

According to the result shown in table 11, school satisfaction of (19-20) age group was significantly higher than those of (21-22) and (above 23) age groups. However, (21-22) and (above 23) age groups possess higher self-satisfaction than (19-20) age group.

It can be concluded that student teachers have satisfaction in accomplishing their goals and ambitions. But, student teachers feel bored in learning academic studies and think that they are full of numerous kinds of subjects and class activities along the school year.

Comparison of Student Teachers' Life Satisfaction by Family Income

In order to find out whether the student teachers were different in their life satisfaction with regard to family income, descriptive statistics and one-way analysis of variance (ANOVA) were computed and the results were shown in Table 12.

Table 12 Descriptive Statistics and ANOVA Results for Student Teachers' Life Satisfaction by Family Income

Variables	Family Income (MMK)	N	M	SD	F	p
Family Satisfaction	150000-300000	313	23.40	2.98	1.186	.306
	300000-500000	274	23.60	3.18		
	above 500000	213	23.83	3.31		

Variables	Family Income (MMK)	N	M	SD	F	p
Friend Satisfaction	150000-300000	313	25.90	2.69	4.533*	.011
	300000-500000	274	25.96	2.41		
	above 500000	213	26.57	3.02		
School Satisfaction	150000-300000	313	21.33	3.37	2.086	.125
	300000-500000	274	21.02	3.61		
	above 500000	213	20.69	3.77		
Living Environment Satisfaction	150000-300000	313	25.60	3.39	2.949	.053
	300000-500000	274	26.12	3.36		
	above 500000	213	26.28	3.50		
Self-Satisfaction	150000-300000	313	21.19	2.49	12.349***	.000
	300000-500000	274	21.77	2.46		
	above 500000	213	22.29	2.65		
Life Satisfaction (Overall)	150000-300000	313	117.42	9.35	3.279*	.038
	300000-500000	274	118.46	9.41		
	above 500000	213	119.65	11.05		

* $p < .05$, *** $p < .001$

It was clearly seen that the mean scores of high family income was the highest and that of low family income was the lowest life satisfaction. Thus, it can be interpreted that the higher the family income was, the greater life satisfaction was.

Based on the results of ANOVA, the significant differences were found in friend satisfaction subscale ($F = 4.533$, $p < .05$), self-satisfaction subscale ($F = 12.349$, $p < .001$) and overall life satisfaction scale ($F = 3.279$, $p < .05$). Therefore, to find out family income differences, Tukey HSD comparison procedure was computed. These results can be seen in Table 13.

Table 13 Post-Hoc Analysis of Student Teachers' Life Satisfaction by Family Income

Variables	(I)Family Income (MMK)	(J)Family Income (MMK)	Mean Differences (I-J)	p
Friend Satisfaction	above 500000	150000-300000	.672*	.014
		300000-500000	.617*	.033
Self-Satisfaction	300000-500000	150000-300000	.588*	.014
	above 500000	150000-300000	1.101***	.000
Life Satisfaction (Overall)	above 500000	150000-300000	2.234*	.029

* $p < .05$, *** $p < .001$

According to the result Post-Hoc analysis, life satisfaction of student teachers who have family income (above 500000 MMK) were significantly higher than those of student teachers who have family income (150000-300000 MMK) and (300000-500000 MMK) in friend satisfaction sub-scales. Besides, life satisfaction of student teachers who have family income (above 500000 MMK) and (300000-500000 MMK) were significantly higher than those of student teachers who have family income (150000-300000 MMK) in self-satisfaction sub-scales.

In overall life satisfaction, student teachers who have family income (above 500000 MMK) were significantly higher than student teachers who have family income (150000-300000 MMK). It can be concluded that student teachers with high income were more satisfied in their life.

Relationship Between Optimism and Life Satisfaction's Subscales of Student Teachers

In order to examine the relationship between optimism and life satisfaction, Pearson product moment correlation was conducted. The following table 14 presented the correlations between each subscale of life satisfaction and optimism.

Table 14 Inter-correlations between Subscales of Life Satisfaction and Optimism

Variables	FS	FRS	SCS	LES	SS	OP
FS	-	.280**	.143**	.492**	.237**	.208**
FRS		-	.224**	.302**	.308**	.231**
SCS			-	.215**	.202**	.249**
LES				-	.229**	.277**
SS					-	.326**
OP						-

**Correlation is significant at the .01 level (2-tailed).

Note: FS = Family Satisfaction, FRS = Friend Satisfaction, SCS = School Satisfaction, LES = Living Environment Satisfaction, SS = Self-Satisfaction, OP = Optimism.

According to Table 14, it could be seen that optimism was positively correlated with each subscales of life satisfaction. Moreover, all subscales of life satisfaction were correlated with one another.

Relationship between Optimism and Life Satisfaction

The following table 15 presented the correlation between optimism and life satisfaction.

Table 15 Correlation between Optimism and Life Satisfaction of Student Teachers

Variables	Optimism	Life Satisfaction
Optimism	-	.400**
Life Satisfaction		-

**Correlation is significant at the .01 level (2-tailed).

According to the results of table 15, there was a significant positive correlation between optimism and life satisfaction at .01 level. This means that if the student teachers possess a high level of optimism, they will be satisfied in their lives. Therefore, a high degree of life satisfaction was significantly associated with a high level of optimism.

Regression Analysis for the Prediction of Student Teachers' Life Satisfaction

To develop predictive model of student teachers' life satisfaction, regression analysis was conducted. The results were described in table 16.

Table 16 Summary of Regression Analysis for the Predictive Contribution of Optimism to Life Satisfaction

variables	<i>B</i>	Beta	<i>t</i>	<i>R</i>	<i>R</i> ²	Adj <i>R</i> ²	<i>F</i>
(Constant)	7.772		7.504***	0.400	0.160	0.159	151.658***
OP	.107	.400	12.315***				

Note. *** $p < .001$, OP= Optimism

The result showed that optimism made a significant predictive contribution to life satisfaction, $F(1, 798) = 151.658, p < .000$ and explained for 15.9% (adjusted R^2) of the variance in optimism. Therefore, optimism can contribute to student teachers' life satisfaction. Optimism is a predictor of life satisfaction. It could be concluded that the higher the optimism student teachers have, the higher the life satisfaction they possess. This is consistent with the study of Nastase et al., (2019). According to Nastase et al., (2019), life satisfaction level was highly correlated with optimism.

Based on the findings of the regression analysis, a diagram was drawn as the resultant model for life satisfaction in Figure 1.

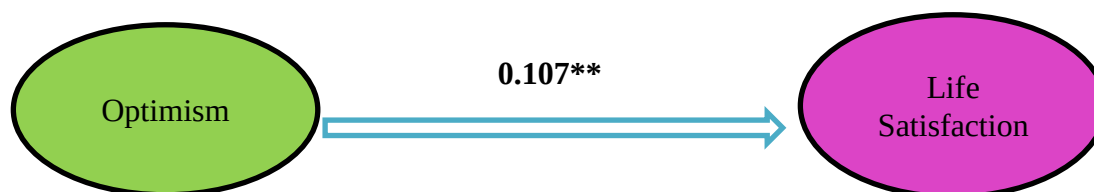


Figure 1 Model Summary for the Predictive Contribution of Optimism to Life Satisfaction

Then, the resultant model can be defined as in the following equation:

$$LS = 7.772 + .107OP$$

Where, LS = Life Satisfaction, OP = Optimism

Conclusion, Discussion and Recommendations

In this study, it was also found that most of the selected student teachers have high optimism and life satisfaction. They see the positive sides of things and expect things to turn out well. Besides, they believe they have skills and abilities to make good things happen. They feel that their life is meaningful and have a clear sense of purpose in life. Moreover, they enjoy close, supportive relationships with family, friends, and their community and have a positive self-image and accept themselves.

It is exactly sure that someone is satisfied with their life if they have positive outlook despite the various hardships they may have encountered. High level of optimism can also lead to high level of life satisfaction for student teachers. Improving optimism in student teachers is crucial for their well-being and effectiveness in the classroom. Implementing training programs that focus on resilience and stress management can enhance optimism. Creating a supportive and positive school culture can enhance optimism. A positive school environment contributes to teachers' overall job satisfaction and optimism (Day & Gu, 2010). Promoting a healthy work-life balance is essential for maintaining optimism. Balancing personal and professional life reduces burnout and enhances teachers' positive outlook (Skaalvik, 2010). Promoting a growth mindset helps student teachers view challenges as opportunities for growth rather than failures. Implementing positive psychology strategies, such as gratitude exercises and strength-based approaches, can boost optimism. Building strong social support networks among student teachers can enhance their optimism.

Optimism contributes to a higher quality of life. Optimistic individuals report greater life satisfaction and happiness. Many studies demonstrated that optimism is strongly correlated with overall life satisfaction and optimists have more positive outlook on life. Positive emotions and high life satisfaction are linked to higher levels of productivity, better job performance, and greater career success (Lyubomirsky et al., 2005). Improving life satisfaction of student teachers involves addressing multiple aspects of their professional and personal lives. Therefore, optimism and life satisfaction are important for student teachers and they should be helped to develop high level of optimism and life satisfaction.

Creating a supportive and positive school culture can enhance optimism. A positive school environment contributes to teachers' overall job satisfaction and optimism. Balancing personal and professional life reduces burnout and enhances teachers' positive outlook. Maintaining work-life balance contributes significantly to life satisfaction. Effective time management skills can help student teachers balance their teaching responsibilities with personal life. If the student teachers have high level of optimism and life satisfaction, they will perform better in their learning and in their profession.

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THE RELATIONSHIP BETWEEN ACADEMIC SELF-EFFICACY AND ACADEMIC PROCRASTINATION OF PRE-SERVICE TEACHERS

Si Thu Hein¹

Abstract

The main objective of this study is to investigate the relationship between academic self-efficacy and academic procrastination of pre-service teachers. Cross-sectional survey research design was used in this study. A total of 550 pre-service teachers from Yangon University of Education participated in this study. As the research instruments, Academic Self-Efficacy Scale (ASES) developed by Sagone and Caroli (2014) and Academic Procrastination Scale developed by Thae Phyu Phyu Nyein (2022) were used. The reliability of ASES was 0.789 and that of APS was 0.932. Regarding gender, male pre-service teachers were more likely to procrastinate in academic tasks than female pre-service teachers, but significant gender related difference was not found on academic self-efficacy. Then, younger pre-service teachers were found to possess higher academic self-efficacy than older pre-service teachers, but more advanced pre-service teachers showed higher academic procrastination. Furthermore, younger pre-service teachers were found to possess higher academic self-efficacy than the older ones, but academic procrastination of older pre-service teachers were found to be significantly higher than that of younger pre-service teachers. Moreover, pre-service teachers with lower daily internet use were more likely to have higher academic self-efficacy than the ones with higher daily internet use, but pre-service teachers with higher daily internet use were more likely to procrastinate in academic activities compared to those with lower daily internet use. According to the results of Pearson product-moment correlation, there was a significant negative correlation between academic self-efficacy and academic procrastination of pre-service teachers. The results pointed out that pre-service teachers with higher academic self-efficacy possessed lower academic procrastination. In addition, this study revealed that academic self-efficacy was a significant predictor of academic procrastination. Thus, this study can be beneficial to pre-service teacher education.

Keywords: Academic Self-efficacy, Academic Procrastination, Pre-service Teachers

Introduction

Significance of the Study

In the context of Myanmar, exploring the relationship between academic self-efficacy and academic procrastination among pre-service teachers holds significant implications for educational practices and professional development. Understanding the dynamics between these two factors is crucial for addressing challenges that pre-service teachers may face in their academic pursuits. High academic self-efficacy might correlate with lower instances of procrastination, as individuals confident in their abilities may approach tasks with greater motivation and a sense of competence.

Unraveling the intricate relationship between academic self-efficacy and academic procrastination for pre-service teachers in Myanmar provides a foundation for targeted interventions and improvements in teacher training programs. Therefore, quantitative data will be collected and analyzed for this study. Therefore, it is time for the study on the relationship between academic self-efficacy and academic procrastination of the pre-service teachers.

Purpose and Research Questions

The primary purpose of this study is to investigate academic self-efficacy and academic procrastination of pre-service teachers. Specifically, this study aims at answering the following research questions:

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1. Is there any significant difference in academic self-efficacy of pre-service teachers by gender, educational level, age and daily internet use?
2. Is there any significant difference in academic procrastination of pre-service teachers by gender, educational level, age and daily internet use?
3. Is there any significant relationship between academic self-efficacy and academic procrastination of pre-service teachers?
4. How can the academic self-efficacy predict on the pre-service teachers' academic procrastination?

Definitions of Key Terms

Academic procrastination. Academic procrastination can be defined as the postponing academic duties such as preparing for exams and delaying homework sometimes or constantly (Rothblum et al., 1986).

Academic self-efficacy. Individual's beliefs about his ability to organize and implement the action steps to reach the desired goal, and his beliefs about the ability to learn or perform academic task (Kitsantas & Zimmerman, 2009).

Pre-service teachers. Pre-service teachers are individuals who are enrolled in teacher education programs and are in the process of acquiring the necessary knowledge, skills, and qualifications to become certified teachers (Zhuotong & Yuan, 2024).

Review of Related Literature

Theoretical Framework of Academic Self-efficacy

Academic self-efficacy is a key determining factor in the aspects of learners' academic performance, motivation and goal attainment (Bandura, 1997; 1986). Academic self-efficacy makes students have commitment to the academic goals a student wants to achieve (Bandura, 1989). Academic self-efficacy is a crucial trait for the academic success of learners at the university level (Hill, 2002). Additionally, academic self-efficacy is a multidimensional trait and does not arise as a disposition.

Theories of Academic Procrastination

Various theories elucidate academic procrastination, characterized as the intentional delay of academic activities even though knowing negative consequences. The Temporal Motivation Theory hypothesizes that procrastination results from a preference for instant rewards over long-term destinations, specifically when activities are perceived as unfriendly (Steel & König, 2006). The Expectancy-Value Theory also indicates that procrastination arises by the time learners do not appreciate the task otherwise have poor personal value (Eccles & Wigfield, 2002). In addition, the Self-Regulation Failure Theory emphasizes that procrastination arises from an absence of efficient time management and low self-control (Wolters, 2003). Taken together, these theories highlight cognitive, self-regulatory, and motivational factors in realizing academic procrastination.

Method

Participants of the Study

The sample of this study was 550 pre-service teachers from Yangon University of Education and were collected by using random sampling technique.

Instrumentation

The present study examined the relationship between academic self-efficacy and academic procrastination in pre-service teachers. In this research, demographic data were also assessed. Academic Procrastination Scale (APS) and Academic Self-Efficacy Scale (ASES) were utilized. Then, all of the instruments in this study were adapted to Myanmar version.

Academic Self-Efficacy Scale (ASES)

The academic self-efficacy scale developed by Sagone and Caroli (2014) was utilized in this survey. It included 28 items each valuable on 4-point Likert scale, ranging from 1 (not at all efficient) to 4 (completely efficient) intervals. This scale consisted of four factors; self-engagement, self-oriented decision making, others-oriented problem solving and interpersonal climate. The reliability of the scale is $\alpha = 0.789$. Therefore, it is the acceptable scale to use in measuring academic self-efficacy of the pre-service teachers.

Academic Procrastination Scale (APS)

The academic procrastination scale developed by Thae Phyu Phyu Nyein (2022) were adapted and used it in this research. This instrument was composed of 26 items. Participants must answer 4-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree). This scale consisted of four factors; purposeful procrastination, procrastinate until deadline, avoidance to academic task and regulation on academic duty. The reliability of the scale is $\alpha = 0.932$. Therefore, it is the acceptable scale to use in measuring academic procrastination of the pre-service teachers.

Procedures of the Study

After setting the research title, the related literature was collected from dissertations, theses, books, journals, articles and internet sources. After collecting the related literature of this study, instruments were adapted. Then, these were translated into Myanmar version. After preparing the questionnaires, expert review was conducted for the face validity and content validity by experts who were specialized in the fields of Educational Psychology and Educational Test and Measurement. According to their suggestions and recommendations, the questionnaires were revised and modified. By the use of these instruments, test administration was conducted. Permission was requested from the Rector of the University to use this data. After that, pilot testing was conducted with 80 pre-service teachers. After piloting, item analysis was used to test the reliability and validity of these instruments.

Research Findings

The current study was conducted to analyse the academic self-efficacy and the academic procrastination of pre-service teachers. After collecting the data, the data analysis was conducted for the study. Descriptive statistics, independent samples *t*-test, one-way ANOVA, correlation, and regression analysis were used to investigate the research questions.

Comparison of Academic Self-efficacy of Pre-service Teachers by Gender

Descriptive statistics revealed the gender difference in academic self-efficacy of pre-service teachers. The mean, standard deviation and *t* value of male and female pre-service teachers were reported in Table 1.

Table 1 showed that there was slightly difference in mean scores of academic self-efficacies in male and female pre-service teachers. The mean score of academic self-efficacy of male students was .979 more than that of the females. To find out the significant difference between male and female pre-service teachers in academic self-efficacy, independent sample *t*-test was used. It was found that there was no significant difference ($t = 1.545$, $p > .05$) between academic self-efficacy of the pre-service teachers by gender. It could be interpreted that academic self-efficacy of pre-service teachers was not dependent on their gender in this study. However, it was found that there were slightly significant differences in self-oriented decision making ($t = 2.446$, $p < .05$) and others-oriented problem solving ($t = 2.300$, $p < .05$) by gender. It could be interpreted that male students were more likely to make self-oriented decision and solve others-oriented problems than the female students.

Table 1 Means, Standard Deviations and Results of Independent Samples *t*-test of Academic Self-efficacy of Pre-service Teachers by Gender

Variable	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Self-engagement	Male	254	19.44	2.62	.105	498.148	.916
	Female	296	19.41	2.22			
Self-oriented Decision Making	Male	254	20.55	2.39	2.446*	548	.015
	Female	296	20.06	2.27			
Others-oriented Problem Solving	Male	254	18.55	3.28	2.300*	548	.022
	Female	296	17.94	2.93			
Interpersonal Climate	Male	254	20.42	2.59	-.663	548	.508
	Female	296	20.56	2.33			
Academic Self-efficacy	Male	254	78.97	7.90	1.545	501.950	.123
	Female	296	77.99	6.78			

* $p < .05$.

Comparison of Academic Self-efficacy of Pre-service Teachers by Education Level

Table 2 Means, Standard Deviations and ANOVA Results of Academic Self-efficacy of Pre-service Teachers by Education Level

Variable	Education Level	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Self-engagement	First Year	110	19.82	2.50	4.983**	.001
	Second Year	110	19.94	1.89		
	Third Year	110	18.99	2.28		
	Fourth Year	110	19.57	2.56		
	Fifth Year	110	18.80	2.58		
Self-oriented Decision Making	First Year	110	20.69	2.58	3.451**	.008
	Second Year	110	20.44	2.03		
	Third Year	110	19.85	2.15		
	Fourth Year	110	20.60	2.40		
	Fifth Year	110	19.84	2.37		

Variable	Education Level	N	M	SD	F	p
Others-oriented Problem Solving	First Year	110	18.60	2.93	5.587***	.000
	Second Year	110	18.43	2.89		
	Third Year	110	17.38	2.75		
	Fourth Year	110	19.05	3.26		
	Fifth Year	110	17.66	3.41		
Interpersonal Climate	First Year	110	20.56	2.27	1.347	.251
	Second Year	110	20.60	2.06		
	Third Year	110	20.40	2.29		
	Fourth Year	110	20.82	2.58		
	Fifth Year	110	20.10	2.94		
Academic Self-efficacy	First Year	110	79.68	7.59	6.681***	.000
	Second Year	110	79.43	5.78		
	Third Year	110	76.62	6.29		
	Fourth Year	110	80.06	7.63		
	Fifth Year	110	76.41	8.33		

** $p < .01$, *** $p < .001$.

To explore the mean and standard deviation of academic self-efficacy of the pre-service teachers by education level, descriptive statistics were conducted.

According to the Table 2, the mean score of fourth year was the highest and slightly higher in academic self-efficacy than other groups of education level. To obtain more information, one-way ANOVA was conducted and the results revealed that there were significant differences in subscales of self-engagement and others-oriented problem solving and overall scale of academic self-efficacy of pre-service teachers between education level. Then, Post-Hoc test was executed by Tukey HSD method. The result was shown in Table 3. According to the result, there were significant differences in the mean scores of pre-service teachers for the subscales and academic self-efficacy by education level.

Table 3 Results of Tukey HSD Multiple Comparison for Academic Self-efficacy of Pre-service Teachers by Education Level

Variable	Education Level (I)	Education Level (J)	Mean Difference(I-J)	p
Self-engagement	First Year	Fifth Year	1.018*	.013
	Second Year	Third Year	.954*	.025
		Fifth Year	1.136**	.004
Others-oriented Problem Solving	First Year	Third Year	1.218*	.027
	Fourth Year	Third Year	1.672**	.001
		Fifth Year	1.390**	.007
Academic Self-efficacy	First Year	Third Year	3.054*	.015
		Fifth Year	3.263**	.007
	Second Year	Third Year	2.809*	.032
		Fifth Year	3.018*	.017
	Fourth Year	Third Year	3.436**	.004
		Fifth Year	3.645**	.002

* $p < .05$, ** $p < .01$.

Comparison of Academic Self-efficacy of Pre-service Teachers by Age

Table 4 Means, Standard Deviations and ANOVA Results of Academic Self-efficacy of Pre-service Teachers by Age

Variable	Age	N	M	SD	F	p
Self-engagement	Below 21Years	214	19.85	2.19	6.382**	.002
	21-22 Years	198	19.30	2.30		
	Above 22 Years	138	18.94	2.76		
Self-oriented Decision Making	Below 21Years	214	20.50	2.32	1.460	.233
	21-22 Years	198	20.18	2.24		
	Above 22 Years	138	20.11	2.49		
Others-oriented Problem Solving	Below 21Years	214	18.50	2.79	2.024	.133
	21-22 Years	198	18.21	3.13		
	Above 22 Years	138	17.81	3.49		
Interpersonal Climate	Below 21Years	214	20.62	2.16	2.743	.065
	21-22 Years	198	20.66	2.52		
	Above 22 Years	138	20.07	2.72		
Academic Self-efficacy	Below 21Years	214	79.47	6.51	4.997**	.007
	21-22 Years	198	78.36	7.38		
	Above 22 Years	138	76.96	8.22		

** $p < .01$.

To access the significant differences in academic self-efficacy of the pre-service teachers by age, one-way analysis of variance (ANOVA) is used for further detailed analyses and computations.

According to Table 4, there were slightly differences in mean scores of academic self-efficacies in pre-service teachers by age. To access whether there were significant differences between academic self-efficacy with subscales such as self-engagement, self-oriented decision making, others-oriented problem solving, interpersonal climate by age group, further analyses and computations were undertaken by using one-way analysis of variance. It was found that there were significance differences in academic self-efficacy ($p < .05$) of the pre-service teachers by age group. Then, Post-Hoc test was executed by Tukey HSD method. The result was shown in Table 5.

Table 5 Results of Tukey HSD Multiple Comparison for Academic Self-efficacy of Pre-service Teachers by Age

Variable	Age (I)	Age (J)	Mean Difference (I-J)	p
Self-engagement	Below 21 Years	Above 22 Years	.901**	.002
Academic Self-efficacy	Below 21 Years	Above 22 Years	2.508**	.005

** $p < .01$.

According to the result, there were significant differences in the mean scores of pre-service teachers for academic self-efficacy by age. It could be interpreted that the pre-service

teachers who are below 21 years have a higher level of academic self-efficacy and self-engagement pre-service teachers who are more than 21 years.

Comparison of Academic Self-efficacy of Pre-service Teachers by Daily Internet Use

In order to investigate whether academic self-efficacy of the pre-service teachers by their daily internet use differed or not, the following analysis was analysed the mean comparison of academic self-efficacy by daily internet use was described in Table 6.

Table 6 Means, Standard Deviations and ANOVA Results of Academic Self-efficacy of Pre-service Teachers by Daily Internet Use

Variable	Daily Internet Use	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Self-engagement	<1 hour	27	20.03	2.12	4.139**	.003
	1-3 hours	248	19.73	2.43		
	4-6 hours	204	19.13	2.17		
	7-9 hours	53	19.35	2.56		
	>9 hours	18	17.88	3.56		
Self-oriented Decision Making	<1 hour	27	20.96	2.31	2.364	.052
	1-3 hours	248	20.52	2.34		
	4-6 hours	204	20.00	2.29		
	7-9 hours	53	20.20	2.32		
	>9 hours	18	19.61	2.57		
Others-oriented Problem solving	<1 hour	27	18.22	2.15	5.258***	.000
	1-3 hours	248	18.77	2.92		
	4-6 hours	204	17.85	3.04		
	7-9 hours	53	17.88	3.26		
	>9 hours	18	16.00	4.33		
Table 6 (Continued)						
Interpersonal Climate	<1 hour	27	19.74	2.55	1.163	.326
	1-3 hours	248	20.45	2.39		
	4-6 hours	204	20.55	2.24		
	7-9 hours	53	20.94	3.03		
	>9 hours	18	20.27	3.37		
Academic Self- efficacy	<1 hour	27	78.96	6.55	3.964**	.004
	1-3 hours	248	79.48	7.52		
	4-6 hours	204	77.53	6.45		
	7-9 hours	53	78.39	8.28		
	>9 hours	18	73.77	9.64		

** $p < .01$, *** $p < .001$.

Table 7 pointed out that the mean score of daily internet use for (1-3 hours) was slightly higher than other groups of daily internet use. A p -value of .004 indicates that there were significant differences among pre-service teachers according to their daily internet use. Beyond this result, Tukey (HSD) was conducted.

Table 7 Results of Tukey HSD Multiple Comparison for Academic Self-efficacy of Pre-service Teachers by Daily Internet Use

Variable	Daily Internet Use (I)	Daily Internet Use (J)	Mean Difference (I-J)	<i>p</i>
Self-engagement	<1 hour	>9 hours	2.148*	.026
	1-3 hours	>9 hours	1.844*	.014
Others-oriented Problem solving	1-3 hours	4-6 hours	.917*	.014
		>9 hours	2.770**	.002
Academic Self-efficacy	1-3 hours	4-6 hours	1.944*	.038
		>9 hours	5.706*	.012

* $p < .05$, ** $p < .01$.

Based on the results shown in Table 7, the pre-service teachers who use internet daily for (1-3 hours) were slightly higher in academic self-efficacy than other groups of daily internet use. It could be interpreted that the students who use internet for (1-3 hours) were more likely to regulate themselves in performing academic tasks well and have higher academic self-efficacy than students who addict internet use more.

Comparison of Academic Procrastination of Pre-service Teachers by Gender

Descriptive statistics revealed the gender difference in academic procrastination of pre-service teachers. The mean, standard deviation and *t* value of male and female pre-service teachers were reported in Table 4.12.

Table 8 showed that there were slightly differences in mean scores of academic procrastinations in male and female pre-service teachers. The mean score of the academic procrastination of male students was 2.8 more than that of the females.

To find out the significant differences between male and female pre-service teachers in academic procrastination, independent samples *t*-test was used. It was found that there was significant difference ($t = 2.590$, $p < 0.05$) between academic procrastination of the pre-service teachers by gender. It could be interpreted that male students were more likely to procrastinate in academic tasks than female pre-service teachers. It was also found that there were significant differences in procrastination until deadline ($t = 5.511$, $p < .001$) by gender. It could be interpreted that the male students were more likely to procrastinate until deadline.

Table 8 Means, Standard Deviations, and Results of Independent Samples *t*-test of Academic Procrastination of Pre-service Teachers by Gender

Variable	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Purposeful Procrastination	Male	254	25.52	5.95	.931	503.930	.352
	Female	296	25.08	5.15			
Procrastination until Deadline	Male	254	16.13	4.14	5.511***	490.618	.000
	Female	296	14.32	3.41			
Avoidance to Academic Task	Male	254	12.22	3.28	1.667	499.759	.096
	Female	296	11.78	2.79			
Regulation on Academic Duty	Male	254	9.25	2.39	.680	548	.497
	Female	296	9.12	2.11			
Academic Procrastination	Male	254	63.12	13.61	2.590*	499.389	.010
	Female	296	60.30	11.57			

* $p < .05$, *** $p < .001$.

Comparison of Academic Procrastination of Pre-service Teachers by Education Level

To explore the mean and standard deviation of academic procrastination of the pre-service teachers by education level, descriptive statistics were conducted. In order to test whether there was a significant different in academic procrastination of the pre-service teachers with respect to education level, one-way ANOVA was conducted and the result revealed that there were significant differences in the subscales of purposeful procrastination, regulation on academic duty and academic procrastination. Then, Post Hoc test was computed by Tukey (HSD) method to be specific about the significance between academic procrastination of the pre-service teachers by educational level.

Table 9 Means, Standard Deviations, and ANOVA Results of Academic Procrastination of Pre-service Teachers by Education Level

Variable	Educational Level	N	M	SD	F	p
Purposeful Procrastination	First Year	110	24.76	5.60	5.06**	.001
	Second Year	110	23.62	5.28		
	Third Year	110	26.37	5.11		
	Fourth Year	110	25.26	5.45		
	Fifth Year	110	26.40	5.80		
Procrastination until Deadline	First Year	110	15.06	3.40	1.17	.324
	Second Year	110	14.90	3.58		
	Third Year	110	15.24	4.10		
	Fourth Year	110	14.78	3.71		
	Fifth Year	110	15.80	4.42		
Avoidance to Academic Task	First Year	110	11.89	3.15	1.63	.164
	Second Year	110	11.68	2.80		
	Third Year	110	12.35	2.79		
	Fourth Year	110	11.61	3.32		
	Fifth Year	110	12.39	3.02		
Regulation on Academic Duty	First Year	110	9.04	2.05	6.71***	.000
	Second Year	110	9.00	2.09		
	Third Year	110	10.01	1.99		
	Fourth Year	110	8.54	2.59		
	Fifth Year	110	9.33	2.22		
Table 9 (Continued)						
Academic Procrastination	First Year	110	60.75	12.63	3.42**	.009
	Second Year	110	59.20	11.86		
	Third Year	110	63.97	12.01		
	Fourth Year	110	60.19	12.58		
	Fifth Year	110	63.92	13.40		

** $p < .01$, *** $p < .001$.

Table 10 Results of Tukey (HSD) Multiple Comparison for Academic Procrastination of Pre-service Teachers by Education Level

Categories	Education Level (I)	Education Level (J)	Mean Difference(I-J)	p
Purposeful procrastination	Third Year	Second Year	2.75**	.002
	Fifth Year	Second Year	2.78**	.002
Regulation on Academic Duty	Third Year	First Year	.97*	.010
		Second Year	1.01**	.006
		Fourth Year	1.47***	.000
Academic Procrastination	Third Year	Second Year	4.77*	.039
	Fifth Year	Second Year	4.72*	.042

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 10 showed that there were significant differences in the mean scores of pre-service teachers for the above subscales of academic procrastination by education level.

Comparison of Academic Procrastination of Pre-service Teachers by Age

To find out the significant differences between academic procrastination with subscales such as purposeful procrastination, procrastinate until deadline, avoidance to academic task, regulation on academic duty by age, descriptive statistics was made. According to the results, the mean values of academic procrastination of pre-service teachers by age were reported in Table 11. To make the confirmation of the significant differences of academic procrastination of pre-service teachers by age, ANOVA was calculated.

According to Table 11, there were slightly differences in mean scores of academic procrastinations in pre-service teachers by age. To obtain more detailed information, the Post-Hoc Test was carried out by Tukey method (see Table 12).

Table 11 Means, Standard Deviations, and ANOVA Results of Academic Procrastination of Pre-service Teachers by Age

Variable	Age	N	M	SD	F	p
Purposeful Procrastination	Below 21 Years	214	24.07	5.35	8.916***	.000
	21-22 Years	198	26.21	5.47		
	Above 22 Years	138	25.84	5.60		
Procrastinate until Deadline	Below 21 Years	214	14.80	3.42	1.511	.222
	21-22 Years	198	15.35	4.01		
	Above 22 Years	138	15.43	4.28		
Avoidance to Academic Tasks	Below 21 Years	214	11.71	2.88	1.558	.212
	21-22 Years	198	12.21	3.16		
	Above 22 Years	138	12.09	3.05		
Regulation on Academic Duty	Below 21 Years	214	8.94	1.99	2.819	.061
	21-22 Years	198	9.46	2.40		
	Above 22 Years	138	9.14	2.33		
Table 11 (Continued)						
Academic Procrastination	Below 21 Years	214	59.51	11.80	5.032**	.007
	21-22 Years	198	63.24	12.79		
	Above 22 Years	138	62.51	13.21		

** $p < .01$, *** $p < .001$.

Table 12 Results of Tukey (HSD) Multiple Comparison for Academic Procrastination of Pre-service Teachers by Age

Categories	Age (I)	Age (J)	Mean Difference (I-J)	<i>p</i>
Purposeful Procrastination	21-22 Years	Below 21 Years	2.15***	.000
	Above 22 Years	Below 21 Years	1.78**	.008
Academic Procrastination	21-22 Years	Below 21 Years	3.73**	.007

** $p < .01$, *** $p < .001$.

Comparison of Academic Procrastination of Pre-service Teachers by Daily Internet Use

In order to investigate whether academic procrastination of the pre-service teachers by their daily internet use differed or not, the following analysis was analyzed. The mean comparison of academic procrastination by daily internet use was described in Table 13. According to the results, the mean score of pre-service teachers who used the internet less than 1 hour was the lowest and those who used the internet above 9 hours were the highest.

Table 13 pointed out that there were significant differences among groups of academic procrastination of the pre-service teachers by daily internet use. To obtain more detailed information, the post-Hoc Test was carried out by Tukey method (see Table 14).

Table 13 Means, Standard Deviations, and ANOVA Results of Academic Procrastination of Pre-service Teachers by Daily Internet Use

Variable	Daily Internet Use	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Purposeful Procrastination	<1hr	27	22.93	4.98	15.811***	.000
	1-3hrs	248	23.78	5.22		
	4-6hrs	204	26.27	5.14		
	7-9hrs	53	28.06	5.64		
	>9hrs	18	30.17	6.33		
Procrastinate until Deadline	<1hr	27	14.44	3.86	16.573***	.000
	1-3hrs	248	14.27	3.48		
	4-6hrs	204	15.48	3.52		
	7-9hrs	53	16.49	4.29		
	>9hrs	18	20.78	5.32		
Avoidance to Academic Tasks	<1hr	27	11.63	3.31	14.021***	.000
	1-3hrs	248	11.14	2.85		
	4-6hrs	204	12.51	2.82		
	7-9hrs	53	13.08	3.01		
	>9hrs	18	15.06	3.37		
Regulation on Academic Duty	<1hr	27	8.48	2.38	11.236***	.000
	1-3hrs	248	8.72	2.06		
	4-6hrs	204	9.39	2.22		
	7-9hrs	53	10.21	1.88		
	>9hrs	18	11.28	3.20		

Table 13 (Continued)

Variable	Daily Internet Use	N	M	SD	F	p
Academic Procrastination	<1hr	27	57.48	11.19	19.986***	.000
	1- 3hrs	248	57.91	11.69		
	4-6hrs	204	63.65	11.46		
	7-9hrs	53	67.83	12.44		
	>9hrs	18	77.28	16.30		

*** $p < .001$.

Table 14 Results of Tukey (HSD) Multiple Comparison for Academic Procrastination of Pre-service Teachers by Daily Internet Use

Categories	Daily Internet Use (I)	Daily Internet Use (J)	Mean Difference (I-J)	p
Purposeful Procrastination	4-6 hrs	<1 hr	3.35**	.017
		1-3 hrs	2.50***	.000
	7-9 hrs	<1 hr	5.13***	.000
		1-3 hrs	4.28***	.000
	>9 hrs	<1 hr	7.24***	.000
		1-3 hrs	6.39***	.000
		4-6hrs	3.89*	.023
Procrastinate until Deadline	4-6 hrs	1-3 hr	1.21**	.005
	7-9 hrs	1-3 hr	2.22**	.001
	>9 hrs	<1 hr	6.33***	.000
		1-3 hr	6.50***	.000
		4-6 hrs	5.30***	.000
		7-9 hrs	4.29***	.000
Avoidance to Academic Task	4-6 hrs	1-3 hr	1.37***	.000
	7-9 hrs	1-3 hr	1.94***	.000
	>9 hrs	<1 hr	3.43**	.001
		1-3 hr	3.92***	.000
		4-6 hrs	2.55**	.004
Regulation on Academic Duty	4-6 hrs	1-3 hr	.67*	.010
	7-9 hrs	<1 hr	1.73**	.007
		1-3 hr	1.49***	.000
	>9 hrs	< 1 hr	2.80***	.000
		1-3 hr	2.56***	.000
		4-6 hrs	1.89**	.004
Academic Procrastination	4-6 hrs	1-3 hr	5.74***	.000
	7-9 hrs	< 1 hr	10.35**	.002
		1-3 hrs	9.92***	.000
	>9 hrs	< 1 hr	19.80***	.000
		1-3 hr	19.37***	.000
		4-6 hrs	13.63***	.000

* $p < .05$, ** $p < .01$, *** $p < .001$.

Relationship between Academic Self-efficacy and Academic Procrastination of Pre-service Teachers

This study investigated the relationship between academic self-efficacy and academic procrastination of pre-service teachers. The Pearson product-moment correlation coefficient was used to examine the relationship among the variables. The correlation between academic self-efficacy and academic procrastination is shown in Table 15.

Table 15 Correlation between Academic Self-efficacy and Academic Procrastination of Pre-service Teachers

Variables	Academic Procrastination
Academic Self-efficacy	-.353**

** $p < .01$.

The results of bivariate correlations showed that there was a significant negative correlation between academic self-efficacy and academic procrastination of pre-service teachers. It seemed that pre-service teachers with higher self-efficacy in their academic abilities tend to procrastinate less. Conversely, those with lower academic self-efficacy are more likely to delay academic tasks.

This finding aligned with Bandura's (1997) social cognitive theory, which posited that self-efficacy influenced motivation, effort, and persistence in academic tasks. This finding was also consistent with the previous research findings revealed by Klassen et al. (2008), Steel (2007) and van Eerde (2003) in that procrastination was linked to low self-efficacy because students who doubted their abilities tended to avoid challenging tasks.

This study provided valuable insights into strengthening self-efficacy could contribute to better academic performance and lower procrastination, ultimately enhancing the quality of education and supporting the development of strong institutions.

Regression Analysis for the Prediction of Pre-Service Teachers' Academic Procrastination

To develop predictive model of pre-service teachers' academic procrastination, bivariate regression analysis was performed.

Table 16 Summary of Regression Analysis for the Predictive Contribution of Academic Self-Efficacy to Academic Procrastination

Predictor	<i>B</i>	β	<i>t</i>	<i>R</i>	R^2	<i>Adj R</i> ²	<i>F</i>
Constant	109.251			0.353	0.125	0.123	77.994***
ASE	-0.607	-0.353	-8.831***				

*** $p < 0.001$.

Note. ASE = Academic Self-Efficacy

The results of simple linear regression pointed out that the academic self-efficacy made a significant predictive contribution to academic procrastination, $F(1, 548) = 77.994$, $p < 0.001$, and explained for 12.3 % (adjusted R^2) of the variance in academic self-efficacy. According to Cohen (1988), this is a medium effect.

Then, the result model can therefore be defined as in the following equation:

$$AP = 109.251 - 0.607 ASE$$

Where, AP = Academic Procrastination, ASE = Academic Self-Efficacy.

It seemed that changes in academic self-efficacy levels could directly influence procrastination tendencies among pre-service teachers. This finding supported the idea that self-efficacy was a critical determinant of students' ability to manage their academic responsibilities effectively (Bandura, 1997). This finding was consistent with the previous research findings revealed by Schunk and DiBenedetto (2021), Klassen et al. (2008) and Steel (2007) in that self-efficacy was a strong negative predictor of procrastination, as students who believed in their academic abilities were more likely to engage in self-regulated learning and persist to complete academic tasks.

This study highlighted institutions that prioritized self-efficacy development contributed to quality education and strong institutions, ultimately leading to greater academic prosperity.

Conclusion, Discussion and Recommendations

Conclusion and Discussion

This study was conducted with a total of 550 pre-service teachers from Y.U.O.E since they are going through the process of becoming teachers and enter into service and so they need to understand the relationship between academic self-efficacy and academic procrastination. Quantitative data analysis was performed to study the relationship between academic self-efficacy and academic procrastination of the pre-service teachers. A significant negative correlation between academic self-efficacy and academic procrastination of pre-service teachers were found. The pre-service teachers with higher academic self-efficacy possess lower level of academic procrastination. On the other hand, the more the pre-service teachers procrastinate, the less the academic self-efficacy they possess.

Students with high academic self-efficacy are more likely to set challenging goals and persist in their efforts, which reduces academic procrastination (Schunk, 1991). Higher academic self-efficacy is associated with lower academic procrastination because students who believe in their capabilities are less likely to delay tasks and more likely to engage in effective academic behaviors (Eerde, 2000).

Teacher educators should encourage pre-service teachers to engage in progressively challenging academic tasks with constructive feedback to boost their confidence. Furthermore, teacher educators should also foster a growth mindset that promotes persistence despite challenges and emphasize positive academic culture to mitigate anxiety-related procrastination. Given the critical role teachers play in shaping future generations, strengthening pre-service teachers' self-efficacy will not only improve their academic performance but also prepare them to be more effective educators. This study underscores the need for institutions to integrate self-efficacy-building-strategies into pre-service teacher education programs to promote academic prosperity and professional preparedness.

Recommendations

Based on the research findings on the relationship between academic self-efficacy and academic procrastination in pre-service teachers, several recommendations can be made. Firstly, teacher education programs should incorporate strategies to enhance academic self-efficacy among pre-service teachers. This can be achieved through workshops, mentoring, and reflective practices that help these future educators develop confidence in their teaching and academic

abilities. Secondly, it is important to integrate time management and goal-setting techniques into the curriculum of teacher education programs. Pre-service teachers should be equipped with practical tools and strategies to manage their academic responsibilities effectively, thereby reducing the likelihood of procrastination. Training sessions focused on these skills can help pre-service teachers develop habits that will benefit them throughout their careers. Furthermore, educational institutions should provide ongoing support through academic advising and counselling services that address both self-efficacy and procrastination. By offering tailored guidance, these services can help pre-service teachers overcome barriers to academic success. Moreover, to enhance teaching and learning strategies for quality education, universities of education should incorporate self-regulated learning strategies in their curriculum, teaching students how to set realistic academic goals. For sustainable educational prosperity, policy makers should prioritize psychological well-being of students by integrating mental health support systems into academic institutions. Lastly, longitudinal studies should be conducted within the context of pre-service teacher education in Myanmar.

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TEACHING APTITUDE OF STUDENT TEACHERS IN YANGON UNIVERSITY OF EDUCATION

May Ko Ko Lwal¹, Yupar Myint²

Abstract

The purpose of this study was to investigate the teaching aptitudes of student teachers in Yangon University of Education (YUOE). The sample for this study consisted of 477 student teachers 250 males (117 from first-year and 133 from fourth-year) and 227 females (123 from first-year and 104 from fourth-year). Teaching aptitude test developed and standardized by Bingham (1937) and by Dr. R.P. Singh & Mrs. S. N. Sharma (2005) containing 30 items. These items were constructed with 28 multiple-choice questions and two open-ended questions. The reliability coefficient was found to be 0.705. The finding revealed that the student teachers make a significant difference in their aptitude due to variations in their gender, educational level, age group, specialization, and locality. This analysis results found that female student teachers are seen to be significantly better than male student teachers. According to the research findings, it was found that fourth-year student teachers may have higher aptitudes than first-year student teachers. There was a significant difference in age group. The regular attending older age group student teachers have a higher aptitude than the other groups. Similarly, there were also significant in specialization. The science major specialization student teachers have higher teaching aptitude than the others. There was no significant difference in locality. As a result of this study, it was found that there were significant differences in aptitude measures between gender, age group, educational level, and major specialization. It was hoped that the findings of this study will be useful to teachers, educators, and student teachers to know the importance of teaching aptitude. The findings of this study will be useful to improve the understanding of student teachers' teaching aptitude. This study indeed provides a positive impact on teacher educators for facilitating their student teachers with effective training.

Keywords: Aptitude, Teaching aptitude, Student teachers, Teaching.

Introduction

Nowadays in our education era, student teachers play an important role in the lives of teachers. In establishing a good education system in Myanmar, teachers' aptitude tests are an important factor in the success of education programs and can be investigated for the various factors that may affect education. In the education process, the teacher is the main pillar, and some specific abilities are necessary for gaining success in personal activities. So, a teacher should have a positive and right aptitude to guide the students. The teacher's performance is dependent to a great extent on his aptitudes and beliefs. Thus, it is made clear that a teacher should have an aptitude to teach, which an aptitude is the potential ability of an individual that promise future fruition into perfection (as cited in Spearman, 1927). Aptitude is a component of the capability to do certain kinds of work at a certain level, which can also be considered "talent". It describes the skills and ability of an individual to learn in the future. Aptitude is also a spontaneous or acquired capacity or ability and a tendency, capacity, or inclination to learn or understand. An individual's aptitude, when it means the capacity to acquire proficiency under appropriate conditions that is, his potentialities at present, as revealed by his performance on selected tests has predictive values. (Sharma & Ahmed, 2016).

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Teaching needs three qualities that are knowledge, communication, and aptitude. A teacher who possesses good teaching aptitude must be aware of the essentials of teaching like planning a lesson, motivating students, using the teaching-learning materials, following innovative teaching-learning strategies, consideration, group activities, and continuous and comprehensive evaluation. The above abilities that help an individual gain a required degree of proficiency or achieve success in a specific field are called aptitudes. An innate, acquired, learned, or developed component of competency for a certain kind of work at a certain level is also called aptitude. The teacher's teaching aptitude may also affect job satisfaction and his responsibilities toward academic activities. There are so many factors that have dominant roles in teachers' aptitude. A variety of factors seem to go along with teachers' aptitude and are dependent upon certain personal traits, intellectual and temperamental, and these often will enable the teacher to get over even drastic constraints imposed on his performance.

Therefore, in teacher education programs, it is necessary to give adequate importance to the teaching aptitude of student teachers. In selecting student teachers for teacher education institutions, it is essential to have an aptitude test. It is fortunate that many universities now started using aptitude components in their B.Ed. Entrance examinations. It has been made to study the teaching aptitude of the student teachers undergoing B.Ed. Course. Therefore, for the professional preparation of student-teachers, the study of teaching aptitude infatuated by them is very important. This study attempted to observe and compare the teaching aptitude of the student teachers. The success of any educational process depends on teacher effectiveness, teaching aptitude, attitude toward teaching, personality, and many more factors. For educational improvement, teaching aptitude becomes one of the major determinants of teacher effectiveness, and it is necessary to become an effective teacher.

Purposes of the Study

The purpose of the study was to investigate the teaching aptitude of student teachers in Yangon University of Education (YUOE).

The specific objectives of the study were:

- (i) to find out the significant difference in teaching aptitude of student teachers in YUOE by gender
- (ii) to examine the significant difference in teaching aptitude of student teachers in YUOE by age
- (iii) to investigate the significant difference in teaching aptitude of student teachers in YUOE by education level
- (iv) to study the significant difference in teaching aptitude of student teachers in YUOE by specialization
- (v) to examine the significant difference between student teachers of teaching aptitude according to locality

Research Questions

The research questions of the study were as follows:

- Are there any significant differences in the teaching aptitude of student teachers according to gender?

- Are there any significant differences in the teaching aptitude of student teachers according to age group?
- Are there any significant differences in the teaching aptitude of student teachers according to education level?
- Are there any significant differences in the teaching aptitude of student teachers according to students' specialization?
- Are there any significant differences in the teaching aptitude of student teachers according to locality?

Scope of the Study

The participants of this study were first-year and fourth-year student teachers (250 males and 227 females) from Yangon University of Education.

Definitions of Key Terms

Aptitude. Aptitude is a condition symptomatic of a person's relative fitness, of which one essential aspect is his readiness to acquire proficiency, his potential ability and another is his readiness to develop an interest in exercising that ability (Bingham, 1942).

Teaching Aptitude. Teaching aptitude is a specific capacity or special ability, distinct from the general intellectual ability of an individual, indicative of his probable success in a particular field after receiving an appropriate opportunity for learning or training (Kaur, 2014).

Student Teachers. Student teachers are those who are getting training or studying in B.Ed. course to become teachers (Ei Mon Mon Aung, 2019).

Teaching. Teaching is closely related to learning, the student's activity of appropriating this knowledge (Tricot, 2012).

Review of Related Literature

Aptitude can be defined as someone's natural capability to do something, and teaching aptitude refers to an individual's innate ability and character in teaching and learning (as cited in Rathod, 2021). It can also be defined as an individual's potential to effectively impart knowledge or skills to others, particularly after receiving appropriate training or education. Bingham (1937) defines aptitude as a condition or set of characteristics regarded as sympathetic to an individual's ability to acquire responses. He associates aptitude with the qualities that define an individual's behavior, which suggests how successfully they can learn to address and resolve particular types of challenges. Aptitude encompasses a range of characteristics that signal an individual's ability to gain specific knowledge, skills, or organized responses through training, such as learning a language, pursuing music, or performing mechanical tasks.

Good aptitude teachers can transform the educational experience, making it not only effective in imparting knowledge but also enjoyable and inspiring for students. Kaur (2007) established that academic achievement, teaching aptitude, and personality traits are the predictors of success in elementary teacher training. Cooley and Paul argued that these words "yesterday's achievement is today's ability and tomorrow's aptitude." Teaching aptitude is one of the major determinants of teacher effectiveness, and it is also found to be a good predictor of teacher effectiveness (Beena, 1995). The effectiveness of teacher education can be enhanced through

various approaches, such as refining the curriculum and enhancing practical teaching experience. Mastery in teaching is essential in this context.

Dave (1983) revealed that male and female teachers do not differ significantly in their Aptitude towards the teaching profession. Rawat and Srivastava (1984) established significant differences between male and female teacher trainees in their Aptitude towards the teaching profession. Beena (1995) indicated that teaching aptitude is a significant predictor of teaching effectiveness. Sajjan (1999) found a significant difference in teaching aptitude between male and female student teachers, and Kaur (2002) found that female teachers are more effective in their teaching than male teachers. Rodger (2007) in a study examined a possible aptitude treatment interaction between teaching clarity and student test anxiety. The findings indicated that both high and low teacher clarity had a notable positive impact on achievement motivation, but there was no interaction observed between teacher clarity and student test anxiety concerning aptitude.

Usha (2010) revealed a significant difference between the teaching aptitude of effective and ineffective male and female teachers. Rajasekar and Seetharaman (2013) stated that B.Ed. student teachers were below average in their teaching aptitude. Studies reviewed that the majority of male and female teachers differ significantly in their teaching aptitude, as reported by the studies conducted by Rawat and Srivastava (1984), Sajjan (1999), Kaur (2002), and Usha (2010). Kuraishy and Ahmed (2010) conducted a study in which academic background is an important factor in shaping the teaching aptitude of prospective teachers. The findings of the study revealed that high academic group members are more effective in teaching aptitude compared to those in the low academic group. It was also found that the male prospective teachers have a higher level of teaching aptitude and professional information. Kaur, (2014) conducted a comparative study of the teaching aptitude of B.Ed. student teachers. The main objective of the study was to find out teacher training programs to address any identified disparities in teaching aptitude based on gender or educational stream. The findings revealed that there was no significant difference between male and female student teachers. In this study, no significant difference was found between arts and science student teachers.

Method

Research Method

Descriptive research design and questionnaire survey method were used in this study.

Sampling

A total of 477 student teachers (males = 250, females = 227) from YUOE were selected as a sample to participate in this study. First-year student teachers (males =117, females =123) were randomly selected from different sections and fourth-year student teachers (males =133, females =104) were also selected from different sections in YUOE. A simple random sampling method was used.

Research Instrumentation

In this study, the teaching aptitude test developed and standardized by Bingham (1937) was used, and the Teaching Aptitude Test questionnaire developed by Dr. R.P. Singh and Mrs. S. N. Sharma (2005) was used for data collection for this study. This questionnaire classified two

types of items (multiple choice questions and open-ended questions). Each item of these questionnaires was scored according to the following categories, “1” for the right answer and “0” for the wrong answer. In open-ended items, similar codes were grouped into categories (categories 1 - 6) according to the student teachers’ responses. After the expert review was conducted for the content validity. The Cronbach’s alpha was 0.705 for the teaching aptitude questionnaire.

Data Analysis and Findings

Comparison of Teaching Aptitude of Student Teachers by Gender

Concerning the student teachers’ teaching aptitude, the gender difference was worthwhile to explore. To confirm the gender difference in the student teachers’ teaching aptitude, an independent samples *t*-test was applied. The mean scores and standard deviations for both male and female student teachers were reported in Table 1.

Table 1 The Results of Independent Samples *t*-test for Teaching Aptitude by Gender

Variable	Gender	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Total aptitudes	Male	250	14.18	4.433	-3.728***	.000
	female	227	15.66	4.219		

Note *** The mean difference is significant at .001 level.

Regarding gender, although a slight variation of mean scores exists in teaching aptitude, significant differences were found. According to the mean results, the females’ teaching aptitude was higher than that of males. There was a significant difference in *t*-test results ($t = -3.728$, $p < 0.001$ level). It is concluded that the teaching aptitude of female student teachers was higher than that of male student teachers.

Kanti (2011) conducted a study on the teaching aptitude of prospective teachers and found that female prospective secondary school teachers have a higher teaching aptitude when compared to their male counterparts. Krishna (2008) studied the teaching aptitude of students of B.Ed. colleges and which the female students possess more teaching aptitude than male students. The above research findings were similar to the results of this study that female prospective teachers have better teaching aptitude than male prospective teachers. This study finding was not consistent with Kulshreshtha and Heeranandini’s (2006) results. Kulshreshtha and Heeranandini’s (2006) findings suggested that prospective teachers of both groups (male and female) have a higher aptitude for teaching.

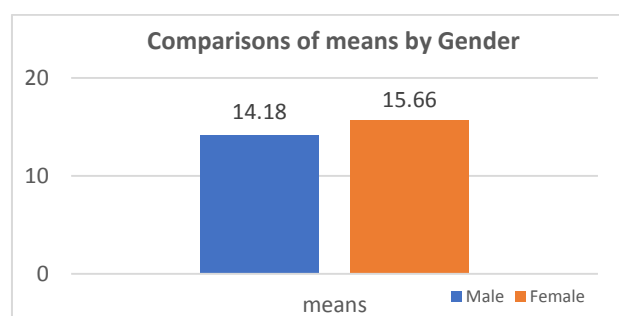


Figure 1 Comparison of Means by Gender

Comparison of Teaching Aptitudes of Student Teachers by Educational Level

To examine the teaching aptitude of student teachers from YUOE by educational level, descriptive statistics were analyzed. The analyses revealed slight differences in means and standard deviations for teaching aptitude by their educational level.

Table 2 The Results of Independent Samples *t*-test for Teaching Aptitudes by Educational Level

Variable	Educational level	N	Mean	SD	<i>t</i>	<i>p</i>
Aptitude	First-year	240	14.33	3.947	-2.797**	.005
	Fourth-year	237	15.45	4.741		

Note ** The mean difference is significant at .01 level.

According to the results of *t*-test, it was confirmed that there are significant differences in teaching aptitude. It was seen that significant differences exist among aptitudes measured by educational level. It may be said that fourth-year student teachers have higher aptitudes ($t = -2.797$, $p < 0.01$ level) than first-year student teachers.

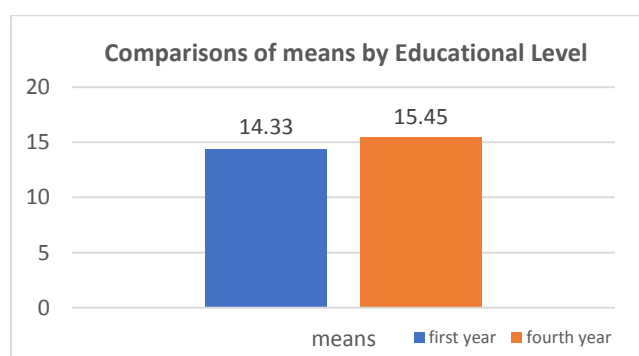


Figure 2 Comparison of Means by Educational Level

Comparison of Teaching Aptitudes of Student Teachers by Locality

Table 3 The Results of Independent Samples *t*-test for Teaching Aptitudes by Locality

Variable	Location	N	Mean	SD	<i>t</i>	<i>p</i>
Aptitude	Yangon Region	68	15.25	4.061	.741	.459
	Other Regions	409	14.82	4.445		

According to the results shown in Table 3, the mean values of total aptitudes for both Yangon and other regions were nearly the same and not significant. Thus, there were no significant differences between student teachers' aptitudes in Yangon and other regions.

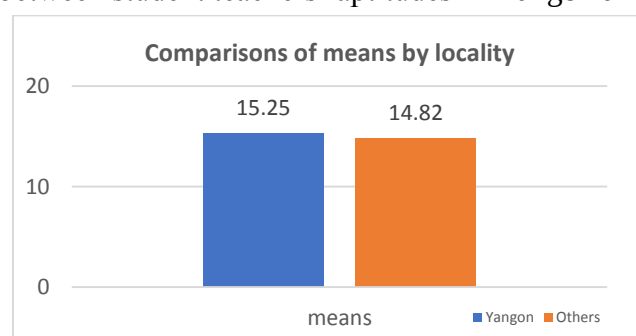


Figure 3 Comparison of Means by Locality

Comparison in Teaching Aptitudes of Student Teachers by Age Group

Table 4 Descriptive Statistics for Teaching Aptitudes of Student Teachers by Age Group

Age Groups	Number	Mean	SD
17-19 years	221	14.29	3.959
20-22 years	167	16.16	4.682
23-25 years	89	13.96	4.391

The results showed that there was a slight difference in the teaching aptitude of student teachers according to their age groups. The mean scores of student teachers in the 20-22 years age group were the highest. According to the descriptive results, the older age group and regular attending student teachers have greater aptitudes. There were mean differences in teaching aptitude by age group. Therefore, to examine whether these differences were statistically significant or not, a one-way analysis of variance (ANOVA) was conducted.

Table 5 The ANOVA Results of Teaching Aptitude for Student Teachers by Age Group

Total aptitude	Sum of squares	df	Mean square	F	P	
Between group	426.321	2	213.160	11.547***	.000	
Within group	8750.337	474	18.461			

Note *** The mean difference is significant at .001 level.

According to the ANOVA results, it was found that there was a significant difference in the teaching aptitude of student teachers by age groups at the 0.001 level (see Table 5). Thus, in 20-22 years age group had the greatest different aptitude. The Tukey HSD comparison procedure was computed (see Table 6).

Table 6 Results of Tukey HSD Comparison for Student Teachers of Teaching Aptitude by Age Group

(I)Age group	(J)Age group	(I-J) Mean Difference	P
(20-22 years)	(17-19 years)	1.868***	.000
	(23-25 years)	2.207***	.000
(17-19 years)	(20-22 years)	-1.868***	.000
	(23-25 years)	.339	.804

Note: *** The mean difference is significant at .001 level.

According to Tukey HSD results, it is easily seen that student teachers' aptitudes in the 20-22 years age group were significantly higher than those of the student teachers in the 17-19 years age group and 23-25 years age group. Thus, this research found that the student teachers in the 20-22 years age group had the highest positive aptitudes among these three groups.

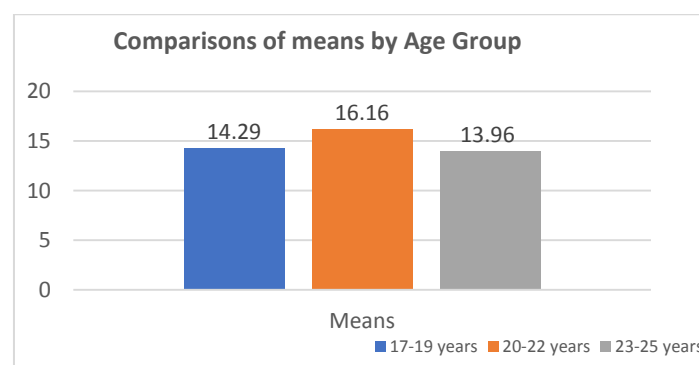


Figure 4: Comparison of Means by Age Group

Comparison of Teaching Aptitudes of Student Teachers by Specialization

Table 7 Descriptive Statistics for Teaching Aptitudes of Student Teachers by Specialization

Specialization	Number	Mean	SD
Science	225	15.66	4.715
Art-science	96	14.61	3.908
Art	156	13.94	3.987

The results showed that there was a slight difference in the teaching aptitude of student teachers according to their specialization. The mean scores of science major specialized student teachers were the highest. There were mean differences in teaching aptitude by their specialization. Therefore, to examine whether these differences were statistically significant or not, a one-way analysis of variance (ANOVA) was conducted.

Table 8 The ANOVA Results of Teaching Aptitude of Student Teachers by Specialization

Total aptitude	Sum of squares	df	Mean square	F	P
Between group	281.911	2	140.955	7.511***	.001
Within group	8894.747	474	18.765		

Note *** the mean difference is significant at .001 level.

According to the ANOVA results, it was found that there was a significant difference in the teaching aptitude of student teachers by specialization at the 0.001 level (see Table 8). Therefore, to find out which science major specialized student teachers had the greatest difference. The Tukey HSD comparison procedure was computed from this result (see Table 9).

Table 9 Results of Tukey HSD comparison for Student Teachers of Teaching Aptitude by Specialization

(I)Specialization	(J)Specialization	(I-J) Mean Difference	P
Science	Art-Science	1.043	.119
	Art	1.722***	.000
Art- Science	Science	-1.043	.119
	Art	.679	.449

Note: *** The mean difference is significant at .001 level.

According to Tukey HSD results, it is easily seen that student teachers' aptitudes in science major specialized student teachers were significantly higher than those of the student teachers in other major specializations. This can be concluded that the science major specialized student teachers had the highest positive aptitudes among these three groups.

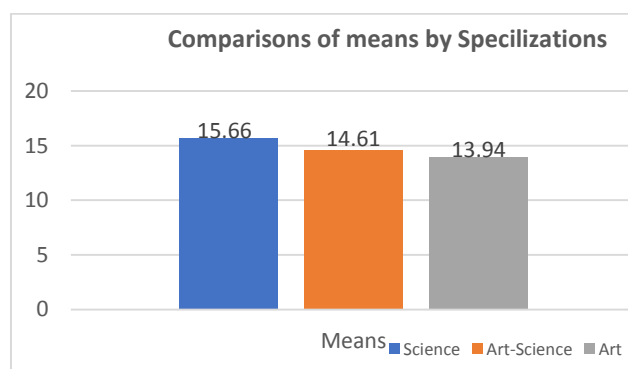


Figure 5 Comparison of Means by Specialization

After quantitative survey questions, this study follows the open-ended questions as a qualitative phase for knowing what factors affect student teachers' aptitude. In the qualitative phase, student teachers were given the opportunity to respond with their opinions by answering these two open-ended questions. All qualitative data were systematically coded and analyzed collectively, and the findings were then presented to an education professional for peer debriefing. Related codes were classified into different categories. An analysis of all qualitative data was conducted to answer the research questions, resulting in the identification of several overarching themes. Student teachers were encouraged to share their thoughts on two open-ended questions concerning the elements that influence teaching aptitude tests.

Question No. 29 asked about the student teachers' beliefs and feelings regarding their aptitude concerning teaching. The student teachers' responses, frequency to the respective factors, and the percentages are shown in Table 10.

Table 10 Responses, Frequency, and Percentage of the Teaching Aptitude Test

No.	Responses	Frequency	Percentage
1	The student teachers want to become teachers because of their interest in teaching. It is their hobby and ambition. Student teachers also have dreamed of becoming teachers since their childhood.	163	34.6%
2	The student teachers want to become teachers because they want to share their knowledge with the next generation. They also want to cultivate their pupils in their native place. They will support their pupils' education as much as they can.	89	18.7%
3	The student teachers want to become teachers because they hope that only the teacher can improve the future education. They want to contribute to their pupils, and community and create a better society with education as a teacher.	134	28.1%
4	The student teachers choose to become teachers because of job opportunities. On the other hand, they have no chance to attend another university according to their family's socio-economic situation.	27	5.7%
5	The student teachers choose to become teachers because of their parents' pressure and their surrounding persons forcing them to attend this university. Some of the student teachers arrive at this university because it is also their grandmother's dream.	52	10.9%
6	The student teachers weren't interested in teaching, but they attended this university because of their Matriculation Examination marks.	10	2.1%

163 respondent student teachers (34.6%) said that they are interested in teaching and their ambition is to become teachers. 134 respondent student teachers (28.1%) believed that they

hoped that they, as teachers, could contribute to society with education. 89 respondent student teachers (18.7%) believed that they wanted to share knowledge with the next generations. 52 respondent student teachers (10.9%) said that they attend this university because of their parents' force. 27 respondent student teachers (5.7%) mentioned that they chose to become teachers because of job opportunities. 10 respondent student teachers (2.1 %) said that they arrived at this university according to matriculation examination marks. According to the student teachers' responses, most of the student teachers were interested in their professional jobs and had high aptitudes for their future lives to become teachers.

Question No. 30 asked about how to handle a weak student in their teaching-learning situation. The student teachers' responses, the frequency of respective methods, and the percentages are shown in Table 11.

Table 11 Frequency and Percentage of Respective Methods on How to Handle a Weak Student

No	Responses	Frequency	Percentage
1	By providing encouragement, praise, motivation, and reinforcement to weak students. The student teachers want to create a positive learning environment.	101	21.2%
2	By trying to know what the weak student needs. By knowing their students' rate and pace, they will communicate with their students patiently, closely, and friendly.	69	14.5%
3	By studying their weak students' backgrounds thoroughly. Thus, they will know their students' limitations, emotions, and difficulties, and they will support their students to become stronger and have better mental health.	113	23.7%
4	By solving problems using various teaching strategies and appropriate methods. (such as giving feedback, doing remedial, making revisions, etc.)	138	28.9%
5	By searching to know everything about their weak students and closely interacting with their students' daily lifestyles. They want to create a private place, especially for their weak student.	31	6.5%
6	By doing research on this problem and finding a way to contribute to their students' needs and weaknesses. They don't ignore everything concerning the weak students.	25	5.2%

138 out of 477 respondent student teachers (28.9%) expressed how to handle a weak student in their teaching and learning situation by using various suitable ways. 113 respondent student teachers (23.7%) said that they will support their students to become stronger and have better mental health. 101 respondents (21.2%) of student teachers said that they want to create a positive learning environment. 69 respondents (14.5%) of student teachers pointed out that they

will try to know their weak student needs. 31 respondents (6.5%) of student teachers believed that they wanted to know everything about their weak students and closely interact with their students. 25 respondent student teachers (5.2%) said that they can contribute to their students' needs and weaknesses by doing research. According to item No. 30 student teachers' responses, most of the student teachers have high teaching aptitudes, and they also have high problem-solving skills. The student teachers know how to use suitable teaching strategies and methods when they find many challenges in their real situations.

Conclusion and Discussion

The main objective of the study was to investigate the teaching aptitude of student teachers in YUOE and to find out the improvement in teaching aptitude. The study used a quantitative research design with a questionnaire survey method. A total of 477 respondents from Yangon University of Education as the sample for the study. The investigation focused on various factors such as gender, age group, educational level, specialization, and locality about the teaching aptitude of student teachers. The findings indicated that female student teachers demonstrated a higher level of teaching aptitude compared to their male counterparts. Sharma (2006) conducted a study of teaching aptitude and found that female art student teachers secured significantly higher mean scores than their male counterparts art student teachers. Like many other studies, the present study also reflects the importance of female student teachers who possess more teaching aptitude. The results reported no significant difference in the measure of locality. It was revealed that student teachers of Yangon and other regions do not differ significantly in their teaching aptitude. In this study, there are significant differences in student teachers' teaching aptitude by their specialization, age groups, and educational level.

The present study investigates the essential elements of teaching aptitude among B.Ed. student teachers, highlighting that when these future educators demonstrate positive aptitudes, they are more adept at managing classrooms, understanding child psychology, and crafting activities that resonate with the interests and needs of their students. Teaching aptitude is an inherent trait, comparable to specific skills and abilities, that influences an individual's success and character. Additionally, the teaching aptitude of student teachers is shaped not only by their intelligence, academic achievements, or gender but also reflects a broader spectrum of their personality, including cognitive, emotional, and physical competencies. The effectiveness of any educational system hinges on the qualifications of its teachers, along with their instructional capabilities, teaching methodologies, personality characteristics, and various other elements. Thus, having proficient teachers is crucial for enhancing education, as their skills have a significant effect on the learning environment. Teaching aptitude plays a critical role in determining a teacher's capability to foster student engagement and drive academic achievement. Thus, a good teacher must have a good teaching aptitude, and so the introduction of the teaching aptitude test may help to improve the efficiency of the program as a part of the entrance examination for the teacher education program.

Limitations and Suggestions of the Study

There were some limitations in this study. The researcher selected the samples from only Yangon University of Education. So, the selected survey area was small. If the sample area is

more than one university, the results obtained from the data were more generalized and representative of the whole population. To confirm the findings, the target population should be selected from different universities and colleges. Teaching aptitude involves more than merely achieving a certain level during professional development or training; it is crucial to sustain that same aptitude or mindset over time. The teaching aptitude entrance test helps to ensure that people who want to become teachers have the right skills and qualities. By assessing candidates before they enter a teaching education program, the test helps improve the overall quality and effectiveness of the program. This way, better-prepared teachers can ultimately lead to better education for students.

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THE RELATIONSHIP BETWEEN ORGANIZATIONAL CLIMATE AND ORGANIZATIONAL COMMITMENT OF TEACHERS

Kyaw Min Naing¹, Khin Hnin Nwe²

Abstract

The main purpose of this study is to examine the relationship between organizational climate and organizational commitment of teachers from selected high schools in Zayathiri District and Yamethin District. The questionnaire survey method and quantitative approach were used in this study. A total of 600 teachers (including 240 senior assistant teachers, 240 junior assistant teachers and 120 primary assistant teachers) from 16 selected schools in the two districts participated as a sample and random sampling technique was utilized in the study. The instruments used in this study were Organizational Climate Index Questionnaire (OCI) developed by Hoy, Smith & Sweetland (2002) and Organizational Commitment Questionnaire (OCQ) developed by Meyer & Allen (2011). The descriptive results showed that overall teachers had satisfactory levels of organizational climate and organizational commitment. The results of the ANOVA revealed that the teachers were significantly different in both organizational climate and organizational commitment by their designations. Thus, it can be assumed that as the teachers increased in hierarchical rank, they became more satisfaction to their organizational climate and they were more professionally committed to the organization. According to the result of independent samples *t*-test, there were significant differences in organizational climate as well as organizational commitment by district in favor of urban and rural areas respectively. Therefore, it can be concluded that school location area (district) were the factors which can make difference in teachers' perceptions on organizational climate and organizational commitment. The results of the correlation showed that teachers' perception on organization climate was significantly and positively related to their organizational commitment. According to the results, it was found that the better the organizational climate perceived by the teachers, the higher the organizational commitment of teachers. Based on the results of the study, it can be concluded that the teachers who perceived organizational climate positively were more likely to have faith in the goals and values of the career, showed considerable efforts for the work, maintained membership in the job, and more committed to the organization.

Keywords: Climate, Organizational Climate, Commitment, Organizational Commitment

Introduction

Education is an indispensable thing for the attainment of aspired goal for a modern nation. The prosperity of a nation can also be measured by its educational system. The quality of educational system reflects quality of human resources and economic development. "In any attempt to improve education, teachers are central" (Frymier, 1987, cited in Kirika, 2011).

Throughout the world, it is commonly accepted that an organization is a group of personnel working together to achieve objectives. One of the most significant characteristics of any organization is its climate. Organizational climate enhances motivation that leads to behaviors such as satisfaction, effectiveness and finally organizational commitment. Teachers are motivated and willing to work when they are committed to their schools. Organizational commitment is a working attitude of employees who have a sense of identification to accomplish organizational goals and wish to maintain good relationship with members within the organization (Robbins, 2001). The strength of any profession depends upon the degree of

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commitment of its members. Commitment is a key factor that influences teachers' work and student performance in schools.

Purposes of the Study

The main purpose of the present study is

- to investigate the relationship between organizational climate and organizational commitment of teachers from selected high schools.

The specific objectives are

- To investigate level of teachers' perception on organizational climate
- To find out differences in teachers' perception regarding the organizational climate by designation and location
- To examine the perceptions of teachers on their organizational commitment
- To explore differences in organizational commitment of teachers by designation and location
- To study the relationship between organizational climate and organizational commitment

Definitions of Key Terms

Climate. As for school, climate is one of the interpersonal relations between teachers and administrators, and teachers and students are positive – good relationships. Climate is a necessary link between organizational structure and teacher attitude and behaviour (Igunbay, 2002).

Organizational Climate. Organizational climate refers to those aspects of the environment that are consciously perceived by organizational members (Armstrong, 2003).

Commitment. Commitment is one's attitude, including effect, belief, and behavioural intention toward his work (Cohen, 2003).

Organizational Commitment. Organizational commitment is "A state in which an employee identifies with a particular organization and its goals, and wishes to maintain membership in the organization" (Miller, 2003).

Review of Related Literature

Organizational Climate

Every organization has certain goals, the school as an organization has its own goals. For a school to achieve its goals and objectives, the organizational climate of the school has to come into play. Obasi (2007) defined organizational climate as a general term that refers to the feel, atmosphere, tone, ideology or milieu of an organization. Okorie (2012) saw it as the internal quality of the organization as seen by its members. It is the tone, the totality of the 'feel' of the organization that is perceived by the members as unique to that organization. Organizational climate had to do with how the members of the organization 'feel' about the organization in this case, teachers. Teachers were indeed the key factors in the educational system as their services are indispensable and critical to the nation's future and economic development. A positive school climate can enhance staff performance, promote higher morale, and improve student achievement (Freiberg, 1998, cited in Rapti (2012). In fact, the climate of the school was the subject of staff and students perceptions and was measurable. From the above definitions, it can be concluded that the climate of the school has to do with the atmosphere or feeling that prevails in a particular

school. It appeared from the relationship between leaders and teachers, teachers and students and between leaders and students. The school as a social interaction system forced the leaders, teachers and students to interact in the planning, decision-making and problem solving fields in an administrative level. They also interact on personal issues that were part of the normal school routine (Rapti, 2012).

Organizational Commitment

Quality education cannot be achieved without the efforts of dedicated and highly committed teachers. Committed teachers must inculcate and nurture values that will guide the subsequent use of the learning of both knowledge and skills in the wider world outside the classroom and lecture theatre. Teachers who demonstrate a high level of commitment perform better and invest more effort in developing productive strategies (Whamond, 2011). By contrast, teachers who lack commitment may create problems and cause deviations from the school's objectives and values. Teachers who are not committed to their profession frequently exhibit the following four attitudes: (a) a diminished emphasis on professional development; (b) a diminished interest in pleasing their superiors than previously; (c) an indisposition to devote to long-term projects; and (d) accomplishing the minimum total of work necessary (The KMK Team, 2014). When teachers are passionate about and committed to their work, they will enthusiastically advocate for school-based improvements or inventions that benefit students' learning and development (Chan, 2006).

Teacher commitment has been considered as a passion to the work. Passion is at the core of effective education. Day (2004) argues that passion is a need for a high quality education. Passion encourages teachers to act as it is source of motivation (Vallerand, 2007). Committed teachers like working with their students and cares about their development. These teachers profoundly struggle for efficiency in teaching and learning through employing different approaches. Without love of profession, teaching cannot be conducted effectively. Teachers with high level of commitment are in love with teaching (Garrison & Liston, 2004). Besides, they have respect for students and it is noteworthy that they build strong relationship with their student which is a hallmark of great teachers. Committed teachers always seek for continuous professional development. It is believed that teachers who have commitment to their profession work collaboratively with other teachers to nurture the learning of the students.

Teacher Commitment has been viewed as a multidimensional concept. Meyer and Allen (1991) based on observations from several findings and types of organizations in 1990, developed a multidimensional model of commitment comprising three components namely affective, normative and continuance. Affective commitment (AC) is the teacher's positive emotional attachment to the school for the learning of the students. A teacher who is affectively committed strongly identifies with the goals of the school and desires to remain a part of it. This teacher commits to the school because he/ she "want to". Normative commitment (NC) is the teacher's perceived obligation to remain the school or stay because of the feelings of obligation. The individual commits to and remains with an organization because of feelings of obligation. The employee stays with the organization because he/ she 'ought to'. Continuance commitment (CC) the teacher commits to the school because he/ she perceives high costs of losing the job, including economic costs (such as pension accruals) and social costs (friendship ties with co-

workers) that would be incurred. The employee remains a member of the organization because he/ she 'has to'.

A previous research by Smith (2009) conducted in Alabama using a similar instrument proves that a correlation exists between the dimensions of organizational climate and teacher commitment. Positive and significant relationship between organizational climate and organizational commitment (Danish, Draz, and Ali, 2015). Organizational climate has a strong and positive correlation with organizational commitment (Kaur and Randhawa, 2017).

Method

Research Design

Quantitative design and questionnaire survey method were used in this study.

Participants of Study

A total of 600 teachers (41 males and 559 females) from Zayarthiri District and Yamethin District in 2023-2024 academic year participated in this study.

Instrumentation

Organizational Climate Index (OCI) developed by Hoy, Smith and Sweetland (2002) was used to measure the teachers' perception on organizational climate by four subscales: collegial leadership (CL), professional teacher behavior (PTB), achievement press (AP) and institutional vulnerability (IV). It has a total of 27 items. Each item was assessed along a 4-point Likert scale. For measuring commitment of teachers, Organizational Commitment Scale (OCS) developed by Meyer and Allen (2011) was used. It has three subscales: affective commitment scale, continuance commitment scale and normative commitment scale. The total number of items used in this study were 18 items and all are five point Likert type.

Procedure

After translating the two instruments in Myanmar version, experts in the field of Educational Psychology from Universities of Education were requested to review the items for face and content validity. The necessary changes were done according to their suggestions. And then, pilot testing was conducted with 75 teachers from Basic Education High School in Zayarthiri District, Naypyitaw Union Territory and Yamethin District, Mandalay Division in order to determine the reliability of the instruments. It was found that the internal consistencies were (0.856) for Organizational Climate Index (OCI) and (0.859) for Organizational Commitment Scale (OCS) respectively. Thus, the resultant of Cronbach alpha values showed that the PPQ-R and GDMS had high reliability to measure organizational climate and commitment of teachers.

Data Analysis and Findings

Teachers' Perceptions on Organizational Climate

To examine teachers' perceptions on organizational climate, descriptive statistics of organizational climate were calculated and the results were shown in Table 1.

Table 1 Descriptive Statistics of Organizational Climate Perceived by Teachers

Variable	N	Minimum	Maximum	Mean	SD	Mean Percent
CL	600	9	27	20.00	4.033	71.43%
PTB	600	19	28	23.71	2.841	84.68%

Variable	N	Minimum	Maximum	Mean	SD	Mean Percent
AP	600	16	30	21.75	3.888	67.97%
IV	600	5	18	9.00	2.475	45.00%
Overall Organizational Climate	600	60	98	74.46	8.873	68.94%

Note : CL = Collegial Leadership PTB = Professional Teacher Behaviour
 AP = Achievement Press IV = Institutional Vulnerability

Table 1 revealed that the mean score of organizational climate as a whole was 74.46 with standard deviation 8.873. The highest mean score of organizational climate was 108 and the lowest mean score was 27. Since the overall mean score 74.46 was greater than the average possible mean score 67.5, it can be said that the overall organizational climate perceived by teachers was satisfactory enough. In addition, the mean percentage value of organizational climate was 68.94. It can be assumed that the organizational climate perceived by teachers was satisfactorily good for all teachers. Moreover, the mean percentage value of Professional Teacher Behaviour 84.68 was the highest among the four subscales of organizational climate. With regard to the report of Smith (2009), it can be interpreted that most of the teachers develop trust and respect for the competence of their colleagues working hard and handling situations professionally. The second highest mean percentage value (71.43) of organizational climate subscale was Collegial Leadership. According to the assumption of Hoy et al. (2002), it can be assumed that the principal did not focus with task achievement, but was considerate, helpful, and genuinely concerned about the social welfare of teachers.

The result showed that the lowest mean percentage value (45) of organizational climate subscale was Institutional Vulnerability. With respect to the attribution of Hoy et al. (2002), it may be assumed that most of the teachers felt that they had less interference from parents and community in the functioning of school. According to the Table 4.1, the mean scores of organizational climate subscales were 20.00 for Collegial Leadership, 23.71 for Professional Teacher Behaviour, 21.75 for Achievement Press, and 9.00 for Institutional Vulnerability.

Table 2 Descriptive and ANOVA Results of Organizational Climate by Designation

Variable	Designation	N	Mean	SD	df	F	p
Organizational Climate	SAT	240	78.38	8.620	2, 597	57.304***	.000
	JAT	240	73.24	8.353			
	PAT	120	69.03	6.568			

*** $p < .001$

According to Table 2, the mean value of senior assistant teachers was 78.38, that of junior assistant teachers was 73.24, and that of primary assistant teachers was 69.03 respectively. So, the mean value of senior assistant teachers was greater than that of primary assistant teachers and junior assistant teachers in organizational climate. Similarly, the mean value of junior assistant teachers was higher than that of primary assistant teachers in this climate. The result showed that as the teachers increased in hierarchical rank, they became more satisfaction to their organizational climate. The ANOVA results of the three designation groups revealed that there was a significant difference in organizational climate among the teachers with different

positions. It can be assumed that organizational climate perceived by teachers was so different according to their designation differences. It can be concluded that the teachers' organizational climate may be influenced by their present ranks and status.

To get more detailed information for making mean comparison among designation groups, Post Hoe Test was employed by Tukey method and organizational climate was interpreted by using multiple comparison method.

Table 3 Results of Tukey HSD Multiple Comparisons for Organizational Climate by Designation

Variable	(I)Designation	(J)Designaion	Mean Difference (I-J)	<i>p</i>
Organizational Climate	SAT	JAT	5.142***	.000
		PAT	9.358***	.000
	JAT	SAT	-5.142***	.000
		PAT	4.217***	.000
	PAT	SAT	-9.358***	.000
		JAT	-4.217***	.000

 $p < .001$

Table 3 indicated that the mean value of senior assistant teachers was significantly higher than that of junior assistant teachers and primary assistant teachers in organizational climate. Similarly, the mean value of junior assistant teachers was significantly greater than that of primary assistant teachers in organizational climate.

Comparison of Teachers' Perception on Organizational Climate by District

To find out the district area effect, the teachers were categorized into two groups by their school location, Zayathiri District (ZTY) and Yamethin District (YMT). By using descriptive statistics and independent samples *t*-test, the difference in organizational commitment between the two groups according to the school location was investigated.

Table 4 Descriptive Statistics and Independent Sample *t*-test Results of Teachers' Organizational Climate by District

Variable	District	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Organizational Climate	ZTR	300	75.71	8.858	3.506***	598	.000
	YMT	300	73.20	8.722			

*** $p < .001$

By the use of descriptive statistics, the mean and standard deviation scores of organizational climate perceived by teachers from Zayathiri District (ZTR) and Yamethin District (YMT) were presented according to the local areas. According to Table 4, it was found that the mean score of Zayathiri District was greater than those of Yamethin District in organizational climate. The result of *t*-test revealed that there was a significant difference between teachers from Zayathiri District and those from Yamethin District ($p < 0.01$, $t = 3.506$). In the organizational climate, it was observed that the mean score of teachers from Zayathiri District was significantly higher than that of teachers from Yamethin District. The reason may be because of different socio-economic culture between urban district and rural district.

Teachers' Perceptions on Organizational Commitment

To explore teachers' perceptions on organizational commitment, descriptive statistics of professional commitment were analyzed and the results were shown in Table 5.

Table 5 Descriptive Statistics of Organizational Commitment Perceived by Teachers

Variable	N	Minimum	Maximum	Mean	SD	Mean percent
Affective Commitment	600	15	29	21.78	3.659	72.60%
Continuance Commitment	600	9	30	17.46	4.048	58.20%
Normative Commitment	600	13	27	18.73	3.160	62.43%
Overall Organizational Commitment	600	41	77	57.98	9.240	64.42%

The mean and standard deviation of organizational commitment were 57.98 and 9.24 respectively. According to the result, organizational commitment of teachers was satisfactory enough in this study because the total mean score 57.98 was greater than the average possible mean score 54 while the highest possible score was 90 and the lowest possible score was 18. Moreover, the mean percentage value of organizational commitment was 64.42. It can be said that most of the teachers were satisfied with their profession.

Most of the teachers were better in affective commitment than other subscales because the mean percentage of affective commitment 72.60 was the highest in all subscales. So, it can be assumed that most of the teachers were capable more in their ability to have the emotional attachment to, involvement in, and identification with the organization and its goals (Meyer & Allen, 2004).

On the other hand, the mean percentage values of continuance subscale and normative subscale were 58.20 and 62.43. So, it may be identified that continuance commitment and normative commitment of the teachers were satisfactory enough. The mean scores of three subscales (affective, continuance, normative) were 21.78, 17.46 and 18.73 respectively.

Table 6 Descriptive and ANOVA Results of Organizational Commitment by Designation

Variable	Designation	N	Mean	SD	df	F	p
Organizational Commitment	SAT	240	62.87	8.394	2, 597	130.546***	.000
	JAT	240	57.60	7.480			
	PAT	120	48.95	6.714			

*** $p < .001$

By the result of Table 6, the mean value of senior assistant teachers was 62.87, that of junior assistant teachers was 57.60, and that of primary assistant teachers was 48.95 respectively. So, the mean value of senior assistant teachers was greater than that of primary assistant teachers and junior assistant teachers in professional commitment. Similarly, the mean value of junior assistant teachers was higher than that of primary assistant teachers in this commitment. The result showed that as the teachers increased in hierarchical rank, they became more committed to their profession. Therefore, the teachers who had the higher rank or position were more satisfied and more committed to their profession. The ANOVA results of the three designation groups revealed that there was a significant difference in organizational commitment among the teachers

with different positions. It can be assumed that organizational commitment of teachers was so different according to their designation differences. It can be concluded that the teachers' organizational commitment may be influenced by their present ranks and status.

To get more detailed information for making mean comparison among designation groups, Post Hoe Test was employed by Tukey method and organizational commitment was interpreted by using multiple comparison method.

Table 7 Results of Tukey HSD Multiple Comparisons for Organizational Commitment by Designation

Variable	(I)Designation	(J)Designaion	Mean Difference (I-J)	<i>p</i>
Organizational Commitment	SAT	JAT	5.267***	.000
		PAT	13.921***	.000
	JAT	SAT	-5.267***	.000
		PAT	8.654***	.000
	PAT	SAT	-13.921***	.000
		JAT	-8.654***	.000

 $p < .001$

Table 7 showed that the mean value of senior assistant teachers was significantly higher than that of junior assistant teachers and primary assistant teachers in organizational commitment. Similarly, the mean value of junior assistant teachers was significantly greater than that of primary assistant teachers in organizational commitment. Therefore, this result indicated that the teachers who were high in their ranks showed more organizational commitment as compared to those who were low in their ranks. The possible reason might be that as the teachers with higher rank or position received the increased power and status, they became more satisfied and more committed to their profession.

Comparison of Teachers' Perception on Organizational Climate by District

To find out the district area effect, the teachers were categorized into two groups by their school location, Zayathiri District (ZTY) and Yamethin District (YMT). By using descriptive statistics and independent samples *t*-test, the difference in organizational climate between the two groups according to the school location was investigated.

Table 8 Descriptive Statistics and Independent Sample *t*-test Results of Teachers' Organizational Commitment by District

Variable	District	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Organizational Commitment	ZTR	300	59.13	8.663	3.079***	598	.000
	YMT	300	56.83	9.660			

*** $p < .001$

By the use of descriptive statistics, the mean and standard deviation scores of organizational commitment perceived by teachers from Zayathiri District (ZTR) and Yamethin District (YMT) were presented according to the local areas. According to Table 8, it was found that the mean score of Zayathiri District was greater than those of Yamethin District in organizational commitment. The result of *t*-test by qualification revealed that there was a significant difference between teachers from Zayathiri District and those from Yamethin District ($p < 0.01$, $t = 3.079$). In the organizational commitment, it was observed that the mean

sore of teachers from Zayathiri District was significantly higher than that of teachers from Yamethin District. It may be due to the different circumstances in work motivation, job satisfaction and socio- economic culture between the two local areas.

Correlation between Organizational Climate and Organizational Commitment of Teachers

To explore the relationship between that organizational climate (independent variable) and organizational commitment of teachers (dependent variable), Pearson's product-moment correlation coefficients were calculated and the result was shown in Table 9.

Table 9 Correlation between Organizational Climate and Organizational Commitment of Teachers

Variable	Organizational Climate	Organizational Commitment
Organizational Climate	1	.610 ^{**}
Organizational Commitment		1

Note. ^{**} $p < .01$

The result of Table 9 indicated that school climate was significantly correlated with organizational commitment ($r = .610$, $p < .01$). This meant that the organizational climate and organizational commitment were highly positively related. This finding revealed that organizational climate perceived by teachers was significantly associated with their capacity of organizational commitment. It can be judged that the better the organizational climate the teachers perceived, the stronger the organizational commitment which may improve to their profession. Based on the attribution of Elias (2006), it can be concluded that the teachers who perceived organizational climate positively were more likely to have faith in the goals and values of the career, showed considerable efforts for the career, and maintained membership in the job than those with low organizational climate.

Discussion and Recommendation

Development of a nation depends to a large extent on education of its people. The higher the educational standard, the more the nation develops. School plays a crucial role in educational development of the nation. It is important to have a wider range of knowledge and correct concept about organizational climate of school. The role of organizational climate is not only connected with the personality and academic development of student but a healthy or unhealthy organizational climate will also influence teacher's performance as well. Organizational climate influences teacher's motivation; dedication and satisfaction in their work.

The role of teachers is pivotal in providing quality education to the children. The teacher is extremely important in order to contribute to students' development and growth effectively. So, teachers need to be committed, sensitive and able to react to the child's feelings and needs. One of the important ways to improve schools is improving the teachers' workplace. Organizational climate can help or hinder teachers as they attempt to satisfy their needs at work. Organizational climate is an ever-changing factor in the lives of people who work and learn in schools.

Hoy and Sabo (1998) found that organizational climate is critical component of effective schools. Organizational climate is considered the measurement of an individual's relationship with principals and teachers in the work environment. The characteristics of a school influence

the level of organizational commitment of teachers. A school with a positive climate for teachers is more likely to have committed teachers (Riel & Sipple, 1996). Organizational climate focuses attention not only on the school's interpersonal work life as it affects teachers, principals, and supervisors but also on the students as well. Teachers receiving administrative support are more likely to be committed to the school's goals and values. Teachers associated with an orderly school have a higher level of organizational commitment (Singh & Billingsley, 1998). Tsui and Cheng (1999) do consider some personal characteristics to be influential on organizational commitment. They identified characteristics that were more demographic in nature, such as age, teaching experience, sex, educational level, professional training, working position, and marital status. There are a number of teacher's personal factors that are also associated with organizational commitment.

Many of the educational survey and research studies has been revealed that the organizational commitment is a contributing factor for the innovations in teaching-learning process in various other countries all over the world.

Education is nowhere without teachers' role and commitment. Teacher commitment plays a vital role in school and system reform. Commitment refers to teachers' motivation to work and committed teachers may have strong psychological ties to their schools, their students or their subject areas. Effective school is existed if the school has committed teachers. Professional commitment is typically conceptualized as a positive, affective attachment to one's work. The committed teachers are focused and more involved in their professions.

The progress of the school depends a lot on enthusiastic behaviours that a teacher displays towards the achievement of a commonly shared goal. A satisfied and a committed teacher is very likely to exert himself or herself to work with enthusiasm. The success of a nation depends fundamentally on the knowledge, skills and competencies of its people. Teaching today is increasingly complex work, requiring the highest standards of professional practice to perform it well (Hargreaves & Goodson, 1996).

Moreover, according to the current situations of our country, it can be seen that the number of in-service teachers who have enough professional experiences are decreasing in the teaching profession due to high turnover rates of the teachers in basic education sector. Although new teachers have been appointed to supplement the vacant positions, there are a few problems that need to be dealt with such as the issues concerning values and attitudes of those new teachers towards teaching profession.

On the other hand, teacher plays an important role in the social reconstruction and in the transmission of wisdom, knowledge and experiences of one generation to another. The capability and quality of the teacher determines the success of any educational system. Moreover, the vitality of all educational organizations lies in the willingness of teachers to contribute to the development of the organizations. Since teaching is a demanding profession, commitment and perseverance have been identified as critical factors for the success of educational institutions. In particular, a teacher's commitment is deemed instrumental in reaching out to the degree of success (Mohan & Kaur, 2014).

The school has a responsibility to ensure that all teaching exercises carried out under the auspices of the school are consistent with established ethical principles. Ethical requirements

arise from an evolving understanding of the right and duties of human beings (Dr. Khin Zaw, 2001). School climate can play a significant role in providing a healthy and positive school atmosphere for all the students. The creation of any school climate starts with the principal, and it is reflected in the relationships among teachers, between teachers and students, among the student body, commitment of teachers to the achievement of school goals and objectives, ethos of the school, etc. (Cohen, 2007).

Recommendation for Organizational Climate

The following recommendation regarding organizational climate in this study were made to enhance organizational commitment of teachers.

All principals should: -

- try to improve communication with parents, teachers and community members.
- upgrade the quality of teachers.
- give opportunities for teachers to make decisions linked to learning.
- keep trying to fulfill the needs of the teachers as much as possible.
- positively criticize and point out cases of the teachers.
- take time to listen to the teachers when they present.
- avoid permanently using power.
- avoid administering very strictly.
- be ideal by attempting to manage school activities.
- encourage teachers to handle their students' problems effectively.
- develop school and classroom rules with input from staff, parents and students.
- reinforce, acknowledge, and celebrate positive student behaviour.
- invite parents to participate in school celebrations and events.

All teachers should: -

- establish a close relationship among teachers and students, and teachers and principal.
- expect all students to learn and grow based on their individual abilities and skills.
- develop classroom rules collaboratively with students at the beginning of the school year.
- reflect in the positive attitude and performance of pupils in all aspects.
- hold teacher-parent-student discussions to go over students' learning goals.
- possess high attitude dealing with their jobs.
- fairly share the tasks and duties which are not concerned with teaching.
- avoid the manners which mentally disturb the other teachers.

Recommendation for Organizational Commitment

The recommendation for organizational commitment has drawn directly from the findings of quantitative and qualitative study. Particularly, teachers can apply ways that improve their commitment.

All principals should: -

- support and protect their teachers
- treat the teachers as colleagues, rather than subordinates
- allow the teachers in decision making

- encourage to teachers' innovation
- create good working conditions for teachers
- give opportunities for professional development of teachers

All teachers should: -

- cooperate with colleagues for school improvement
- respect and imitate the professional competence of other teachers
- build trust the colleagues by doing work together
- give mutual support each other
- treat the students fairly and equal
- recognize to the students' effort
- love the teaching profession
- value the importance of education in people's live
- try and investigate willingly the current change in education
- engage process in the decision making
- actively involved in the school activities
- have positive relationship with colleagues

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STUDENT TEACHERS' PERCEPTIONS ON REFLECTIVE JOURNAL WRITING AND THEIR CRITICAL THINKING SKILLS

Win Win Khaing¹, Khin Hnin Nwe²

Abstract

The purpose of this study was to examine the perceptions of students teachers, regarding learning outcomes associated with reflective journal writing and their critical thinking skills in Education Degree Colleges of Ayeyarwady, Yangon and Bago (East) Regions. This study was also to evaluate and determine the reflective thinking and critical thinking skills of student teachers. Reflective journal writing is used extensively in teacher training program curriculum, specifically those preparing to become teachers with reflective and critical thinking skills. The original Reflective Journaling Instrument developed by McMullan (2006) and Maloney et al. (2013) that was adapted by Genua in 2019 was used in this study. The study was performed with the participation of 669 (male = 331 and female = 338) student teachers enrolled in the seven selected Education Degree College from three regions in (2022-2023) Academic Year. Participants were selected by using simple random sampling method. The independent sample *t*-test and Tukey HSD multiple comparison results showed that reflective thinking skills as well as perceptions on reflective journal writing do not depend on gender but depend on EDCs. This means that student teachers in each EDC have different perceptions on reflective journal writing. In the comparison of student teachers' critical thinking skills by gender and by EDCs, there were significant differences. This means that student teachers' critical thinking skills depend on gender and EDC. The result of the value of Pearson product-moment showed a significant correlation. Reflective journal writing and critical thinking skills were positively correlated. This means that reflective journal writing in teacher education develop student teachers' critical thinking skills. Therefore, this study can provide some innovations and self-assessment habits for nurturing program of effective teachers to create an educated nation in the 21st century.

Keywords: Perception, Reflective Journals, Critical Thinking

Introduction

Reflective journals are affective to improve teaching and learning. They have been used for many years in other countries. To promote autonomy, reflective journals becomes powerful tools and also to improve students' learning by the results of many studies. In Myanmar, reflective journal writing has begun with new curriculum after 2019- 2020 Academic Year.

The ability to reflect on one's learning is a fundamental skill necessary for lifelong learning (Ryan, 2015). Therefore, encouraging students to engage in reflective practices has been acknowledged as an essential goal in higher education for effectively preparing students for their subsequent professional experiences (Adie & Tangen, 2015). While the potential of reflective practices to engender lasting and effective changes in students' lives is widely recognized (Waggoner-Denton, 2018), a somewhat opaque landscape emerges in terms of identifying the dimensionality of reflection and the potential connection between using reflective writing and subsequent adoption of reflective practice into students' personal or professional lives (Griggs et al., 2018). Indeed, while some previous investigation has explored the issues of measuring reflection and assessing student reflective journal (RJ) writing (Kember et al., 2008), a widely

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accepted method for identifying and assessing reflection does not exist (Waggoner-Denton, 2018).

Critical thinking is the ability to transfer knowledge learned from certain disciplines to other cognitive areas (Bronson, 2008). It involves not only the acquisition of information, but also active learning, problem solving, joint decision making, and the utilization of information (Kim, 2009). Critical thinking involves both a process and a product (Garrison, Anderson, & Archer, 2001). The scientific research have shown that students active and open to learning for their mind and bodies by the acquisition of critical thinking. Science applications, in particular, involve processes such as problem finding, problem solving, critical thinking, exploration, and investigation (Gomes, 2005).

The reflective and critical thinking skills are crucial for student teachers to identify their interested areas and abilities while they are learning in teacher education. To assess student teachers' thinking skills, effective means must be identified and utilized. Ensuring that student teachers –there is a significant positive impact on teacher training because of the acquisition of necessary reflective and critical thinking skills to the teachers of the future. In this context, the aim of this study is to investigate student teachers' perceptions on reflective journal writing and their critical thinking skills.

Purposes of the Study

The main purpose of the present study is

to investigate student teachers' perceptions on reflective journal writing and their critical thinking skills .

The specific objectives are

- to explore the perceptions on reflective journal writing of student teachers by gender and Education Degree Colleges,
- to examine the critical thinking skills of student teachers by gender and Education Degree Colleges, and
- to observe the relationship between student teachers' perceptions on reflective journal writing and their critical thinking skills.

Definitions of Key Terms

Perception. Perception is a process of actions for acquiring information. (Ghadirian, Ayub & Salehi ,2018)

Reflective journals. Reflective journals were defined as “written documents that students create as they think about various concepts, events, or interactions over a period of time for the purposes of gaining insights into self-awareness and learning” (Thorpe, 2004, p. 328).

Critical thinking. Critical thinking is the ability to transfer knowledge learned from certain disciplines to other cognitive areas (Bronson, 2008).

Related Literature Review

Understanding the Term Perception

In human perception, human action can be affective by the positive or negative perception because of a difference in sensing that is good or not. Based on experience and feeling of ones'

perception can be changed. Perception means that individuals respond with the process of sensing by their own.

There are two types of perception; positive and negative perception (Irwneto, 2002).

(a) Positive perception describes all knowledge and endeavor to continue by using it to attain the perceived object.

(b) Negative perception describes all knowledge and be discordance to accomplish the perceived object. Thus, perceptions can affect someone positively or negatively in doing something. Based on individuals' knowledge, positive or negative perception can be changed on the perceived object.

Reflective Practice

The philosophical underpinnings for this study are also based on the assumptions of constructivism. Crotty (2012) defines constructivism as the belief that all knowledge is dependent on human practices and interaction between people. Constructivism stems from the ideas of philosopher Immanuel Kant (1724 - 1804) who stated that all understanding happens because of the interaction between the world and the mind resulting in a meaningful experience (Young & Patterson, 2007). Psychologist Jean Piaget (1896-1980) refined Kant's work regarding constructivism, demonstrating that understanding occurs through interactions with problems, previous knowledge, experiences, and beliefs and that students can be actively involved in their own learning (Young & Patterson, 2007). Vygotsky's theoretical framework regarding sociocultural theory contributes to the constructivist underpinnings because he theorized that social interactions influence thinking and interpretation of environment with individual cognition occurring (Jaramillo, 1996; Yilmaz, 2008).

Reflective Journal Writing

One of the methods promoted to track reflective practice is through journal writing which is focus to student learning (Osterman & Kottkamp, 1993). Landeen, Byrne and Brown (1995) evaluated the use of journal writing by 13 third year students in practice to assess learning needs. Results indicated that while students both struggled and learned from their experiences, journal writing was a medium that provided students with a structure to write about experiences encountered and through which they could reflect and review experiences. Sutton et al. (2007) concluded that journals are beneficial as they are a place where students can express thoughts and feelings, thus enabling self-awareness. A qualitative study conducted by Chirema (2007) examined 42 reflective journals to determine if journal writing promoted reflection on experience. Results indicated a range of positive and negative comments where some found writing experiences useful whereas others preferred to talk about an experience instead of putting it in writing. O'Connell and Dymont (2013) stated that journals facilitate student learning and personal growth because students write about experiences using critical thinking skills and self-expression.

Critical Thinking

Critical thinking and thinking critically are very important for a student teacher. For modern education, critical thinking skill is essential element in using approaches and models. This study purposes to provide with a framework on the concept of critical thinking in teaching and

learning. In day by day life environment, the world is more modernize according to technology while more complex problems. To manage the technology and to solve the problems, there is more necessary for education of new generation. In the last decades, it is accepted the critical thinking skill is very vital in learning. A general suggestion can be draw on the importance of thinking critically as a study.

Models of Critical Thinking Skills. By providing practice on evaluating and testing ideas, student gets critical thinking in a directed manner. Instructors who teach critical thinking provide students with the opportunity to understand and take charge of their learning (Murawski, 2014). Therefore, teachers who teach critical thinking should understand model concerning with critical thinking skills to teach student effectively.

Design and Procedure

Sampling. The participants of this study were Year 2 Semester 2 and Year 1 Semester 2 student teachers who enrolled in Patheingyi, Myaungmya, Bogalay, Yankin, Thingangyun, Hlegu and Taungtha Education Degree College during (2022-2023) Academic Year. A total of 669 student teachers (331 males, 338 females) participated in this study. Simple random sampling technique was used to select the sample.

Research Method. The design and method used in this study were quantitative research design and descriptive survey method.

The original Postal Questionnaire Survey was developed by McMullan (2006) and Maloney et al. (2013) was adapted to Reflective Journaling Instrument (RJI) by Genua in 2019. This researcher constructed the Reflective Journaling Instrument (RJI) as a 32-item survey which utilizes a 5-point Likert-scale. It is divided into two sections: usefulness of reflective practice, and questions related to reflective journal writing looking at student feelings, honesty, grading and embellishment. The internal consistency for overall scale of RJI was 0.86.

The California Critical Thinking Skills Test (CT) was developed by Facione in 1990. It includes sub-scales of Analysis, Evaluation of inference, Deduction and Induction ratiocinate (Facione, Facione, Giancarlo, & Blohm, 1998). The revised Turkish scale included 51 items associated with 6 factors and it is a 5-point Likert-scale. There are 6 subscales of the Turkish version of the California Critical Thinking Scale; Analyticity, Curiosity, Open-mindedness, Self-reliance, Search for Truth, and Systematicity. The internal consistency coefficient of the scale was 0.88.

With the permission of administrative personal of selected education degree colleges, two questionnaires were administered to student teachers in August, 2023. The participant students were also explained the purpose of the study and the importance of their participation. The questionnaires were distributed to selected EDCs. The participants took time 20 minutes to complete the questionnaires. Then, the completed questionnaires were gathered.

Data Analysis and Research Findings

After modifying the Reflective Journaling Instrument and California Critical Thinking Scale, perceptions on reflective journal writing and critical thinking skills of student teachers were examined on the student teachers from the selected Education Degree Colleges in

Ayeyarwady, Yangon and Bago (East) Region. By using the statistical analysis, findings and results were discussed in the following sections of this chapter.

Reflective Journal Writing of Student Teachers

Descriptive Analysis of Student Teachers' Reflective Journal Writing

By using the descriptive procedure with the data obtained from reflective journal writing, the mean percentage and standard deviation of reflective journal writing for the whole sample was 71.13% and 8.29 (see Table 1). This findings showed that student teachers from this study were reflective person in their writing general.

Table 1 Descriptive Statistics of Student Teachers' Reflective Journal Writing

Subscales	<i>N</i>	<i>M</i>	<i>M%</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Reflective Practice	669	28.10	80.29%	2.63	12	35
Feeling	669	31.39	69.76%	3.26	21	43
Honesty	669	21.53	71.77%	2.84	12	60
Grading	669	18.63	74.52%	2.49	9	25
Embellishment	669	17.96	71.84%	2.83	6	25
Reflective Journal Writing	669	113.81	71.13%	8.29	79	150

According to the result in Table 1, the mean percentages of each subscale for reflective journal writing of student teachers were 80.29%, 69.76%, 71.77%, 74.52% and 71.84% respectively.

Based on the descriptive statistics, it could be seen that the mean percentage of reflective practice was the highest and that of feeling was the lowest among all subscales of reflective journal writing of student teachers. The mean percentages showed that student teachers believed the process of reflective journal writing helps them to promote critical thinking skills as well as identify areas of improvement related to knowledge and skills. They also revealed that the process of reflective journal writing enhances reflective skills. This finding was consistent with the findings of Tsingos-Lucus et al. (2016).

Comparison of Student Teachers' Reflective Journal Writing by Gender

To find out the differences of reflective journal writing by gender, descriptive statistics were calculated. To make more detailed investigation on gender differences of student teachers' reflective journal writing, independent samples *t*-test was conducted (see Table 2). The mean score of male student teachers in reflective journal writing was not significantly difference that of female student teachers in reflective journal writing and its subscales.

Table 2 Means, Standard Deviations, and Independent Samples *t*-test Results of Student Teachers' Reflective Journal Writing by Gender

Subscales	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Reflective Practice	Male	331	27.99	2.972	-1.125	665	0.261
	Female	336	28.22	2.248			
Feeling	Male	331	31.39	3.270	0.044	665	0.965
	Female	338	31.38	3.256			
Honesty	Male	331	21.69	2.530	1.443	665	0.149
	Female	338	21.37	3.118			

Subscales	Gender	N	M	SD	t	df	p
Grading	Male	331	18.73	2.621	0.985	665	0.325
	Female	338	18.54	2.347			
Embellishment	Male	331	18.05	2.893	0.789	665	0.430
	Female	338	17.88	2.754			
Reflective Journal Writing	Male	331	114.06	8.737	0.782	665	0.435
	Female	335	113.56	7.826			

The result indicated that reflective thinking skills as well as perceptions on reflective journal writing were not depended on gender. This means that both of female and male student teachers had nearly the same perceptions on reflective journal writing. Both of female and male student teachers had a lot of chance to get knowledge and experience in 21st century, therefore, they were not difference in learning, teaching, thinking and other activities.

Comparison of Student Teachers' Reflective Journal Writing by Education Degree Colleges

According to mean comparison statistics, the mean scores and standard deviations of student teachers' reflective journal writing and its subscales for Education Degree Colleges were reported in Table 3. The result revealed that the mean scores of student teachers from EDC4 and EDC7 were higher in feeling than that of other EDCs and the mean scores of student teachers EDC1, EDC3, EDC4 and EDC7 were higher in Honesty than that of other EDCs, EDC4 and EDC5 were higher in Grading, EDC2, EDC3, EDC4, EDC5 and EDC7 were higher than average level in embellishment (see Table 3).

In order to obtain more detail information on the difference of student teachers' reflective journal writing and its subscales by Education Degree Colleges, one way Analysis of Variance (ANOVA) was conducted. ANOVA results indicated that there were significant differences of reflective journal writing, $F(2,665) = 4.215$, $p < .001$, reflective practice, $F(2,665) = 2.809$, $p = .010$, feeling, $F(2,665) = 2.814$, $p = .010$, grading, $F(2,665) = 4.316$, $p = .000$, and embellishment, $F(2,665) = 5.106$, $p = .000$ with respect to Education Degree Colleges.

Table 3 Means, Standard Deviations, and ANOVA Results of Student Teachers' Reflective Journal Writing by Education Degree Colleges

Subscales	EDC	N	M	SD	F	p
Reflective Practice	EDC1	99	28.04	2.25	2.809*	0.010
	EDC2	100	27.81	2.92		
	EDC3	96	28.61	2.46		
	EDC4	100	28.40	2.70		
	EDC5	83	27.77	2.82		
	EDC6	92	27.43	2.32		
	EDC7	99	28.59	2.75		
Feeling	EDC1	99	30.71	2.65	2.814*	0.010
	EDC2	100	31.37	3.52		
	EDC3	96	31.15	3.50		
	EDC4	100	31.74	3.03		

Subscales	EDC	N	M	SD	F	p
	EDC5	83	30.84	3.33		
	EDC6	92	31.20	3.38		
	EDC7	99	32.32	3.16		
Honesty	EDC1	99	21.90	2.25	1.920	0.075
	EDC2	100	21.27	2.39		
	EDC3	96	21.90	2.34		
	EDC4	100	20.99	2.44		
	EDC5	83	21.41	2.38		
	EDC6	92	21.24	2.42		
	EDC7	99	21.99	4.69		
Grading	EDC1	99	18.26	2.33	4.316***	0.000
	EDC2	100	18.02	2.40		
	EDC3	96	19.19	2.58		
	EDC4	100	18.88	2.62		
	EDC5	83	18.86	2.32		
	EDC6	92	18.03	2.65		
	EDC7	99	19.19	2.22		
Embellishment	EDC1	99	16.68	2.90	5.106***	0.000
	EDC2	100	18.03	2.67		
	EDC3	96	18.10	2.91		
	EDC4	100	18.70	2.60		
	EDC5	83	18.11	2.47		
	EDC6	92	17.82	2.98		
	EDC7	99	18.26	2.84		
Reflective Journal Writing	EDC1	99	111.91	7.32	4.215***	0.000
	EDC2	100	112.69	8.15		
	EDC3	96	115.15	8.76		
	EDC4	100	114.85	7.15		
	EDC5	83	113.14	8.19		
	EDC6	92	112.32	8.21		
	EDC7	99	116.44	9.26		

Table 4 Results of Tukey HSD Multiple Comparisons for Student Teachers' Reflective Journal Writing by Education Degree Colleges

Subscales	(I)EDC	(J)EDC	Mean Difference(I-J)	p
Feeling	EDC1	EDC7	-1.616**	0.008
	EDC5	EDC7	-1.480*	0.036
Grading	EDC2	EDC3	-1.168*	0.015

Subscales	(I)EDC	(J)EDC	Mean Difference(I-J)	<i>p</i>
	EDC2	EDC7	-1.172*	0.013
	EDC3	EDC6	1.155*	0.022
	EDC6	EDC7	-1.159*	0.020
Embellishment	EDC1	EDC2	-1.363*	0.010
	EDC1	EDC3	-1.427**	0.006
	EDC1	EDC4	-2.026***	0.000
	EDC1	EDC5	-1.432*	0.010
	EDC1	EDC7	-1.606**	0.001

Note. EDC 1 = Education Degree College 1, EDC 2 = Education Degree College 2, EDC 3 = Education Degree College 3, EDC 4 = Education Degree College 4,, EDC 5 = Education Degree College 5, EDC 6 = Education Degree College 6, EDC 7= Education Degree College 7

* $p < .05$, ** $p < .01$, *** $p < .001$.

The results of Tukey HSD test indicated that the mean score of student teachers in EDC7 was significantly higher than that of student teachers in EDC1 and that of EDC7 was significantly higher than that of EDC5 in feeling. The mean score of student teachers in EDC3 and EDC7 was significantly higher than that of EDC2 in grading and that of student teachers in EDC3 was significantly higher than that of student teachers in EDC6 and also that of student teachers in EDC6 was significantly higher than that of student teachers in EDC7 in grading. The mean score of student teachers in EDC2, EDC3, EDC4, EDC5 and EDC7 was significantly higher than that of EDC1 in embellishment.

This means that student teachers in each Education Degree Colleges have different perceptions on reflective journal writing. Especially, student teachers from EDC1 did not try to embellish when they were writing reflective journal. This means that they worked according to the instructions of teacher educators in respective subjects. They had no pressure to write reflective journal writing and expressed freely their feeling because of very close and familiar with teacher educators.

Critical Thinking Skills of Student Teachers

Descriptive Analysis of Student Teachers' Critical Thinking Skills

To identify critical thinking skills of student teachers, descriptive statistics were conducted and the results were shown in Table 5.

Table 5 Descriptive Statistics of Student Teachers' Critical Thinking Skills

Subscales	<i>N</i>	<i>M</i>	<i>M%</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Analyticity	669	21.40	72.00%	2.20	14	30
Curiosity	669	34.11	75.80%	3.30	23	45
Open-mindedness	669	18.30	61.00%	2.90	7	28
Self-reliance	669	50.26	67.01%	4.89	36	76
Search for Truth	669	32.80	72.89%	3.09	22	43

Subscales	<i>N</i>	<i>M</i>	<i>M%</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Systematicity	669	20.44	68.13%	2.17	14	29
Critical Thinking Skills	669	177.32	69.54%	12.61	142	223

According to the result in Table 5, the mean percentage of critical thinking of the whole sample was 69.54% and the mean percentages of each subscale for critical thinking of student teachers were 72.00%, 75.80%, 61.00 %, 67.01%, 72.89%, 68.13% and respectively.

Based on the descriptive statistics, it could be seen that the mean percentage of curiosity was the highest and that of open-mindedness was the lowest among all subscales of critical thinking of student teachers and most of the student teachers were with them of critical thinking skills.

Comparison of Student Teachers' Critical Thinking Skills by Gender

To find out the difference of critical thinking skills by gender, descriptive statistics were calculated. The mean score of male student teachers was higher than that of female student teachers in critical thinking skills and its subscales. To make more detailed investigation on gender differences of student teachers' critical thinking skills, the independent samples *t*-test was conducted (see Table 6).

Table 6 Means, Standard Deviations, and Independent Samples *t*-test Results of Student Teachers' Critical Thinking Skills by Gender

Subscales	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Analyticity	Male	331	21.60	2.15	2.378*	665	0.018
	Female	338	21.20	2.24			
Curiosity	Male	331	34.67	3.29	4.415***	665	0.000
	Female	338	33.56	3.22			
Open-mindedness	Male	331	18.79	2.92	4.344***	665	0.000
	Female	338	17.83	2.82			
Self-reliance	Male	331	51.56	4.74	7.052***	665	0.000
	Female	338	48.99	4.70			
Search for Truth	Male	331	32.96	3.23	1.270	665	0.205
	Female	338	32.65	2.95			
Systematicity	Male	331	20.73	2.21	3.461**	665	0.001
	Female	338	20.15	2.10			
Critical Thinking Skills	Male	331	180.31	12.38	6.255***	665	0.000
	Female	338	174.38	12.15			

* $p < .05$, ** $p < .01$, *** $p < .001$.

The result of independent samples *t*-test stated that there were significant differences on critical thinking skills and its subscales, $t(665) = 6.255$, $p < .001$, analyticity, $t(665) = 2.378$, $p = .018$, curiosity, $t(665) = 4.415$, $p = .000$, open-mindedness, $t(665) = 4.344$, $p = .000$, self-reliance, $t(665) = 7.052$, $p = .000$, systematicity and $t(665) = 3.461$, $p = .001$ by gender (see Table 6). The results indicated that the mean scores of male student teachers were significantly

higher than that of female student teachers in critical thinking skills and its subscales except search for truth.

It is undeniable that males tend to be better at describing ideas than females (Piaw, 2014). In estimating the causes of problems, males are stronger than females. It is in line with the study. Males can identify information specific and systematically. To precise the result, they focus more in one direction than females. The capacity and function of left-brain support to be rational for males. The left-brain supports critical thinking abilities, while the right brain supports creative thinking skills (Rosnawati, 2009). Because of the brain function of males are better than females in some parts. Therefore, the male students were higher than females in estimating ability on a problem. This finding is in line with Gunawan et al. (2020a), that male students' thinking abilities is higher than female students. One study showed that female students were more influenced by the teachers they chose as their role models and showed high levels of intrinsic motivation (Christophersen et al., 2015).

Comparison of Student Teachers' Critical Thinking Skills by Education Degree Colleges

According to descriptive statistics, the mean scores and standard deviations of student teachers' critical thinking skills and its subscales for Education Degree Colleges were reported in Table 7. The results revealed that the mean scores of student teachers from EDC5 were higher in critical thinking skills than that of other EDCs. There was no significant difference of mean scores of student teachers in analyticity among EDCs. The mean scores of student teachers from EDC3, EDC4, EDC5, EDC6 and EDC7 were higher in curiosity than that of EDC1 and EDC2. The mean score of student teachers from EDC5 was higher in open-mindedness than that of other EDCs. The mean score of student teachers from EDC5 was higher in self-reliance than that of other EDCs. The mean scores of student teachers from EDC2, EDC3 and EDC4 were higher in search for truth than that of other EDCs. The mean score of student teachers from EDC5 was higher in systematicity than that of other EDCs.

ANOVA results indicated that there were significant differences of critical thinking skills, $F(6,664) = 2.623$, $p = 0.016$, open-mindedness, $F(6,664) = 3.418$, $p = 0.002$, self-reliance, $F(6,664) = 2.475$, $p = 0.022$, search for truth, $F(6,664) = 2.637$, $p = 0.016$ and systematicity, $F(6,664) = 2.691$, $p = 0.014$ by Education Degree Colleges (see Table 7).

Table 7 Means, Standard Deviations, and ANOVA Results of Student Teachers' Critical Thinking Skills by Education Degree Colleges

Subscales	EDC	N	M	SD	F	p
Analyticity	EDC1	99	21.05	1.72	0.705	0.646
	EDC2	100	21.34	2.26		
	EDC3	96	21.51	2.06		
	EDC4	100	21.64	2.33		
	EDC5	83	21.35	2.39		
	EDC6	92	21.50	2.29		
	EDC7	99	21.39	2.33		
Curiosity	EDC1	99	33.98	3.25	0.708	0.643
	EDC2	100	33.65	3.36		
	EDC3	96	34.25	3.15		
	EDC4	100	34.00	3.31		
	EDC5	83	34.54	3.35		
	EDC6	92	34.11	3.41		
	EDC7	99	34.33	3.30		

Subscales	EDC	N	M	SD	F	p
Open-mindedness	EDC1	99	17.66	3.01	3.418**	0.002
	EDC2	100	18.75	2.38		
	EDC3	96	18.46	2.75		
	EDC4	100	17.60	3.35		
	EDC5	83	19.12	3.03		
	EDC6	92	18.39	2.61		
	EDC7	99	18.28	2.88		
Self-reliance	EDC1	99	48.65	4.81	2.475*	0.022
	EDC2	100	50.28	4.28		
	EDC3	96	50.39	4.45		
	EDC4	100	50.44	4.40		
	EDC5	83	51.19	5.74		
	EDC6	92	50.60	4.27		
	EDC7	99	50.48	5.87		
Search for Truth	EDC1	99	31.72	3.01	2.637*	0.016
	EDC2	100	33.04	3.12		
	EDC3	96	33.22	2.83		
	EDC4	100	33.07	2.98		
	EDC5	83	32.92	3.26		
	EDC6	92	32.75	3.23		
	EDC7	99	32.94	3.09		
Systematicity	EDC1	99	20.26	1.88	2.691*	0.014
	EDC2	100	20.22	2.09		
	EDC3	96	20.29	2.28		
	EDC4	100	19.96	2.15		
	EDC5	83	21.02	2.16		
	EDC6	92	20.73	2.11		
	EDC7	99	20.69	2.40		
Critical Thinking Skills	EDC1	99	173.31	12.71	2.623*	0.016
	EDC2	100	177.28	11.16		
	EDC3	96	178.11	11.77		
	EDC4	100	176.71	12.08		
	EDC5	83	180.14	12.79		
	EDC6	92	178.08	12.48		
	EDC7	99	178.12	14.40		

Moreover the more detailed analyses, post-hoc test analysis method was conducted by Tukey HSD multiple comparison procedure for Education Degree Colleges (see Table 8).

Table 8 Results of Tukey HSD Multiple Comparisons of Student Teachers' Critical Thinking Skills by Education Degree Colleges

Subscales	(I) EDC	(J) EDC	Mean Difference(I-J)	<i>p</i>
Open-mindedness	EDC4	EDC5	-1.520**	0.007
	EDC5	EDC1	1.464*	0.012
Self - reliance	EDC1	EDC5	-2.546**	0.008
Search for Truth	EDC1	EDC2	-1.323*	0.040
		EDC3	-1.502*	0.012
		EDC4	-1.353*	0.032
Systematicity	EDC4	EDC5	-1.064*	0.016
Critical Thinking skills	EDC1	EDC5	-6.831**	0.005

Note. EDC 1 = Education Degree College 1, EDC 2 = Education Degree College 2, EDC 3 = Education Degree College 3, EDC 4 = Education Degree College 4, EDC 5 = Education Degree College 5

* $p < .05$, ** $p < .01$.

The results of Tukey HSD test indicated that the mean score of student teachers from EDC5 ($M = 180.14$) were significantly higher in critical thinking skills than that of student teachers from EDC1 ($M = 173.31$). Similarly, the mean score of student teachers from EDC5 ($M = 19.12$) were significantly higher in open-mindedness than that of student teachers from EDC4 ($M = 17.60$) and EDC1 ($M = 17.66$). The results also revealed that the mean score of student teachers from EDC5 ($M = 51.19$) were significantly higher in self-reliance than that of student teachers from EDC1 ($M = 48.65$).

The results also revealed that the mean score of student teachers from EDC2 ($M = 33.04$), EDC3 ($M = 33.22$), and EDC4 ($M = 33.07$) were significantly higher in self-reliance than that of student teachers from EDC1 ($M = 31.72$). The results also revealed that the mean score of student teachers from EDC5 ($M = 21.02$) were significantly higher in systematicity than that of student teachers from EDC4 ($M = 19.96$) (see Table 8).

Critical thinking skills could be improved by learning and developing with time and effort. To improve critical thinking skills, it depends on learning environment that create by teacher educators. Lujan and Dicarlo (2006) stated that teacher need to focus on active learning, more specifically, on inquiry models as solutions to solve the low level of critical thinking skills. Llewellyn (2013) has also recommended for implement inquiry learning in order that students get involved in the exploration process actively by using skills of logical and critical thinking. There are some other researches that proved that inquiry learning improves the scores of critical thinking skills (Azizmalayer, 2012; Mahanal, 2012; Kazempour, 2013).

Relationship of Reflective Journal Writing and Critical Thinking Skills of Student Teachers

To explore the relationship between reflective journal writing and critical thinking skills of student teachers, Pearson product-moment correlation was calculated. It was found that reflective journal writing of student teachers were significantly related to a wide range of critical

thinking skills of student teachers. The correlation between reflective journal writing and critical thinking skills of student teachers was shown in table 9.

Table 9 Correlation Between Reflective Journal Writing and Critical Thinking Skills of Student Teachers

Subscales	CTS	RP	F	H	G	E	RJW
Critical Thinking Skills(CTS)	1	.230 [*]	.322 ^{**}	.242 ^{**}	.296 ^{**}	.306 ^{**}	.455 ^{**}
Reflective Practice (RP)		1	.163 ^{**}	.124 ^{**}	.255 ^{**}	.204 ^{**}	.549 ^{**}
Feeling (F)			1	.270 ^{**}	.197 ^{**}	.271 ^{**}	.681 ^{**}
Honesty (H)				1	.157 ^{**}	.137 ^{**}	.575 ^{**}
Grading (G)					1	.383 ^{**}	.570 ^{**}
Embellishment (E)						1	.653 ^{**}
Reflective Journal Writing (RJW)							1

^{**} $p < .01$.

As expected, reflective journal writing and its subscales were positively correlated with critical thinking skills ($r = .455$).

Discussion and Recommendations

The process of teaching and learning is more advanced for developing and processing education including teacher training program. In Myanmar, Ministry of Education is implementing to be innovation and using modern teaching methodologies. Reflective journal writing is effective for doing self-assessment and also helps to improve critical thinking skill and self-directed learning for all learners.

The use of reflective learning journals is purported to enhance the development of the professional self in practice (Boud, 2001; Wong, Kember, Chung, & Yan, 1995). This survey examines their own attitudes and needs in daily programs. This finding is consistent with the literature, in that reflective journal writing allows for the exploration of attitudes such as self-doubt and fear of exposure (Kerka, 2002).

Reflective journal writing may also enhance growth and accountability as a professional and facilitate the formation of a base of knowledge needed to become a well-rounded practitioner (Banker, 2004; Hiemstra, 2001). This outcome of reflective journal writing is moderately acknowledged for student teachers yet. But there is a recognition that the professional is a cognitive and effective process.

In this context, to ensure the development of critical thinking skills during formal education, it is generally recommended that different perceptions are considered and used during classes, and that these skills are practiced actively by employing suitable techniques (Bulut, Ertem and Sevil, 2009). In his study, Tok (2008) describes that reflective thinking activities are effective for improving student performance and attitudes towards the class, and that teachers should be trained on the implementation of such activities in classroom environments by

receiving both pre-service and in-service trainings. Therefore, identification and developing of the critical and reflective thinking skills of student teachers is very crucial during their education.

Conclusion

This study also showed high levels of professionalism among student teachers. They were also found to have great respect for the teaching profession throughout the work of reflective journal writing. However, this improvement in professionalism was not statistically significant. Reflective journal writing is believed to contribute to success in higher education by providing insight into academic difficulties, changes in performance, and increased student responsibility for learning (Patterson, 1995). The result on the perception of the student teachers were consistent with the previous research, Student teachers perceived positive learning outcomes of reflective journal writing in learning courses, a finding that is consistent with a recent qualitative study in web-based courses conducted by Ruland and Ahern (2007). Student teachers motivate to engage in reflection and thinking critically by understanding of the purposes and benefits of reflective journal writing.

To sum up, reflective journal writing and critical thinking skills are important variables to educational profession and it is hoped that the contribution of this research can provide the successful profession for student teachers and development of education system for educational personnel. An also the results of this study reveal favorable perceptions of graduate students and faculty regarding the outcomes of reflective journal writing in teacher education. Plans for future investigations include examination of the psychometric characteristics of the instrument for the learning outcomes of professional development, personal growth, empowerment, and facilitation of the learning process. Reflective journal writing can strengthen student teachers growth and facilitate faculty.

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A STUDY ON PARENT-CHILD RELATIONSHIP AND SOCIAL-EMOTIONAL DEVELOPMENT OF PRESCHOOL-AGED CHILDREN

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Abstract

The main purpose of this study was to investigate the parent-child relationship and social-emotional development of preschool-aged children. In this study, a quantitative research design and descriptive survey method were used. As a sample, a total of 300 parents of preschool-aged children (150 from public preschools and 150 from private preschools) were randomly selected from Yangon and Ayeyarwaddy regions in Myanmar. As the research instruments, Child-Parent Relationship Scale (Pianta, 1998) modified by Driscoll and Pianta (2011) and Social-Emotional Development Questionnaire developed by Mardell and Dorothea (2011) were applied. Independent samples *t*-test and ANOVA results confirmed that significant differences were found in parent-child relationship by parent's gender, birth order and mother's education level. In addition, independent samples *t*-test and ANOVA results also confirmed that significant differences were found in social-emotional development of children by type of school, family type and mother's education level. Next, the Pearson product-moment correlation results revealed that positively significant relationship was found between parent-child relationship and social-emotional development ($r = .579, p < .01$) and also positively significant relationships were found among conflict subscale, closeness subscale and dependency subscale of parent-child relationship and social-emotional development ($r = .583, p < .01$), ($r = .252, p < .01$) and ($r = .264, p < .01$) respectively. The results of this study revealed that preschool children who had better parent-child relationship would be higher in their social-emotional development. Moreover, parent-child relationship and its subscales significantly contributed about 33% of the variance in social-emotional development of preschool children. Finally, this study suggested that parents should try to improve and strengthen positive parent-child relationship in order to help their children higher social-emotional development. Therefore, it was vital to emphasize the parent-child relationship and social-emotional development of preschool-aged children.

Keywords: parent-child relationship, social-emotional development, preschool-aged children

Introduction

Parents and families are very important people in children's lives. Among family members, children's first relationships are with their parents. Parents are usually the first people a child learns to trust. Trust and respect are essential to a positive parent-child relationship (Dolby, 2017). The babies will feel secure when they learn they can trust their parents or other primary caregivers to meet their needs. When children reach preschool years, they'll begin to discover a lot about themselves and interact with people around them (Brennan, 2022). Children's early relationships shape the way they see the world and affect all areas of their development (Halloran, 2020). So, parents or other main caregivers who are first contact persons in a child's life are said to be the primary sources of social and emotional support for children during their first years of life.

The relationship between a parent and a child is the most long-lasting because a person's parents always involve everything throughout their child's life (Thompson, 2001). The healthy

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involvement of parents in their children's day to day life helps children can perform better socially and emotionally. Hence, providing a child with love and affection is a pre-requisite for the healthy development of his/her brain, self-confidence, capacity to thrive and even the ability to form relationships as he/she goes through life. If a child's world at home is full of love, he/she will better prepare to deal with challenges of the larger world. Moreover, Palmer (2019) also affirmed that healthy social-emotional development is rooted in nurturing and responsive relationships with parents or other main caregivers. Young children who grow with a secure and healthy attachment to their parents will stand a better chance of developing happy and content relationships with others in their life.

Therefore, to improve social-emotional development of preschool children, it is first necessary to identify its key factors. Among these factors, parent-child relationship will be examined in this study as the related factors which can enhance the social-emotional development of children.

Purpose of the Study

The main purpose of the study was to investigate parent-child relationship and social-emotional development of preschool-aged children from public and private preschools in Myanmar.

The specific objectives of the study were

- To study parent-child relationship and social-emotional development of preschool-aged children
- To examine the differences in parent-child relationship by parent's gender, birth order and mother's education level
- To explore the differences in social-emotional development of children by type of school, family type and mother's education level
- To investigate the correlation between parent-child relationship and social-emotional development of preschool-aged children
- To find out whether parent-child relationship predicts social-emotional development of preschool-aged children or not

Definitions of Key Terms

Parent-Child Relationship. Parent-child relationship is defined as a kind of unique and influential relationship established in the process of interaction between parents and their children, which is critical to adolescents' physical and mental development (Zeigler-Hill & Shackelford, 2020).

Social-Emotional Development. Social-emotional development is a gradual, integrative process through which children acquire the capacity to understand, experience, express and manage emotions and to develop meaningful relationships with others (Cohen et al., 2005).

Preschool-Aged Children. Preschool-aged children refers to children between the ages of 3 and 5 years, who are not yet attending kindergarten (Dr. El-Soadaa, 2017).

Review of Related Literature

Parent-child relationship is one which combines behaviors, feelings and expectations and unique to a particular parent and a particular child. It is the earliest and most prominent relationships that individuals develop. This relationship involves the full extent of a child's development (Dr. Dona & Ms. Sarita, 2021). Trairatvorakul (2016) theorized that this bond serves as a model from which other interpersonal relationships are formed. And, according to ethological theory of attachment developed by Bowlby and Ainsworth (1969), a child and his mother had a natural instinct to bond with one another as a way to promote survival (Berk, 2014). Then, they found that the relationship a child had with his parents or primary caregivers may directly affect how the child was able to form relationships in the future.

Next, based upon the attachment theory, Antonucci et al. (2004) stated that the importance of caring relationships and young children needed to develop a relationship with at least one primary caregiver for normal social and emotional development; it also suggested that a good nurturing relationship between parent and child shaped future social, cognitive, and emotional development of that child. Thus, it could be said that parents play the biggest role in social-emotional development because they are available to offer the most consistent relationships for their child. The central theme of attachment theory was that parents or primary caregivers who were available and responsive to a child's needs allowed the child to develop a sense of security. It became the basis for development of trust or mistrust, and shaped how the child would relate to the world, learn, and form relationships throughout life (Corinne, 2007).

According to Davies (2008), parenting is the process of promoting and supporting the physical, emotional, social and intellectual development of a child from infancy to adulthood. Thus, a stable and secure family life is vital to healthy child and youth development. Briefly, strong families are those in which family members get along and communicate well, follow routines, share tasks and enjoy time together, have a support network, have a positive outlook, and where parents use positive parenting skills that means the mother's provision of nurturance, responsiveness, consistency, and appropriate control in caring for her young child (Slater & Power, 1987).

Moreover, parent-child relationships were complex and multidimensional. They varied over time, differed from the perspective of the parent and of the child, and differed from one situation to another, and so on (Ainsworth, 1972). At this research, child-parent relationship scale developed by Driscoll and Pianta (2011) was contained 30 items and was categorized into three subscales namely conflict, positive aspects of relationship (closeness), and dependency. Firstly, parent-child conflict means as an aspect of the parent-child relationship that is characterized by discordant or acrimonious interactions during which both the parent and the child display negative behaviors and affect (Patterson et al., 1998). Secondly, positive aspects of relationship (parent-child closeness) may be defined by the overall sense of strength of a relationship between parent and child include factors such as relationship satisfaction, feeling comfortable with, and feeling understood by one another (Elizabeth & Edward, 2018). Finally, dependency is the state of relying on or needing someone or something for aid, support, or the like. This could mean the dependency of children on their parents for care and provisions (Gewirtz, 1972).

When children reach preschool years, this is the time in which children immersed in initiative, the third stage of Erikson's psychosocial theory. They should be motivated to plan and carry out their own activities and in their own way (Laurence, 2023). A positive parent-child relationship is one in which parents can allow and encourage their child to meet the world with purpose. According to David (2017), parents are their child's first teachers. Children can learn social skills, such as sharing, cooperating, and respecting things of others when interacting with their parents. Based upon Albert Bandura's social learning theory, Hay and Vespo (1988) revealed that parents are models who demonstrate behaviour and children then copy. In other words, children were taught how to behave and relate to others through their relationships with their parents. Lev Vygotsky also viewed parents as masters and the child as an apprentice in the learning (Williams, 2022).

Previous researches proved that positive parent-child relationship had several positive effects on social-emotional development of children, it was more empathetic, more mature, more independence, less disruptive and less aggressive (Reid et al., 2002), it increased self-worth, and thus improved mental health outcomes (Garber et al., 1997; Kamkar et al., 2012), it decreased degree of anxiety (Wang et al., 2006 ; Minggui & Haung, 2022), and it reduced the risk of social and emotional problems later in life (Domitrovich et al., 2017).

Research Method

Research Design: The quantitative research design and survey method were used in this study.

Participants: The sample for this research was selected 300 parents of preschool children (150 from public preschools, 150 from private preschools) by using random sampling technique. Parents of preschool children in public and private preschools from Yangon and Ayeyarwaddy regions in Myanmar were as participants of the study.

Instruments: In this study, the research instruments were Child-Parent Relationship Scale (CPRS) modified by Driscoll and Pianta (2011) and Social-Emotional Development Questionnaire (SEDQ) developed by Mardell and Dorothea (2011). Child-Parent Relationship Scale (CPRS) included 30 items and it was a self-report instrument completed by fathers or mothers to assess parental perceptions of the quality of their relationships with their children. It had three subscales; conflict, positive aspects of relationship (closeness) and dependency. Social-Emotional Development Questionnaire (SEDQ) involved 28 items and it was an instrument designed for parents' responses to ask about how their child got along with other children and how he or she felt about himself/herself and others. By using these questionnaires, the researcher examined the parent-child relationship and social-emotional development of preschool children from public and private preschools in Myanmar.

Data Analysis Procedure: After preparing the instruments for the research and collecting the data with these instruments, the assessment for parent-child relationship and social-emotional development of preschool children from public and private preschools was conducted. The resulted data was assessed by using descriptive and inferential statistics. In addition, the differences of parent's gender, type of school, family type, birth order and mother's education level were analyzed by using independent samples *t*-test and one-way analysis of variance

(ANOVA). Finally, the correlation between parent-child relationship and social-emotional development of preschool children was determined by applying Pearson Product-Moment Correlation and regression analyses. By using the statistical analyses, correlational findings and results were discussed in the following.

Research Findings

Descriptive Statistics of Parent-Child Relationship for Preschool-Aged Children

Table 1 Descriptive Statistics of Parent-Child Relationship for Preschool-Aged Children

Variable	N	M	SD	Max	Min	Skewness
Parent-Child Relationship	300	110.62	13.633	145	70	-.213

Based on the descriptive statistics, observed mean (110.62) was greater than theoretical mean (90) and skewness was -.213. The results pointed out that preschool children in this study had satisfactory relationships with their parents.

Descriptive Statistics of the Subscales of Parent-Child Relationship for Preschool-Aged Children

Table 2 Descriptive Statistics of the Subscales of Parent-Child Relationship for Preschool-Aged Children

Variable	Number of Items	N	M	Mean %	SD	Max	Min
Conflict	14	300	52.12	74.46%	9.849	70	20
Closeness	11	300	45.21	82.2%	4.913	55	23
Dependency	5	300	13.29	53.16%	3.444	23	5

According to Table 2, the mean percentage of closeness subscale was the highest among three subscales. It could be said that many children had warm, affectionate and close relationships with their parents. The mean percentage of conflict subscale was the second highest. It could be interpreted that some children had discordant and conflict relationships with their parents in some cases. And, it was observed that a few children were quite dependent on their parents because the mean percentage of it was just 53.16%.

Comparison of Parent-Child Relationship by Parents' Gender

Table 3 Means, Standard Deviations, and Results of Independent Samples *t*-test of Parent-Child Relationship by Parents' Gender

Variables	Parents' Gender	N	M	SD	<i>t</i>	<i>df</i>	<i>p</i>
Conflict	Father	83	49.94	9.249	-2.386*	298	.018
	Mother	217	52.95	9.963			
Closeness	Father	83	44.64	4.733	-1.254	298	.211
	Mother	217	45.43	4.974			
Dependency	Father	83	12.89	3.139	-1.241	298	.216
	Mother	217	13.44	3.548			
Overall Parent-Child Relationship	Father	83	107.47	12.470	-2.497*	298	.013
	Mother	217	111.82	13.892			

* $p < .05$.

Independent samples *t*-test revealed that significant differences were found in overall parent-child relationship and conflict subscale of parent-child relationship by parents' gender. It was found that the mean scores of mothers were higher than those of fathers and thus it could be interpreted that mother-child relationship was better than father-child relationship. Also, conflict relationships were occurred more frequently between mothers and their children than fathers.

Comparison of Parent-Child Relationship by Birth Order

Table 4 Means, Standard Deviations, and ANOVA Results of Parent-Child Relationship by Birth Order

Variables	Birth Order	N	M	SD	F	p
Conflict	Eldest	90	52.21	9.087	2.094	.101
	Middle	28	48.14	8.418		
	Youngest	91	51.93	10.619		
	Only Child	91	53.43	9.992		
Closeness	Eldest	90	45.98	4.778	6.451***	.000
	Middle	28	41.54	4.887		
	Youngest	91	45.23	4.088		
	Only Child	91	45.57	5.369		
Dependency	Eldest	90	13.82	3.672	0.821	.483
	Middle	28	12.84	2.983		
	Youngest	91	13.43	3.757		
	Only Child	91	13.43	3.481		
Overall Parent-Child Relationship	Eldest	90	111.03	12.748	3.175*	.025
	Middle	28	103.50	11.187		
	Youngest	91	110.59	14.479		
	Only Child	91	112.43	13.796		

* $p < .05$, *** $p < .001$.

Table 4 represented that the mean scores of eldest child, youngest child and only child were nearly equal and higher than those of middle child for overall scores and all the subscales of parent-child relationship. The results of ANOVA showed that there were significant differences in closeness subscale ($F = 6.451$, $p < 0.001$) and overall parent-child relationship ($F = 3.175$, $p < 0.05$) by birth order.

Table 5 Results of Tukey HSD Multiple Comparison for Parent-Child Relationship by Birth Order

Variable	(I)Birth Order	(J)Birth Order	Mean Difference(I-J)	p
Closeness	Eldest	Middle	4.442***	.000
	Youngest		3.695**	.002
	Only Child		4.036**	.001
Overall Parent-Child Relationship	Only Child	Middle	8.929*	.013

* $p < .05$, ** $p < .01$, *** $p < .001$.

According to the results of Tukey HSD, eldest child, youngest child and only child had greater closeness relationships with their parents than middle child. And only child had more satisfactory parent-child relationship than middle child significantly.

Comparison of Parent-Child Relationship by Mother's Education Level

Table 6 Means, Standard Deviations, and ANOVA Results of Parent-Child Relationship by Mother's Education Level

Variable	Mother's Education Level	N	M	SD	F	p
Conflict	Primary	69	46.23	9.807	15.573***	.000
	Middle	110	51.86	9.839		
	High School	56	55.80	7.232		
	Graduate	65	55.62	8.909		
Closeness	Primary	69	43.52	4.238	4.223**	.006
	Middle	110	45.93	4.321		
	High School	56	46.07	4.480		
	Graduate	65	45.06	6.327		
Dependency	Primary	69	12.51	2.536	13.379***	.000
	Middle	110	12.52	3.758		
	High School	56	13.21	2.814		
	Graduate	65	15.49	3.331		
Overall Parent-Child Relationship	Primary	69	102.26	13.236	16.476***	.000
	Middle	110	110.31	12.449		
	High School	56	115.09	10.625		
	Graduate	65	116.17	14.034		

** $p < .01$, *** $p < .001$.

Table 6 revealed that the mean scores of mothers who were middle school level, high school level and graduate were higher than those of primary school level in overall parent-child relationship and all subscales. ANOVA results showed that there were significant differences in conflict subscale ($F = 15.573$, $p < 0.001$), closeness subscale ($F = 4.223$, $p < 0.01$), dependency subscale ($F = 13.379$, $p < 0.001$) and overall parent-child relationship ($F = 16.476$, $p < 0.001$) of preschool children by mother's education level.

Table 7 Results of Tukey HSD Multiple Comparison of Parent-Child Relationship by Mother's Education Level

Variable	(I)Mother's Education Level	(J)Mother's Education Level	Mean Difference(I-J)	p
Conflict	Middle	Primary	5.632***	.000
	High School	Primary	9.572***	.000
		Middle	3.940*	.000
	Graduate	Primary	9.384***	.047
		Middle	3.752*	.047

Variable	(I)Mother's Education Level	(J)Mother's Education Level	Mean Difference(I-J)	<i>p</i>
Closeness	Middle	Primary	2.406**	.007
	High School	Primary	2.550*	.019
Dependency	Graduate	Primary	2.985***	.000
		Middle	2.974***	.000
		High School	2.278**	.001
Overall Parent-Child Relationship	Middle	Primary	8.048***	.000
	High School	Primary	12.828***	.000
	Graduate	Primary	13.908***	.000
	Graduate	Middle	5.860*	.018

* $p < .05$, ** $p < .01$, *** $p < .001$.

According to the interpretation of Tukey HSD, there were significant differences among primary school level, middle school level, high school level and graduate. It was seen that the quality of parent-child relationship in preschool children whose mothers were middle school level, high school level and graduate was higher than the ones whose mothers were primary school level. And, it was also observed that more educated mothers had more conflict, closeness and dependency relationships with their children.

Descriptive Statistics of Social-Emotional Development for Preschool-Aged Children

Table 8 Descriptive Statistics of Social-Emotional Development for Preschool-Aged Children

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Max	Min	Skewness
Social-Emotional Development	300	68.01	5.892	82	52	-.363

Based on the descriptive statistic, observed mean (68.01) was greater than theoretical mean (56) and skewness was -.363. Thus, it could be said that preschool children in this study had satisfactory social-emotional development.

Comparison of Social-Emotional Development by Type of School

Table 9 Means, Standard Deviations, and Results of Independent Samples *t*-test of Social-Emotional Development by Type of School

Variable	Preschool	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Social-Emotional Development	Public	148	67.13	6.029	-2.582*	298	.010
	Private	152	68.87	5.644			

* $p < .05$.

Independent samples *t*-test confirmed that significant difference was found in two types of school concerning social-emotional development of children at 0.05 level. It was found that

the mean score of children from private preschools was higher than that of children from public preschools and therefore, children from private preschools had greater social-emotional development.

Comparison of Social-Emotional Development by Family Type

Table 10 Means, Standard Deviations, and Results of Independent Samples *t*-test of Social-Emotional Development by Family Type

Variable	Family Type	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Social-Emotional Development	Nuclear	128	66.95	6.294	-2.709**	298	.007
	Extended	172	68.80	5.460			

***p* < .01.

Independent samples *t*-test revealed that there was significant difference between nuclear family and extended family in social-emotional development of children. Based on descriptive analysis, the mean score of children from extended family was higher than that of children from nuclear family. So, it was interpreted that children from extended family had more wonderful social-emotional development than children from nuclear family.

Comparison of Social-Emotional Development by Mother's Education Level

Table 11 Means, Standard Deviations, and ANOVA Results of Social-Emotional Development by Mother's Education Level

Variable	Mother's Education Level	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Social-Emotional Development	Primary	69	65.83	6.054	5.946**	.001
	Middle	110	67.45	5.543		
	High School	56	68.63	5.497		
	Graduate	65	69.77	6.012		

***p* < .01.

The result of ANOVA showed that there were significant differences in social-emotional development of preschool children ($F = 5.946$, $p < 0.01$) with regard to mother's education level. According to the table 11, it was clearly seen that the mean score of children whose graduated mothers was the highest.

Table 12 Results of Tukey HSD Multiple Comparison of Social-Emotional Development by Mother's Education Level

Variable	(I)Mother's Education Level	(J)Mother's Education Level	Mean Difference(I-J)	<i>p</i>
Social-Emotional Development	High School	Primary	2.801**	.009
	Graduate		3.943**	.001

***p* < .01.

According to the results, it was found that preschool children whose mothers were high school level and graduate were higher in social-emotional development than the ones whose mothers were primary school level.

Correlation between Parent-Child Relationship and Social-Emotional Development of Preschool Children

To explore the correlation between Parent-Child Relationship and Social-Emotional Development of preschool children, Pearson Product-Moment Correlation Coefficient was calculated. The result was shown in Table 13.

Table 13 Correlation between Parent-Child Relationship and Social-Emotional Development

Variables	1.Conflict	2.Closeness	3.Dependency	4. Overall PCR	5.SED
1.Conflict	-	.350**	.394**	.948**	.583**
2.Closeness		-	-.227**	.556**	.252**
3.Dependency			-	.455**	.264**
4. Overall PCR				-	.579**
5.SED					-

** $p < .01$.

Note. PCR = Parent-Child Relationship, SED = Social-Emotional Development

According to the result, it was revealed that parent-child relationship was significantly and positively correlated with social-emotional development ($r = .579$, $p = 0.01$). This finding indicated that parent-child relationship of preschool children had a strong positive association with their social-emotional development. It can be assumed that the better the parent-child relationship the children had, the higher they would be in their social-emotional development.

And, the conflict subscale, closeness subscale and dependency subscale of parent-child relationship were also significantly and positively correlated with social-emotional development ($r = .583$, $p = 0.01$), ($r = .252$, $p = 0.01$) and ($r = .264$, $p = 0.01$) respectively. These findings indicated that conflict subscale had a strong positive association and the other two had a moderate positive association with social-emotional development. It can be assumed that the higher conflict, closeness and dependency relationships the children had with their parents, the better they had social-emotional development.

This result was consistent according to the concepts of attachment theory, ethological theory of attachment and social learning theory. They revealed that a good nurturing relationship between a parent and a child shaped future social-emotional development of that child.

Regression Analysis for Prediction of Parent-Child Relationship on Social-Emotional Development

A simple linear regression was calculated to investigate how well Parent-Child Relationship predicts children's Social-Emotional Development. The predicting power of Parent-Child Relationship on children's Social-Emotional Development can be observed in Table 14.

Table 14 Simple Linear Regression Analysis for Parent-Child Relationship on Children's Social-Emotional Development

Variables	<i>B</i>	β	<i>t</i>	<i>p</i>	<i>R</i>	<i>R</i> ²	Adj <i>R</i> ²	<i>F</i>
(Constant)	40.319		17.727***	.000	.579	.336	.333	150.467***
Parent-Child Relationship	.250	.579	12.266***	.000				

****p* < .001.

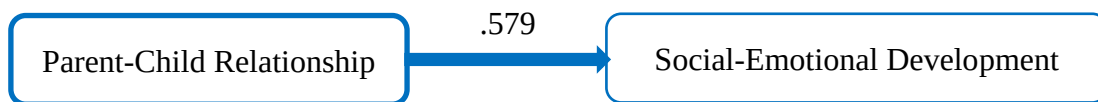
According to Table 14, the result of simple linear regression pointed out that parent-child relationship made a significant predictive contribution to social-emotional development. Regression analysis also showed that the model is significantly a good fit for the data according to the *p* value (*F* = 150.467, *p* = .000). The Adjusted *R*² value was .333. This proved that parent-child relationship contributed 33% of the variance in social-emotional development. According to Cohen (1988), this is a medium effect.

By the result of simple linear Regression, the model for social-emotional development can be defined as the following equation.

$$\text{SED} = 40.319 + .250 \text{ PCR}$$

Note. SED = Social-Emotional Development, PCR = Parent-Child Relationship

It can be predicted that social-emotional development of children will increase .250 units for the increase in one unit of parent-child relationship. Based on the result of simple linear regression analysis, the model for the Parent-Child Relationship on Social-Emotional Development was developed. It can be clearly seen in Figure 1.

**Figure 1 Predictive Power of Parent-Child Relationship on Social-Emotional Development Regression Analysis for Prediction of Parent-Child Relationship Subscales on Overall Social-Emotional Development**

Next, the multiple linear regression analysis was calculated to investigate how well Parent-Child Relationship Subscales predict Social-Emotional Development. The predicting power of Parent-Child Relationship subscales on children's Social-Emotional Development can be observed in Table 15.

Table 15 Multiple Linear Regression Analysis Summary for Subscales of Parent-Child Relationship on Social-Emotional Development

Variables	<i>B</i>	β	<i>t</i>	<i>p</i>	<i>R</i>	<i>R</i> ²	Adj <i>R</i> ²	<i>F</i>
(Constant)	49.821		33.375***	.000	.583	.340	.338	153.761***
1. Conflict	.349	.583	12.400***	.000				
2. Closeness	.303	.252	4.504***	.000				
3. Dependency	.452	.264	4.733***	.000				

****p* < .001.

It was found that conflict subscale, closeness subscale and dependency subscale of parent-child relationship were significantly predicted with overall social-emotional development. According to the multiple Regression Analysis results, it pointed out that three subscales of parent-child relationship made a significant predictive contribution to social-emotional development, ($F = 153.761$, $p = .000$) and explained for contribution 34% of the variance in social-emotional development. Cohen (1988) suggested that this was a medium effect.

By applying multiple regression analysis, the model for social-emotional development can be described as the following equation.

$$SED = 49.821 + .349 CF + .303 CS + .452 DP$$

Note. SED = Social-Emotional Development

CF = Conflict

CS = Closeness

DP = Dependency

According to the result of multiple regression analysis described in Table 15, the model for the subscales of Parent-Child Relationship on Social-Emotional Development was developed and as shown in Figure 2.

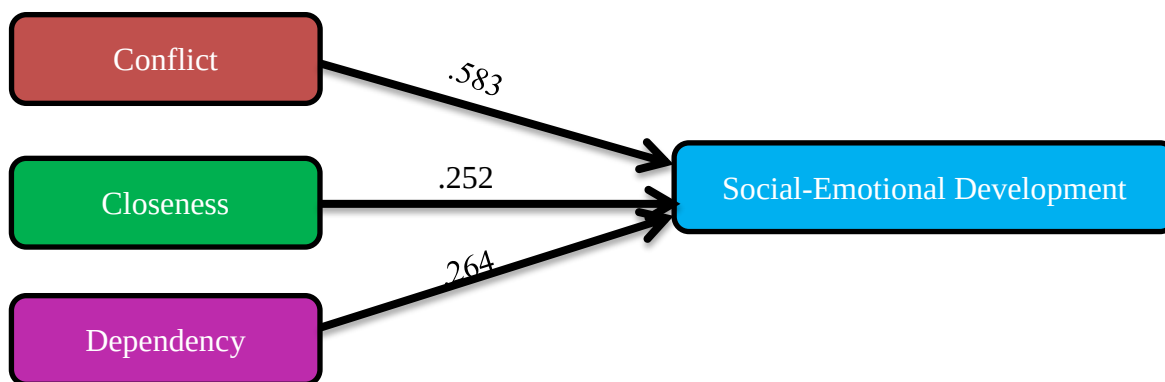


Figure 2 Predictive Power of Parent-Child Relationship Subscales on Social-Emotional Development

Discussion

Depending on the result of examining parent-child relationship of preschool children by parent's gender, it was found that mother-child relationship was better than father-child relationship. This finding was consistent with Moon and Hoffman (2008). In their research, they described that mothers were more responsive and shared friendly and warmly relationship with their children and rated higher for physical care and emotional support than did fathers. Since mothers had more contacts and directly involved in the everyday lives of their children, a few conflicts in some cases were found more frequently between mothers and their children.

Next, for difference of birth order, eldest child, youngest child and only child had more close relationships with their parents than middle child. This may be due to the fact that generally, many parents tended to be more loving and indulgent towards their eldest, youngest

and only child than middle child and thus, those children had more chances to contact and close to their parents.

Moreover, in studying parent-child relationship by mother's education level, it was observed that more educated mothers were the best in the quality of parent-child relationship. This could be interpreted that the higher the mother's education level, the more children were effectively nurtured and responsive and thus, more adaptable the relationship with their children. However, educated mothers were too worried and demanding about their children and then tended to intervene more than they needed in every case of their children so that they may be conflict with their children in some cases.

In addition, there was significant difference in social-emotional development of preschool children by type of school. Preschool children from private preschools had greater social-emotional development than preschool children from public preschools. This may be that parents of children from private preschools were more knowledgeable about the development of children than those of from public preschools. Thus, children from private were received effective training and nurturance from their parents for social-emotional development.

Besides, significant difference was also found in social-emotional development due to family type. Preschool children in extended family had greater social-emotional development than preschool children in nuclear family. It could be assumed that in extended family, children could learn practically communication skills that help their social and emotional well-being by interacting with many family members besides their parents. This result was agreeable with the opinion by Berk (2000), the families were children's main socialization agents, that was the communication and relationship skills acquired in their families of origin, would affect the quality of their interpersonal relationships throughout their lifetime.

Then, in exploring the influence of mother's education level in social-emotional development, preschool children whose mothers were high school level and graduate were higher in social-emotional development than the ones whose mothers were primary school level. This may be that the more educated mothers were, the more proficiently they could teach their children to socialize and aware of the feelings of self and others.

Furthermore, according to the Pearson Product-Moment Correlation, parent-child relationship was significantly and positively correlated with social-emotional development ($r = .579, p = .01$). Due to a strong positive association between parent-child relationship and social-emotional development, it could be said that preschool children who had favorable parent-child relationship would be higher in their social-emotional development. Theoretically, this finding was satisfactory because it was consistent with ethological theory of attachment, social learning theory and attachment theory. Besides, the three subscales of parent-child relationship were also significantly and positively correlated with social-emotional development ($r = .583, p = .01$), ($r = .252, p = .01$) and ($r = .264, p = .01$) respectively.

Next, according to a Simple Linear Regression and Multiple Regression Analysis, it could be found that both parent-child relationship and its subscales significantly predicted to social-emotional development of preschool children and it explained for 33% and 34% respectively.

This result was consistent with the study of Reid et al. (2002) and Khaleque (2015). In their research, they confirmed that parental acceptance, warmth, and support were positively related to favorable emotional and social development of children and extreme restrictiveness, authoritarianism, and punishment, without acceptance, warmth and love were negatively related to a child's positive self-concept, emotional, and social development.

Conclusion

This study highlighted unhealthy parent-child relationship and low social-emotional development of preschool children in order to find ways to promote them. Strong attachments and relationships early in life meant the child was more likely to behave better mental health and fewer behavioral challenges later (Knitzer, 2000). According to Funk and Ho (2018), social-emotional health affected a person's overall development and capacity to learn. Thus, early parent-child relationship was very important because it was the foundation of the child's personality, life decisions and conduct, ultimately influencing mental, emotional, social and physical well-being. Parents should always be aware of the enormous impact they had on their children's lives beginning the birth of a child.

As parents, maintaining favorable relationship with their children was crucial to wise parenting. Positive parenting can help the child to face social problems and it was required for early cognitive development, emotional balance and maturation of thought. Whereas negative, hostile parenting lead to the depression, social and cultural problems. In this study, the researcher investigated that parent-child relationship influenced on social-emotional development of preschool children and the close and healthy parent-child relationship could enhance children's social-emotional development.

Therefore, it was suggested that as the teacher educators should held as much educational talks as possible about Early Childhood Care and Development (ECCD) in all preschools in Myanmar and more discussions associated with children. Parents who involved the biggest role for a child's development should also listen with interests to these educational talks, engage in discussions and carry out in everyday life according to the knowledge and suggestions obtained from the educational lectures. It was hoped that the findings of this study would be useful to teacher educators and parents to make attempts to get positive outcomes in children's overall development.

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THE INFLUENCE OF TRUST IN SCHOOLS AND JOB SATISFACTION ON TEACHER RETENTION

May Zin Thant¹, Ei Thinzar Ko²

Abstract

The main purpose of the study was to investigate the influence of trust in schools and job satisfaction on teacher retention. A total sample of 630 in-service teachers (PAT, JAT, SAT) was randomly selected from the Ayeyarwady Region, Yangon Region, and Mon State. To find out trust in schools, job satisfaction, and teacher retention, the Omnibus T-Scale (OTS) developed by Hoy and Tschannen-Moran (2003), the Teacher Job Satisfaction Questionnaire (TJSQ) developed by Lester (1987), the Intent to Stay Questionnaire (ISQ) developed by Olivier (2001) were used. There was no significant difference in trust in schools (overall), job satisfaction (overall), and teacher retention (overall) by gender. ANOVA results indicated a significant difference in trust in schools (overall) by age and designation at 0.01 level and location at 0.001 level. ANOVA results indicated a significant difference in job satisfaction (overall) by age and designation at 0.001 level and location at 0.01 level. There was a significant difference in teacher retention by age at 0.05 level, location at 0.01 level, and total teaching experience at 0.001 level. There was a significant positive correlation between trust in schools and teacher retention at 0.001 level and job satisfaction and teacher retention at 0.001 level. The faculty trust in colleagues subscale at 0.001 level and faculty trust in clients subscale at 0.001 level of trust in schools were significant positive predictors of teacher retention. Again, the colleagues subscale at 0.01 level and work itself subscale at 0.001 level of job satisfaction were significant positive predictors of teacher retention. The construct of trust in schools and job satisfaction of in-service teachers were considered to support teacher retention. This study will be useful for educators, principals, and educational stakeholders to maintain qualified teachers in the teaching profession and then help to improve professional knowledge and feel fulfilled as educators.

Keywords: Trust in Schools, Job Satisfaction, Teacher Retention.

Introduction

Trust is one of the most critical parts of a school. It is often unseen but generally felt by everyone in the school. When a school is successful, strong working relationships are built with trust between administrators, staff, students, and the community. According to Goddard et al. (2007), trust makes schools better places for students to learn, teachers to teach, and administrators to manage. Teacher trust affects schools' effectiveness (Van Maele & Houtte, 2012). Building trust among everyone in the school was a central component of its success.

Teacher job satisfaction is strongly tied to teacher retention, which helps solve the problem of teacher shortage (Klecker, 1996; Garrett, 1999; Meng, 2004). Teacher retention is a significant challenge facing educators today. This challenge has become a persistent concern for both general education and special education programs in public and private schools.

Significance of the Study

Trust is viewed as a vital element in organizations that are well-functioning (Tschannen-Moran & Hoy, 1998). Without trust, communication may break down, and teamwork may suffer,

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leading to an environment where individuals are less likely to share ideas, support one another, or work toward common goals. Building trust within the school community is essential for creating a positive and cohesive educational environment that promotes student success and overall school improvement. A healthy school culture must be built upon trusting, collegial relationships among teachers, the principal, colleagues, students, and parents (Tarter & Hoy, 2004).

Teacher retention is a persistent issue that has significant implications for student achievement and school improvement. When experiencing a high rate of teacher loss, educational systems may encounter problems offering high-quality education to all their students. There has been an even higher percentage of beginning teachers who leave the teaching profession within the first five years. Teachers are reaching a breaking point where they are choosing to transfer to other schools or to seek other employment. As the nation struggles with a high teacher turnover rate, teacher retention must be addressed to adequately fill classrooms with suitable teachers (Ellis & Bernhardt, 1992).

The trust in schools and teacher job satisfaction were reviewed to determine their influence on teacher retention. Therefore, this study is to explore the influence of trust in schools and job satisfaction on teacher retention.

Purposes of the Study

The main purpose of the study is to investigate the influence of trust in schools and job satisfaction on teacher retention among in-service teachers. The specific objectives are

- To observe the differences in trust in schools, job satisfaction, and teacher retention among in-service teachers based on gender, age, total teaching experience, designation, and location
- To investigate a relationship among trust in schools, job satisfaction, and teacher retention of in-service teachers
- To examine the influence of trust in schools on teacher retention among in-service teachers
- To explore the influence of job satisfaction on teacher retention among in-service teachers

Definitions of Key Terms

Trust. Trust occurs when one person is vulnerable to another person and believes that the other person is compassionate, dependable, competent, genuine, and honest (Hoy, 2013).

Job satisfaction. Job satisfaction is the general attitude of an individual's current job and organization that encompasses the feelings, beliefs, and thoughts about that job (Cranny et al., 1992).

Teacher retention. The ability to attract teachers to the job means mitigating teacher attrition and teacher turnover (Ingersoll, 2001).

Methodology

Sample of the Study

The participants were about 630 in-service teachers chosen by stratified random sampling technique from forty schools in the Ayeyarwady Region, Yangon Region, and Mon State.

Research Method

The design and method used in this study were a quantitative research design and a descriptive survey method.

Research Instrumentation

The demographic characteristics of the participants are gender, age, designation, total teaching experience, and location. The Omnibus T-Scale (OTS) was used to explore the trust in schools among in-service teachers. It was developed by Hoy and Tschannen-Moran (2003). It consists of 26 items of a six-point Likert scale questionnaire. This instrument contained three subscales namely; faculty trust in the principal, faculty trust in colleagues, and faculty trust in clients (students and teachers). The internal consistency for the overall scale of OTS was 0.87.

The questionnaire was used to examine job satisfaction adopted by in-service teachers. Teacher Job Satisfaction Questionnaire (TJSQ) was adapted to measure four of the subscales: supervision, colleagues, working conditions, and work itself. It consists of 36 items of a four-point Likert scale questionnaire. This instrument was developed by Lester (1987). The internal consistency for the overall scale of TJSQ was 0.95.

The Intent to Stay Questionnaire (ISQ) was developed by Olivier (2001) which measures a teacher's intent to remain in the teaching profession. It is an unidimensional measure. It consists of 9 items of a four-point Likert scale questionnaire. The internal for the overall scale of ISQ was 0.83.

Data Analysis and Research Findings

Descriptive Statistics of Teachers' Trust in Schools

Table 1 Descriptive Statistics of Teachers' Trust in Schools

Variable	No. of Teachers	<i>M</i>	<i>SD</i>
Trust in Schools	630	118.27	13.989

According to the descriptive statistics in Table 1, the mean value of trust in schools was above average (118.27). This result pointed out that teachers' social interaction are good and they are active and trust each other in their schools. Cohen-Vogel and Herrington (2005) indicated that trust encourages teachers to be more open, to share their ideas, and to express their concerns freely.

Table 2 Descriptive Statistics for Trust in Schools in Different Subscales

Variables	No. of Items	<i>M</i>	Mean (%)	<i>SD</i>
Faculty Trust in the Principal	8	39.84	83	5.780
Faculty Trust in Colleagues	8	38.20	79.58	5.655
Faculty Trust in Clients	10	40.23	67.05	6.638

The results shown in Table 2, indicated that the mean percentage of in-service teachers' faculty trust in the principal subscale was the highest at 83, that of faculty trust in colleagues subscale was the second-highest at 79.58, and that of faculty trust in clients subscale was the lowest at 67.05. In this study, it can be interpreted that most in-service teachers trust their principal. And most in-service teachers generally have less trust in students and parents in their workplace. Teacher's trust in the principal is essential and basis of trust in schools (Hoy & Tschannen-Moran, 2003).

Comparison of Trust in Schools by Gender

To find out whether the differences in teachers' trust in schools concerning gender was significant or not, an independent samples *t*-test was used and reported in Table 3.

Table 3 Results of Independent Samples *t*-test of Trust in Schools by Gender

Variables	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Faculty Trust in the Principal	Male	43	40.44	5.539	.704	.482
	Female	587	39.80	5.799		
Faculty Trust in Colleagues	Male	43	39.70	5.414	1.806	.071
	Female	587	38.09	5.661		
Faculty Trust in Clients	Male	43	40.49	6.988	.262	.793
	Female	587	40.21	6.618		
Trust in Schools (overall)	Male	43	120.63	13.918	1.145	.253
	Female	587	118.10	13.990		

Based on the results in Table 3, the mean scores of male teachers' trust in schools (overall) and all subscales were slightly higher than that of female teachers and insignificant. By this study, the results point out that male teachers and female teachers in their workplace had trust in schools and gender difference was not an important factor for school effectiveness and success.

Comparison of Trust in Schools by Age

To find out whether there was a significant difference in teachers' trust in schools by age. Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

According to results, teachers with the age between 20-35 years had the highest mean score in faculty trust in the principal subscale, faculty trust in clients subscale, and trust in schools (overall). Teachers with the age between 36-50 years had the highest mean score in faculty trust in colleagues subscale. The mean score of teachers with the age 51 years and above was the lowest in all subscales and trust in schools (overall).

Based on the result of ANOVA, a significant difference was found in trust in schools (overall) ($F(2,627) = 5.541, p < .01$), in faculty trust in the principal ($F(2,627) = 9.325, p < .001$) by age.

Table 4 Post-hoc Analysis of Trust in Schools by Age

Variables	(I) Age	(J)Age	Mean Difference(I-J)	<i>p</i>
Faculty Trust in the Principal	20-35 years	51 and above	2.483***	.000
	36-50 years		1.417*	.024
Trust in Schools (overall)	20-35years	51 and above	4.336**	.006
	36-50 years		3.464*	.023

* $p < .05$, ** $p < .01$, *** $p < .001$.

According to the results shown in Table 4, the mean scores of teachers with the age between 20-35 years and teachers with the age between 36-50 years were significantly higher than that of teachers with the age 51 and above in faculty trust in the principal subscale and trust in schools (overall).

In this study, it can be interpreted that younger teachers are more likely to be active, open, adaptable, and collaborative than older teachers. Younger teachers have new ideas in their teaching activities. They can create effective learning environment and are more energetic. In 2019, World Teachers' Day celebrates the teachers with the theme "Young Teachers: The Future of the Profession" (UNESCO, 2019). Older adults may learn to trust differently than younger adults (Seaman et al., 2023).

Comparison of Trust in Schools by Total Teaching Experience

To find out whether there was a significant difference in teachers' trust in schools by total teaching experience. Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

Table 5 Descriptive Statistics of Trust in Schools by Total Teaching Experience

Variables	Grade	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Faculty Trust in the Principal	≤ 5 years	49	39.90	5.084	3.389*	.034
	6-10 years	114	41.10	4.741		
	11 and above	467	39.53	6.041		

Variables	Grade	N	M	SD	F	p
Faculty Trust in Colleagues	≤ 5 years	49	37.43	6.185	.808	.446
	6-10 years	114	38.64	5.328		
	11 and above	467	38.17	5.678		
Faculty Trust in Clients	≤ 5 years	49	40.67	5.336	.270	.763
	6-10 years	114	39.89	6.491		
	11 and above	467	40.27	6.803		
Trust in Schools (overall)	≤ 5 years	49	118.00	11.788	.649	.523
	6-10 years	114	119.62	12.323		
	11 and above	467	117.97	14.576		

* $p < .05$.

According to Table 5, the mean score of teachers with 6-10 years of teaching experience was the highest in trust in schools (overall), faculty trust in the principal subscale, and faculty trust in colleagues subscale. Then the mean score of teachers with 5 years and less of teaching experience was the highest in faculty trust in clients subscale. The mean score of teachers with 5 years and less of teaching experience was the lowest mean score in faculty trust in colleagues subscale. Teachers with 6-10 years of teaching experience had the lowest mean score in faculty trust in clients subscale. Teachers with 11 years and above teaching experience had the lowest mean score in faculty trust in the principal subscale and trust in schools (overall). The observation that the mean score of teachers' trust in schools was not significantly different among various teaching experience groups.

Based on the result of ANOVA, a significant difference was found in trust in schools (overall) ($F(2,627) = 3.389$, $p < .05$) by total teaching experience.

Table 6 Post-hoc Analysis of Teachers' Faculty Trust in the Principal by Total Teaching Experience

Variable	(I) Total Teaching Experience	(J) Total Teaching Experience	Mean Difference (I-J)	p
Faculty Trust in the Principal	6-10 years	11 and above	1.565*	.026

* $p < .05$.

According to the results shown in Table 6, the mean score of the teaching experience group of 6-10 years teachers was significantly higher than those of 11 and above in faculty trust in the principal subscale. It can be interpreted that the teaching experience group of 6-10 years

teachers can build positive relationships with their principal. Teachers with 6-10 years of teaching experience have more trust than 11 and above in trust in the principal.

Comparison of Trust in Schools by Designation

To find out whether there was a significant difference in teachers' trust in schools by designation. Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

Table 7 Descriptive Statistics of Trust in Schools by Designation

Variables	Designation	N	M	SD	F	p
Faculty Trust in the Principal	PAT	210	40.24	5.659	2.333	.098
	JAT	210	39.14	6.327		
	SAT	210	40.15	5.267		
Faculty Trust in Colleagues	PAT	210	38.53	5.470	.992	.372
	JAT	210	37.77	5.282		
	SAT	210	38.29	6.175		
Faculty Trust in Clients	PAT	210	41.10	6.483	7.313**	.001
	JAT	210	38.83	6.484		
	SAT	210	40.77	6.748		
Trust in Schools (overall)	PAT	210	119.87	12.751	5.339**	.005
	JAT	210	115.74	14.299		
	SAT	210	119.20	14.561		

** $p < .01$.

According to Table 7, the Primary Assistant Teachers (PAT) had the highest mean scores in faculty trust in the principal subscale, faculty trust in colleagues subscale, faculty trust in clients subscale, and trust in schools (overall). The Senior Assistant Teachers (SAT) had the second-highest mean scores in all subscales and trust in schools (overall). Then Junior Assistant Teachers (JAT) had the lowest mean scores in all subscales and trust in schools (overall).

Based on the result of ANOVA, significant differences were found in trust in schools (overall) ($F(2,627) = 5.339, p < .01$), in faculty trust in the clients ($F(2,627) = 7.313, p < .01$) by designation.

Table 8 Post-hoc Analysis of Trust in Schools by Designation

Variables	(I) Designation	(J) Designation	Mean Difference (I-J)	p
Faculty Trust in Clients	PAT	JAT	2.271**	.001
	SAT		1.938**	.007

Variables	(I) Designation	(J) Designation	Mean Difference (I-J)	<i>p</i>
Trust in Schools (overall)	PAT	JAT	4.129**	.007
	SAT		3.457*	.030

* $p < .05$, ** $p < .01$.

According to the results shown in Table 8, the mean scores of Primary Assistant Teachers (PAT) and Senior Assistant Teachers (SAT) were significantly higher than Junior Assistant Teachers (JAT) in faculty trust in clients subscale and trust in schools (overall).

Comparison of Trust in Schools by Location

To find out whether there was a significant difference in teachers' trust in schools by location. Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

According to results, teachers from Region 2 had the highest mean score in all subscales and trust in schools (overall). Teachers from Region 3 had the lowest mean score in faculty trust in the principal subscale, faculty trust in colleagues subscale, and trust in schools (overall). Teachers from Region 1 had the lowest mean score in faculty trust in clients subscale.

Based on the result of ANOVA, significant differences were found in trust in schools (overall) ($F(2,627) = 14.121, p < .001$), in faculty trust in the principal ($F(2,627) = 12.669, p < .001$), in faculty trust in colleagues ($F(2,627) = 21.588, p < .001$), in faculty trust in clients ($F(2,627) = 3.706, p < .05$) by location.

Table 9 Post-hoc Analysis of Trust in Schools by Location

Variables	(I) Location	(J) Location	Mean Difference (I-J)	<i>p</i>
Faculty Trust in the Principal	Region 1	Region 3	2.395***	.000
	Region 2		2.433***	.000
Faculty Trust in Colleagues	Region 1	Region 3	2.829***	.000
	Region 2		3.219***	.000
Faculty Trust in Clients	Region 2	Region 1	1.681*	.025
Trust in Schools (overall)	Region 1	Region 3	4.824**	.001
	Region 2		6.933***	.000

* $p < .05$, ** $p < .01$, *** $p < .001$.

According to the results shown in Table 9, the mean scores of teachers from Region 1 and Region 2 were significantly higher than that of teachers from Region 3 in faculty trust in the principal subscale, faculty trust in colleagues subscale, and trust in schools (overall). The mean

scores of teachers from Region 2 were significantly higher than that of teachers from Region 1 in faculty trust in clients subscale.

Descriptive Statistics of Teachers' Job Satisfaction

Table 10 Descriptive Statistics of Teachers' Job Satisfaction

Variable	No. of Teachers	<i>M</i>	<i>SD</i>
Job Satisfaction	630	111.54	12.084

According to the descriptive statistics in Table 10, the mean value of teachers' job satisfaction was above average (111.54). This result indicated that teachers' job satisfaction and positive attitudes toward their profession are good. Moreover, teachers feel fulfilled and happy in their workplace. Teachers with high job satisfaction provided higher quality teaching and their students were more successful (Demirtas, 2010).

Table 11 Descriptive Statistics for Job Satisfaction in Different Subscales

Variables	No. of Items	<i>M</i>	Mean (%)	<i>SD</i>
Supervision	13	39.92	76.77	5.508
Colleagues	10	30.84	77.10	3.913
Working Conditions	4	12.55	78.44	1.695
Work Itself	9	28.23	78.42	3.267

According to Table 11, the mean percentage of working conditions subscale (78.44) was the highest and that of supervision subscale (76.77) was the lowest in teachers' job satisfaction. This result pointed out that teachers had good working conditions and were satisfied in their schools. However, they were less satisfied with supervision. They may require good administration, adequate support, appreciation, and appropriateness and timing of feedback that influence teachers' job satisfaction. The level of support an administrator provides a teacher impacts a teacher's effectiveness and job satisfaction (Ingersoll, 2001).

Comparison of Job Satisfaction by Gender

To find out whether the differences in teachers' job satisfaction concerning gender were significant or not, independent samples *t*-test was used.

Based on the results, the mean scores of male teachers' job satisfaction (overall) and all subscales are slightly higher than that of female teachers. The mean value of job satisfaction (overall) was not significantly different by gender. However, a significant difference was found in colleagues subscale by gender (2.090, $p < .05$). Yin Nwe Aung (2017) stated that the mean score of females was slightly higher than that of males on job satisfaction.

Comparison of Job Satisfaction by Age

To find out whether there was a significant difference in teachers' job satisfaction by age. Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

According to results, teachers with the age between 20-35 years had the highest mean score in supervision subscale, colleagues subscale, working conditions subscale and job satisfaction (overall). Teachers with the age between 36-50 years had the highest mean score in work itself subscale. The mean score of teachers with the age 51 years and above had the lowest in all subscales and job satisfaction (overall).

Based on the result of ANOVA, a significant difference was found in job satisfaction (overall) ($F(2,627) = 8.556, p < .001$), in supervision ($F(2,627) = 11.957, p < .001$), in colleagues ($F(2,627) = 6.043, p < .01$), in working conditions ($F(2,627) = 3.270, p < .05$) by age.

According to the results, the mean scores of teachers with the age between 20-35 years and 36-50 years were significantly higher than that of teachers with age 51 and above in supervision subscale, and job satisfaction (overall). Then, the mean scores of teachers with the age between 20-35 years were significantly higher than that of teachers with age 51 and above in colleagues subscale, and working conditions subscale.

Comparison of Job Satisfaction by Total Teaching Experience

To find out whether there was a significant difference in teachers' job satisfaction by total teaching experience. Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

The mean score of teachers' job satisfaction (overall), supervision subscale, colleagues subscale, working conditions subscales, and work itself subscale from 6-10 years of teaching experience were higher than that of other teaching experience groups. Then the teachers with 5 years and less of teaching experience had the lowest mean scores in supervision subscale, work itself subscale, and job satisfaction (overall). Teachers with 11 years and above teaching experience had the lowest mean score in colleagues subscale and working conditions subscale.

Based on the result of ANOVA, a significant difference was found in supervision ($F(2,627) = 3.506, p < .05$), in colleagues ($F(2,627) = 3.081, p < .05$) by total teaching experience.

According to the results, the mean scores of the teaching experience group of 6-10 years teachers were significantly higher than those of 11 years and above in supervision subscale, colleagues subscale, and job satisfaction (overall).

Comparison of Job Satisfaction by Designation

To find out whether there was a significant difference in teachers' job satisfaction by designation. Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

The Primary Assistant Teachers (PAT) had the highest mean scores in supervision subscale, colleagues subscale, working conditions subscale, and job satisfaction (overall). The Senior Assistant Teachers (SAT) had the highest mean scores in work itself subscale. Then the Junior Assistant Teachers (JAT) had the lowest mean scores in supervision subscale, colleagues subscale, working conditions subscale, work itself subscale and job satisfaction (overall).

Based on the result of ANOVA, a significant difference was found in job satisfaction (overall) ($F(2,627) = 9.235, p < .001$), in supervision ($F(2,627) = 7.817, p < .001$), in colleagues

($F(2,627) = 5.439, p < .01$), in working conditions ($F(2,627) = 3.948, p < .05$), in work itself ($F(2,627) = 8.815, p < .001$) by designation.

Table 12 Post-hoc Analysis of Job Satisfaction by Designation

Variables	(I) Designation	(J) Designation	Mean Difference (I-J)	<i>p</i>
Supervision	PAT	JAT	2.090***	.000
Colleagues	PAT	JAT	1.219**	.004
Working Conditions	PAT	JAT	0.457*	.016
Work Itself	PAT	JAT	1.038**	.003
	SAT		1.229***	.000
Job Satisfaction (Overall)	PAT	JAT	4.805***	.000
	SAT		3.610**	.006

* $p < .05$, ** $p < .01$, *** $p < .001$.

According to the results shown in Table 12, the mean scores of Primary Assistant Teachers (PAT) were significantly higher than Junior Assistant Teachers (JAT) in supervision subscale, colleagues subscale, and working conditions subscale. The mean scores of Primary Assistant Teachers (PAT) and Senior Assistant Teachers (SAT) were significantly higher than Junior Assistant Teachers (JAT) in the work itself subscale and job satisfaction (overall).

Comparison of Job Satisfaction by Location

To find out whether there was a significant difference in teachers' job satisfaction by location. Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

According to results, teachers from Region 2 had the highest mean score in supervision subscale and colleagues subscale. Teachers from Region 1 had the highest mean score in working conditions subscale, work itself subscale and job satisfaction (overall). Teachers from Region 3 had the lowest mean score in all subscales, and job satisfaction (overall).

Based on the result of ANOVA, a significant difference was found in job satisfaction (overall) ($F(2,627) = 7.239, p < .01$), in supervision ($F(2,627) = 5.425, p < .01$), in colleagues ($F(2,627) = 5.318, p < .01$), in working conditions ($F(2,627) = 13.185, p < .001$), in work itself ($F(2,627) = 3.446, p < .05$) by location.

According to the results, the mean scores of teachers from Region 1 and Region 2 were significantly higher than that of teachers from Region 3 in supervision subscale, colleagues subscale, working conditions subscale, and job satisfaction (overall). The mean score of teachers from Region 1 was significantly higher than that of teachers from Region 3 in work itself subscale.

Descriptive Statistics of Teacher Retention

Table 13 Descriptive Statistics of Teacher Retention

Variable	No. of Teachers	<i>M</i>	<i>SD</i>
Teacher Retention	630	27.86	4.763

According to Table 13, descriptive analysis revealed that the mean and standard deviation of teacher retention for all respondents were 27.86 and 4.763. It could be interpreted that retaining qualified teachers is a critical issue for educational development. Ingersoll (2001) points out that the crisis in the education field today is not really about the recruitment of teachers but rather about the retention of teachers.

Comparison of Teacher Retention by Gender

To find out whether the teachers were different in teacher retention for gender, descriptive statistics were conducted. The results are reported in Table 14.

Table 14 Results of Independent *t*-test of Teacher Retention by Gender

Variable	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Teacher Retention	Male	43	27.14	5.445	- 0.907	.309
	Female	587	27.91	4.710		

The mean score of female teachers was slightly higher than that of male teachers in teacher retention and not significant. The results show that female teachers are more attached than male teachers in school and profession.

Comparison of Teacher Retention by Age

To determine whether there was a significant difference in teacher retention by age. Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

Table 15 Descriptive Statistics of Teacher Retention by Age

Variable	Age	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Teacher Retention	20-35 years	179	27.09	5.344	3.517*	.030
	36-50 years	241	28.30	4.383		
	51 and above	210	28.01	4.597		

* $p < .05$.

Teachers with the age between 36-50 years had the highest mean score in teacher retention. Teachers with the age 51 years and above had the second-highest mean score in teacher retention. Teachers with the age between 20-35 years had the lowest mean score in teacher retention. Ingersoll (2001; 2003) estimated that young teachers (under the age of 30) are 17.1% more likely to leave teaching than middle-aged teachers (between 30-50 years of age).

Table 16 Post-hoc Analysis of Teacher Retention by Age

Variable	(I) Age	(J) Age	Mean Difference (I-J)	<i>p</i>
Teacher Retention	36-50 years	20-35 years	1.214*	.026

* $p < .05$

According to the results shown in Table 16, the mean score of teachers with the age between 36-50 years was significantly higher than that of teachers with age between 20-35 years in teacher retention. It can be seen that middle adulthood teachers have stability, maturity, good health, and satisfaction. So, middle adulthood teachers remain in their schools.

Comparison of Teacher Retention by Total Teaching Experience

To determine whether there was a significant difference in teacher retention by total teaching experience, Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

Table 17 Descriptive Statistics of Teacher Retention by Total Teaching Experience

Variable	Total Teaching Experience	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Teacher Retention	≤ 5 years	49	25.57	6.840	8.367***	.000
	6-10 years	114	27.25	4.326		
	11 and above	467	28.25	4.524		

*** $p < .001$.

Teachers with 11 years and above of total teaching experience had the highest mean score in teacher retention. Teachers with 6-10 years of total teaching experience had the second-highest mean score. Teachers with 5 years and under of total teaching experience had the lowest mean score in teacher retention.

Based on the result of ANOVA, a significant difference was found in teacher retention ($F(2,627) = 8.367$, $p < .001$) by total teaching experience.

Table 18 Post-hoc Analysis of Teacher Retention by Total Teaching Experience

Variable	(I) Total Teaching Experience	(J) Total Teaching Experience	Mean Difference (I-J)	<i>p</i>
Teacher Retention	11 and above	≤ 5 years	2.679***	.000

*** $p < .001$.

According to the results shown in Table 18, the teachers' mean score of the teaching experience group of 11 years and above was significantly higher than those of 5 years and under in teacher retention.

Comparison of Teacher Retention by Designation

To determine whether there was a significant difference in teacher retention by designation, Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

Table 19 Descriptive Statistics of Teacher Retention by Designation

Variable	Designation	N	M	SD	F	p
Teacher Retention	PAT	210	27.95	4.788	.072	.931
	JAT	210	27.77	4.390		
	SAT	210	27.86	5.105		

The mean score of Primary Assistant teachers (PAT) was slightly higher than that of Junior Assistant Teachers (JAT) and Senior Assistant Teachers (SAT) in teacher retention. Then Junior Assistant Teachers (JAT) had the lowest mean scores in teacher retention.

Based on the result of ANOVA, a significant difference was not found in teacher retention by designation.

Comparison of Teacher Retention by Location

To determine whether there was a significant difference in teacher retention by location, Descriptive statistics and one-way analysis of variance (ANOVA) were computed.

Table 20 Descriptive Statistics of Teacher Retention by Location

Variable	Location	N	M	SD	F	p
Teacher Retention	Region 1	210	28.82	4.782	6.918**	.001
	Region 2	210	27.57	4.978		
	Region 3	210	27.19	4.376		

** $p < .01$.

According to Table 20, teachers from Region 1 had the highest mean score 28.82, teachers from Region 2 had the second-highest mean score 27.57, and teachers from Region 3 had the lowest mean score 27.19 in teacher retention.

Based on the result of ANOVA, a significant difference was found in teacher retention ($F(2,627) = 6.918, p < .01$) by location.

Table 21 Post-hoc Analysis of Teacher Retention by Location

Variable	(I) Location	(J) Location	Mean Difference (I-J)	<i>p</i>
Teacher Retention	Region 1	Region 2	1.252*	.018
		Region 3	1.638**	.001

* $p < .05$, ** $p < .01$.

According to the results shown in Table 21, the mean score of teachers from Region 1 was significantly higher than that of teachers from Region 2 and Region 3 in teacher retention.

The Relationship Between Teacher Retention and Trust in Schools

To examine the relationship among teacher retention, faculty trust in the principal, faculty trust in colleagues, faculty trust in clients. Pearson's correlation was conducted in Table 22.

Table 22 Correlation Between Trust in Schools and Teacher Retention

Variables	Faculty Trust in the Principal	Faculty Trust in Colleagues	Faculty Trust in Clients	Teacher Retention
Faculty Trust in the Principal	1			
Faculty Trust in Colleagues	0.535***	1		
Faculty Trust in Clients	0.294***	0.382***	1	
Teacher Retention	0.263***	0.424***	0.287***	1

*** $p < .001$.

According to Table 22, teacher retention is positively and significantly correlated to faculty trust in the principal ($r = .263$, $p < .001$). Teacher retention is positively and significantly correlated to faculty trust in colleagues ($r = .424$, $p < .001$). Teacher retention is positively and significantly correlated to faculty trust in clients ($r = .287$, $p < .001$). It could be interpreted that teacher retention in their schools is boosted if the trusting relationship among the principal, colleagues, students, and parents increases. Maintaining quality teachers for the success and efficiency of schools depends mostly on the trust between and among principals, colleagues, students, and parents.

Regression Analysis for Prediction of Teacher Retention from Faculty Trust in the Principal, Faculty Trust in Colleagues and Faculty Trust in Clients

To evaluate the prediction of teacher retention from faculty trust in the principal, faculty trust in colleagues and faculty trust in clients, simultaneous multiple regression was conducted. The results are shown in Table 23.

Table 23 Regression Analysis for Prediction of Trust in Schools and Teacher Retention

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	R^2	Adj R^2	<i>F</i>
Constant	11.334		7.793***	.446	.199	.195	51.746***
Predictor Variables							
Faculty Trust in the Principal	.028	.034	.789				
Faculty Trust in Colleagues	.296	.351	7.964***				
Faculty Trust in Clients	.103	.143	3.670***				

*** $p < .001$ (one-tailed).

Multiple regression analysis from Table 23, pointed out that the results were statistically significant $R^2 = .199$, $F(3,626) = 51.746$, $p < .001$. The adjusted R^2 was .195. This indicated that 19.5 % of the variance in teacher retention was explained by faculty trust in the principal, faculty trust in colleagues and faculty trust in clients. Faculty trust in colleagues had the highest positive effect ($\beta = .351$, $p < .001$) on teacher retention and this is statistically significant. Faculty trust in clients had a positive effect ($\beta = .143$, $p < .001$) on teacher retention and this is statistically significant. The faculty trust in principle had a positive effect ($\beta = .034$, $p > 0.05$) on teacher retention, but this is not statistically significant.

The model could be explained in the following equation:

$$TR = 11.334 + 0.296 \text{ FTCo} + 0.103 \text{ FTCl}$$

TR = Teacher Retention, FTCo = Faculty Trust in Colleagues, FTCl = Faculty Trust in Clients

The Relationship Between Job Satisfaction and Teacher Retention

To examine the relationship among teacher retention, supervision, colleagues, working conditions and work itself, Pearson's correlation was conducted in Table 24.

Table 24 Correlation Between Job Satisfaction and Teacher Retention

Variables	Supervision	Colleagues	Working Conditions	Work Itself	Teacher Retention
Supervision	1				
Colleagues	0.649***	1			
Working Conditions	0.672***	0.638***	1		
Work Itself	0.503***	0.534***	0.554***	1	
Teacher Retention	0.379***	0.428***	0.384***	0.581***	1

*** $p < .001$.

According to Table 24, the correlation analysis of teacher retention and supervision results indicated that teacher retention is positively and significantly correlated to supervision. Teacher retention had a moderately strong but significant correlation to supervision ($r = .379$, $p < .001$).

The results of the correlation analysis of teacher retention and colleagues indicated that teacher retention is positively and significantly correlated to colleagues. Teacher retention had a moderately strong but significant correlation to colleagues ($r = .428$, $p < .001$).

The results of the correlation analysis of teacher retention and working conditions indicated that teacher retention is positively and significantly correlated to working conditions. Teacher retention had a moderately strong but significant correlation to working conditions ($r = .384$, $p < .001$).

The results of the correlation analysis of teacher retention and work itself indicated that teacher retention is positively and significantly correlated to work itself. Teacher retention had a moderately strong but significant correlation to work itself ($r = .581$, $p < .001$).

Regression Analysis for Prediction of Teacher Retention from Supervision, Colleagues, Working Conditions and Work Itself

In order to evaluate the prediction of teacher retention from supervision, colleagues, working conditions and work itself, simultaneous multiple regression was conducted. The results are shown in Table 25.

Table 25 Regression Analysis for Prediction of Job Satisfaction and Teacher Retention

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	R^2	Adj R^2	<i>F</i>
Constant	1.170		.790	.598	.358	.354	87.019***
Predictor Variables							
Supervision	.041	.047	.997				
Colleagues	.175	.143	3.099**				
Working Conditions	-.019	-.007	-.141				
Work Itself	.706	.484	11.981***				

** $p < .01$, *** $p < .001$ (two-tailed).

Multiple regression analysis from Table 35, pointed out that the results were statistically significant $R^2 = .358$, $F(4,625) = 87.019$, $p < .001$. The adjusted R^2 was .354. This indicated that 35.4 % of the variance in teacher retention was explained by supervision, colleagues, working conditions and work itself. Work itself had the highest positive effect ($\beta = .484$, $p < .001$) on teacher retention, and this is statistical significant. Colleagues also had a positive effect ($\beta = .143$, $p < .01$) on teacher retention, and this is statistical significant. Supervision had a positive effect ($\beta = .047$, $p > 0.05$) on teacher retention, but this is not statistically significant. Working

conditions had a negative effect ($\beta = - .007, p > 0.05$) on teacher retention, but this is not statistically significant.

The model could be explained in the following equation:

$$TR = 1.170 + 0.175 C + 0.706 WI$$

TR = Teacher Retention, C = Colleagues, WI = Work Itself

Conclusion

Educational systems and schools worldwide constantly face the concern of teachers deciding to leave their school or even the profession. When experiencing a high rate of teacher loss, educational systems may encounter problems with offering high-quality education to all their students. If teachers possess trust in schools and job satisfaction, can maintain quality teachers and create an effective and successful school environment. Teachers who are satisfied and trust in schools will assist the future generation's education in terms of their intellectual and social abilities.

Limitations of the Study

Forty schools from four Townships of Ayeyarwady Region, Yangon Region, and Mon State were selected as samples of this study. The proportion of male teachers and female teachers involved in this study was not equal because male teachers are very rare in Myanmar. Moreover, it is also hard to obtain the same population in age group, and total teaching experience group among Ayeyarwady Region, Yangon Region, and Mon State. To examine the gender, age, and total teaching experience-related differences, an equal sample size was more participation.

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MOTHER-CHILD ATTACHMENT AND CHILD'S PROSOCIAL BEHAVIOR

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Abstract

The main purpose of this study was to investigate the effects of mother-child attachment on child's prosocial behavior. The questionnaire survey method and quantitative approach were applied in this study. A total of 400 mothers of preschool children from Yangon participated in this study. The required sample was selected using a random sampling technique. As the research instruments, Mother-Object Relationship (Child) and Child-Parent Relationship Scales (Simikiss et al., 2013) was used to measure mother-child attachment and Questionnaire for Surveying Prosocial Behavior of Preschool-Aged Children (Fedorko, 2013) was used to measure child's prosocial behavior. In general, the result of the descriptive analysis revealed that mother-child attachment and child's prosocial behavior in this study were satisfactory because the mean percentage of mother-child attachment and child's prosocial behavior were 81.49% and 74.04%. There was significant difference in mother-child attachment by type of school, mothers' educational level and birth order but not found for gender. There were also significant differences in child's prosocial behavior (total) and its subscales by gender, type of school and mothers' educational level but not for birth order. Moreover, according to Pearson's correlation, there was significantly correlated between mother-child attachment and child's prosocial behavior ($r = 0.477, p < 0.01$). Regression analysis revealed that proximately 24% of the variance in child's prosocial behavior could be explained by mother-child attachment. The finding of this study will be benefited for preschool teachers, mothers and also caregivers to have a deeper understanding of the effects of mother-child attachment on child's prosocial behavior while considering how to improve not only child's prosocial behavior but also child's all-round developments from childhood to adults life.

Keywords: Attachment, Mother-Child Attachment, Prosocial Behavior

Introduction

It is universally recognized in modern psychology that the family, being by definition a multiple complex of close, long-term and emotionally rich interpersonal relations, bears in itself the fundamental conditions of mental development and formation of the personality as a whole. The child becomes involved in these relations from the moment of his birth (and even earlier: during the prenatal period). With the use of such an approach many classical problems of psychology concerning laws of cognitive and emotional development have been transferred to the context of analysis of the child's communication and activity within the limits of parent-child relations: mother-child, father-child, sibling-child, grandparent-child and so on.

Bowlby (1969) and Ainsworth et al. (1978), founders of the theory of attachment, described attachment not only as a basic characteristic formed in mother-infant interaction (in other words, in new formations), but from the very beginning they drew attention of researchers to the fact that attachment is never the same: different children have different qualitative-specific forms (types) of attachment. Although the concept of attachment is somewhat different in various conceptions, nevertheless the formation of a close, individually directed, emotional mother-infant tie has been recognized as common in all interpretations. Thus, for example, the concept of attachment in works by Lisina (1986) appears in description of forming mother-child interaction and is considered as one of major products of communication activity, in particular, in situational/personality form of adult-child interaction.

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According to Bowlby (1969), the child's orienting/cognitive processes and emotional/personality sphere develop not by themselves but within limits of attachment system – as a means of providing the child's tie to mother and removing his emotional discomfort. Attachment not only makes him feel secure in face of the new and complex world but also expresses his internal need for contacts with people. Within the framework of his attachment to mother the infant creates his first pattern of interpersonal relations which is initially connected with his cognitive, emotional and behavioral sphere.

In turn, children's abilities to regulate their emotional states may support their capacity and willingness to attend to others' distress (Eisenberg et al., 1990, Fabes et al., 1994). Children who are skilled at modulating their emotions experience less emotional arousal or are able to regulate their arousal in response to the distress of others (Hastings et al., 2014). Such children may be more successful at directing their attention toward others' aversive conditions and providing care and support. Children who are not skilled at emotion regulation might focus on their own emotional states when encountering the distress of others, causing them to withdraw and act in less prosocial ways. Indeed, this study can provide the importance of mother-child attachment and how this relationship will impact on child's prosocial behavior.

Purpose of the Study

The main purpose of this study is to investigate the mother-child attachment in relation to the child's prosocial behavior.

The specific objectives of this study are:

- 1.To explore the levels of mother-child attachment.
- 2.To study the differences in mother-child attachment by gender, type of school, mothers' educational level and birth order
- 3.To explore the levels of child's prosocial behavior
- 4.To study the differences in child's prosocial behavior by gender, type of school, mothers' educational level and birth order
5. To examine how mother-child attachment relates to child's prosocial behavior
6. To analyze whether the child's prosocial behavior predict mother-child attachment

Definition of Key Terms

Attachment. Attachment is where the child uses the primary caregiver as a secure base from which to explore and, when necessary, as a haven of safety and a source of comfort (Waters & Cummings, 2000).

Mother-Child Attachment. Mother-child attachment is conceived as an affectional tie that a baby forms to his mother figure, binding them together in space and enduring over time; such bonding is not present at birth, but develops during the first year of life (Anisworth, 1978).

Prosocial Behavior. Prosocial behavior refers to behavior intended to benefit another person that includes helping, sharing, comforting, and cooperation (Eisenberg et al., 2006)

Review of Related Literature

Attachment Theory

Attachment is a construct that has been studied since the 1960s. Bowlby (1969), a psychiatrist, used his observations of infants who were separated from their mothers to document the "grief reaction" that the infants appeared to exhibit with the separation. Bowlby (1973)

defined attachment as the close emotional relationship between two persons, characterized by mutual affection and a desire to maintain proximity. The primary attachment relationship between a mother and her infant, he postulated, is formed in the first years of life and remains relatively stable throughout childhood, adolescence, and adulthood. Mother-infant attachment, proposed Bowlby (1973) is a critically important process for the healthy emotional development of the individual. In his attachment theory, Bowlby (1969) suggested that if a primary caregiver (in most cases, the mother) is consistently sensitive to her infant's cries or other signals of need, an attachment relationship begins to develop. By the last half of the first year, the infant begins to "have confidence" that his or her caregiver is emotionally responsive.

According to Bowlby (1969), the infant's trust in the mother's positive responses leads to an internal representation within the infant of the mother-infant relationship as positive, rewarding, dependable, and safe. At the same time, the infant forms a representation of "the self" as worthy of love and care. This cognitive representation or working model (Bowlby, 1969) is then generalized to the infant's expectations of other relationships and serves to guide the infant's behavioral reactions to distress. Thus, the working model becomes a source of continuity for infants in regard to their feelings, behaviors, and experiences. Bowlby called the working model of this optimal and fundamental relationship a secure mother-infant attachment. He hypothesized that this secure working model becomes a cognitive framework for relationships throughout the child's life. Bowlby (1988) also observed that some infants developed a working model of insecure attachment when a mother was emotionally unavailable to her infant, or her sensitivity and/or responsiveness was inconsistent or negative in nature. The insecure working model of attachment also carried forth from the child's primary relationship to subsequent relationships for that individual throughout life. Bowlby's theory of attachment as a working model has been supported by research that shows the stability of the security of the mother-child relationship throughout childhood (Benoit & Parker, 1994). Studies have also indicated that attachment security or insecurity is transferred to relationships with peers (Zhao et al., 2010), romantic relationships (Feeney, 2004), and life partners (Creasey & Jarvis, 2009). Researchers (e.g., Colin, 1996) have suggested that approximately 90% of the time, the primary attachment figure for the infant is the mother, although situations do exist in which a grandmother, father, or other caregiver serves as the attachment figure. Other authors (e.g., Colin, 1996; Schaeffer & Emerson, 1984) have shown that attachments are often formed with more than one caregiver. In these cases, the security of the relationship may be somewhat different with each caregiver, but as a rule, if the attachment to the primary caregiver is highly secure, the attachment to other caregivers is also secure. Because almost all research has been focused on mother-infant relationships, this review of literature is focused only on the attachment relationship between mothers and their young children before the age of 3 years.

Bowlby's (1969) observations led him to believe that infants' working models, whether secure or insecure, influenced their behaviors when distressed. Bowlby and subsequent researchers identified infant behaviors that are related to a positive mother-infant relationship and are assumed to be indicators of a high degree of attachment security (Ainsworth et al., 1978). They are a negative reaction to separation from the mother, the ability to be comforted and return to exploration with the mother near, proximity seeking, and infant actions that are referred to as

secure base behaviors (Bowlby, 1969, 1982). Secure base behaviors are shown when the infant ventures away from the mother in order to explore the environment, but checks back with the mother periodically in order to feel safe, elicit approval or attention, and gain assurance of the mother's whereabouts. Proximity to the mother is consistently sought by more securely attached children when they are upset or frightened. Infants with negative or disturbed relationships with their mothers show different behaviors, including either an intense or an indifferent reaction to separation from their mother, anger, or a mixture of those reactions upon the mother's return. These children, who are assumed to be more insecurely attached, seem to have either a coercive relationship with their mothers or might be seen as having no real relationship with their mothers. They are seen as clingy, angry, or unresponsive to their mothers during play. Infants with these more insecure attachments are typically inconsolable by their mothers when upset or frightened. Bowlby (1969) and others have proposed that these attachment behaviors can be interpreted as the manifestation of the infants' cognitive working models of the relationship they have with their mother, and simultaneously the representation they have of themselves (Mikulincer et al., 2003). Bowlby (1988, p.119) wrote, "the pathway followed by each developing individual and the extent to which he or she becomes resilient to stressful life events are determined to a very significant degree by the pattern of attachment developed during the early years". Subsequent researchers (Atkinson & Zucker, 1997) have confirmed his theory, including the importance of the development of highly secure mother-infant attachments. Study of the attachment relationship has led to a greater understanding of the emotional health of very young children.

Mother-Child Attachment

Mary Ainsworth was one of the individuals who continued Bowlby's work. She was interested in both maternal and child behaviors (Ainsworth et al., 1978). The sensitivity and responsiveness of the mother are vital, according to Ainsworth and colleagues, for the secure attachment of young children. Ainsworth et al. (1978) were the first to attempt to categorize secure and insecure mental representations of attachment. In their studies, they found that approximately 60% of the infants in her sample, which was taken from throughout North America, exhibited behaviors that fell into a category she identified as securely attached. Infants in this category were most likely to have a mother who was warm, sensitive, and responsive to signals given by the child. In situations of stress, infants displayed little or no anger toward their mother and after receiving comfort would soon return to play. The majority of the remaining 40% of the infants in studies by Ainsworth et al. (1978) were identified as insecurely attached. Mothers of these infants lacked sensitivity to the feeling states of their children and were either directive and controlling or unresponsive to their baby's cues. These insecure infants did not use the mother as a safe haven in times of stress, nor did they use their mother as a secure base from which to explore their environment.

Ainsworth et al. (1978) two different insecure categories were insecure avoidant (or anxious-avoidant) and insecure-resistant (also called anxious-ambivalent). The insecure avoidant infants were the most likely to have an unresponsive caregiver. These babies tended to ignore (avoid) their mothers and withdraw from their mothers' attempts to comfort them. On the other hand, insecure-resistant children most often had a care giving environment in which they experienced both positive and negative interaction with their mothers. The problem was that they

could not tell which to expect. These children were likely to show some anger (resistance) toward their caregiver in stressful situations, and were often difficult to sooth. Under stress, these infants fluctuated from aggressiveness and anger, to coy, needy and manipulative behavior.

Sometime later, Main and Solomon (1999) suggested that it was possible to identify another category of insecure attachment in some of the children who did not fit into either the avoidant or resistant categories. Referred to as insecure-disorganized/disoriented attachment, this has become the fourth major category of attachment. This category was found to be related to both “frightening” and “frightened” parenting styles (Abrams, 2001). Mothers of insecure-disorganized/disoriented infants tend to be either emotionally or physically abusive (frightening) or live in a state of fear or victimization themselves (frightened). Jacobsen et al. (2000) research showed that a mother’s high level of expressed emotion (intrusive and hostile maternal behavior) was related to a disorganized attachment style in her child. Children with this classification appear to lack a coherent or organized strategy to cope with stressful situations. When presented with those situations, they may appear to be depressed or exhibit mixtures of avoidance, anger, fear, and attachment behaviors. Children with this attachment style were found to lack stress management strategies and to aggressively act out or externalize behavior problems. Children with behaviors in this category have also been found to show medical failure-to-thrive (Ward et al., 2000) and dissociative behavior in later life (Van et al., 1999). It has been hypothesized that the negative behaviors associated with insecure attachments are actually adaptive behaviors. From an evolutionary perspective, these behaviors may be exhibited to elicit caregiving by adults, which, in turn, enhance the probability of survival (Balbernie, 2010). Although the research is clear that secure mother-child attachment is protective and insecure mother-child attachment is a risk factor in regard to prosocial behaviors (Bauminger et al., 2008), this perhaps does not reflect successful adaptation and survival of an individual despite negative circumstances. Although traditionally attachment has been conceptualized in a categorical manner, a number of researchers have suggested that it might better be understood as a dimensional construct. Waters and Deane (1985) have placed attachment on a linear continuum from secure to insecure, and Gardner et al. (1986) found that differences between resistant and avoidant children are often weak and unreliable. Fraley and Spieker (2003) have suggested that the construct is better described as ranging from insecure, avoidantly attached (more distancing), youngsters on one end of the continuum to insecurely anxiously attached children on the opposite end, with securely attached children in the middle.

Theoretical Framework of Prosocial Behavior

Humans are social creatures, and they cannot live without the help of others. Other people will not necessarily help someone who does not want to help others. According to Santrock (2007), the nature of prosocial behavior is stable from childhood to early adulthood. This understanding leads to prosocial behavior growing and developing from an early age. Prosocial behavior needs to be stimulated as early as possible so that children can mature self-preparation when they become members of a community group and adapt to a broader environment.

One thing is clear, prosocial behavior is always voluntary and intentional. Not to forget that it should be separated from behavior that accidentally benefited another person. Altruistic and prosocial behaviors can be easily interchanged, since it is difficult to detect the intrinsic

motivation behind the actions performed. Mussen and Eisenberg-Berg (1977) and Eisenberg (1982) consider a behavior to be prosocial that was intended to help others intentionally and voluntarily and in which the motive was unspecified, unknown or not altruistic. Smithe and Mackie (2007) defined prosocial behavior as behavior in which the immediate aim is to help or benefit others. Rather, the determining factor is the intention that the acts have been carried out and the consequences of these acts are not emphasized. Thus, prosocial behavior is one that a person does consciously and voluntarily without any duties, and its aim is to improve the life of individuals or groups that may be known or unknown to an individual performing a good act. Prosocial behavior is characterized by deeds and acts performed in favor of others without any expectation of reward or without social consent. These acts of behavior have the character of providing selfless help when there is no expected reward or reciprocity in the future and it is based on a person's inner attitude towards others and their free choice. Reykowski et al. (1979) described the types of prosocial behavior according to person's incurred expenses and received profits, interacting against the background of other forms of human behavior. **Altruistic prosocial behavior** includes voluntary help motivated primarily by an interest in needs and benefits of the other person. It is often triggered by compassion and internalized moral norms or principles. The assisting entity is primarily concentrated on the need of the other person; their behavior sometimes leads to its own costs or losses. **Compliant prosocial behavior** can be defined as helping other people, which is motivated by a response to their verbal or nonverbal request. This kind of help occurs a lot more often in society than spontaneous help. The higher level of compliant prosocial behavior appears to be linked to a higher level of moral appreciation orientated towards achieving social recognition, but also to a higher level of acceptance of perspective and compassion. **Emotional prosocial behavior** is aimed at helping others in emotionally loaded situational conditions. These situations can invoke involved person's compassion, but also a high level of excitement and personal distress. Thus, helping is strongly motivated by compassion, which corresponds with the helpers' tendency to orientate more to others than to their own persona, as well as to a high level of empathy. Emotionally loaded situations have greater potential to activate a tendency towards action and behavior that would solve such a situation. **Public prosocial behavior** presents an act that takes place with the participation of an audience and the public, and is probably motivated, at least in part, by a wish to gain acceptance and respect of others. The influence of the public – the audience on expressions of prosocial behavior can vary, depending on the personality of the helper, the situation, the circumstances. In some individuals, it may be of an incentive character increasing the likelihood of assistance. On the other hand, the presence of other people may cause a fear of inappropriate interference associated with mistrust of one's own competence, which may prevent providing help (Cacioppo et al., 1986). **Anonymous prosocial behavior** is a kind of assistance that is performed without individual knowing whom he or she is helping. It is mostly motivated by positively experienced emotions related to performing a good deed. Anonymous prosocial activities can be negatively affected mostly by the need for an individual to be valued for what he does for others and to gain social recognition, as well as the difficult controllability of such assistance. Finally, **dire prosocial behavior** is defined as helping behavior in critical and dire situations that do not always provoke emotional reflections (Carlo & Randall, 2002). The authors

of dividing prosocial tendencies (Carlo & Randall, 2002) found out that respondents who reported more help within the six types of prosocial tendencies were more likely to discuss the perspective of others, use stereotypical prosocial moral judgement show greater compassion and social responsibility, and were more likely to help within various situations.

Prosocial behavior includes sharing, cooperation, honesty, donating, helping, and considering the welfare of other individuals (Dayakisni, 2009). These six aspects are intended so that children can be able to help others by lightening the physical and psychological burdens of others, being compassionate or feeling what other people are experiencing, being able to do work or activities together, being generous, and caring about other people's problems. Several supporting factors that can improve prosocial behavior skills in children include self-gain, personal values and norms, and empathy (Fedorko, 2013).

Methods

Sample of the Study

The sample of preschoolers' mothers was identified. The total of 400 sample of this study were collected by using random sampling technique.

Research Method

So as to achieve the purpose of this study, quantitative approach was adopted to collect data and information. Mother-child attachment and child's prosocial behavior were examined by using descriptive survey method.

Research Instrumentation

Mother-Child Attachment

To measure the mother-child attachment, MORS (Child) and CPRS scales was used in this study. This questionnaire was developed by (Simikiss et al., 2013) and it included 29 items and five subscales; MORS warmth, MORS invasiveness, CPRS closeness and CPRS conflict. It is an instrument of six- point Likert scale (0-never, 1-rarely, 2-sometimes, 3-quite often, 4-very often, 5- always). So, the scoring key was 0, 1, 2, 3, 4 and 5. According to the pilot study which was conducted by a sample of 60 mothers, Cronbach's alpha for mother-child attachment was .736.

Child's Prosocial Behavior

To measure the child's prosocial behavior, Questionnaire for Surveying Prosocial Behavior of Preschool-Aged Children (Fedorko, 2013) was used in this study. It included 20 items and six subscales; altruistic prosocial behavior, compliant prosocial behavior, emotional prosocial behavior, public prosocial, dire prosocial behavior and anonymous prosocial behavior. It is an instrument of five-point Likert scale (strongly disagree, disagree, I don't know, agree, strongly agree). So, the scoring key was 0, 1, 2, 3 and 4. According to the pilot study which was conducted by a sample of 60 mothers, Cronbach's alpha for child's prosocial behavior was .732.

Research Findings

Mother-Child Attachment Levels

In order to explore mother-child attachment levels, questionnaire was developed by (Simikiss et al., 2013) was used.

Table 1 Three Different Groups Based on Mother-Child Attachment Level

Mother-Child Attachment	Frequency	Percentage
High	66	15.8%
Moderate	271	67.7%
Low	63	16.25%
Total	400	100%

As seen in Table 1, it was prominent that (67.7%) of children having average level of mother-child attachment. Again, the percentage of children in high attachment group (15.8%) was found to be high level among the three attachment groups. Despite the percentage (16.5%) children have low attachment, it should not to be ignored if its later consequences are taken into consideration.

Child's Prosocial Behavior Levels

To investigate child's prosocial behavior levels, Questionnaire for Surveying Prosocial Behavior of Preschool-Aged Children (Fedorko, 2013) was used.

Table 2 Three Different Groups Based on Child's Prosocial Behavior Level

Child's Prosocial Behavior Level	Frequency	Percentage
High	51	12.4%
Moderate	297	74.8%
Low	52	12.8%
Total	400	100

As seen in Table 2, it was prominent that the percentage of children having average of prosocial behavior (74.8%) of children having average level of prosocial behavior. Again, the percentage of children in prosocial behavior group (12.4%) was found to be high level among the three attachment groups. Despite the percentage of (12.8%) children have low attachment, it should not to be ignored if its later consequences are taken into consideration.

The Relationship Between Mother-Child Attachment and Child's Prosocial Behavior

The collected data was analyzed to find out the extent of relationship between mother-child attachment and child's prosocial behavior using Pearson's Product Moment of Coefficient of correlation.

Table 3 Pearson Correlation for Mother-Child Attachment and Child's Prosocial Behavior

	Mother-Child Attachment	Child's Prosocial Behavior
Mother-Child Attachment	1	.477**
Child's Prosocial Behavior	.477**	1

** $p < 0.01$.

In Table 3, there was positively significant relationship between mother-child attachment and child's prosocial behavior ($r = .477$, $p < 0.01$). This mean that mother-child attachment increase, child's prosocial behavior increased accordingly. This finding is incongruent with the research that Ferreira et al. (2016). It is described that the quality of the mother-child relationship was indirectly linked to children's prosocial behavior. On the other hand, this finding is congruent with the research that indicated that mother-child attachment positively predicted prosocial behavior (Li et al., 2023).

Multiple Regression Analysis for Determining Subscales of Mother-Child Attachment on Child's Prosocial Behavior

To investigate the predictive contributions of variables of mother-child attachment to child's prosocial behavior, the multiple regression analysis was conducted. The result was shown in the following Table 4.

Table 4 Multiple Regression Analysis for Determining Subscales towards Mother-Child Attachment on Child's Prosocial Behavior

Subscales	<i>B</i>	β	<i>T</i>	<i>R</i>	R^2	Adjusted R^2	<i>F</i>
(Constant)	23.323		4.986***	.493	.243	.236	31.763
MW	.118	.133	2.389*				
MI	.026	.025	.450				
CC	.226	.274	5.189***				
CCF	.247	.260	5.155***				

* $p < 0.05$, *** $p < 0.001$.

MW = Mother's Object Relations-Short Form Warmth, MI = Mother's Object Relations-Short Form Invasiveness, CC = Child-Parent Relations Scale Closeness, CCF = Child-Parent Relations Scale Conflict.

The results pointed out that the four variables of mother-child attachment such as mother's object relations-short form warmth, child-parent relations scale closeness and child-parent relations scale conflict were significantly related to the child's prosocial behavior (except mother's object relations-short form invasiveness). Therefore, mother-child attachment such as mother's object relations-short form warmth, child-parent relations scale closeness and child-parent relations scale conflict were positively significant predictors of child's prosocial behavior ($t = 4.986$, $p < 0.001$). Adjusted R square value was 0.236, it indicated that proximately 24% of the variance in child's prosocial behavior could be explained by mother-child attachment. The model equation for predicting child's prosocial behavior from the subscales of mother-child attachment was as follows.

The Model Equation

$$\text{CPB} = 23.323 + 0.118\text{MW} + 0.226\text{CC} + 0.260\text{CCF}$$

CPB = Child's Prosocial Behavior, MW = Mother's Object Relations-Short Form Warmth

CC = Child-Parent Relations Scale Closeness, CCF = Child-Parent Relations Scale Conflict.

Based on the findings of multiple regression analysis, a model diagram can be drawn as follows.

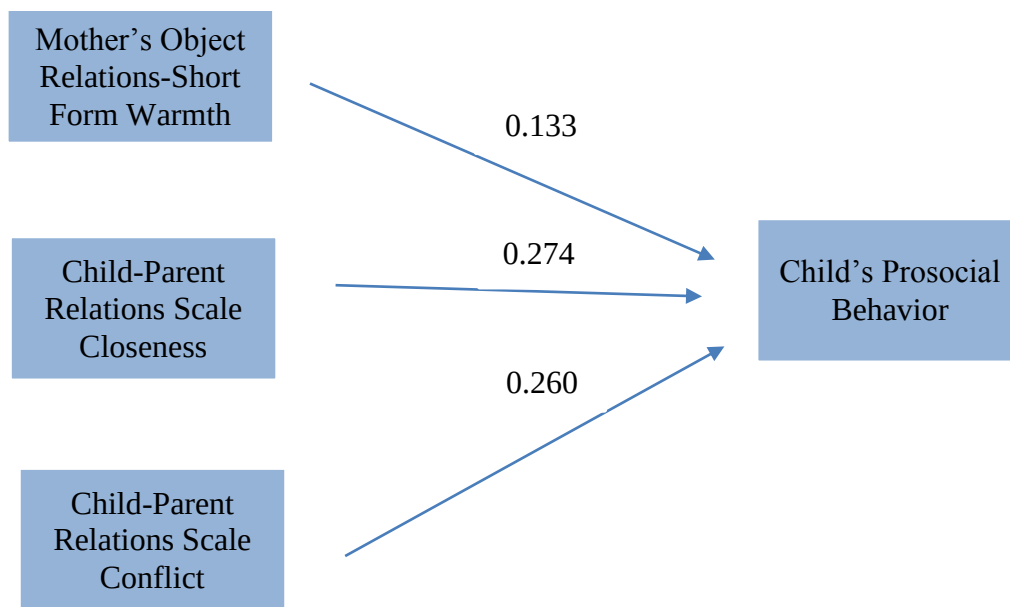


Figure 4.13 Summary Models of Subscales Influencing Mother-Child Attachment on Child's Prosocial Behavior

Discussion

This study was to investigate the mother-child attachment and child's prosocial behavior and the researcher conducted an investigation by using a quantitative research design. As a sample, a total of 400 preschool children from Yangon region participated in this study. In this study, mother's object relations-short form MORS (Child) and child-parent relations scale (CPRS) scales (Simikiss et al., 2013) were used to measure the mother-child attachment. Prosocial behavior of preschool children was measured by using a questionnaire for surveying prosocial behavior of preschool-aged children developed by (Fedorko, 2013).

As the final results of correlation between mother-child attachment and child's prosocial behavior indicated that there was a significant relationship among variables. It was found that there was a significant positive correlation between mother-child attachment and child's prosocial behavior ($r = .477, p < 0.01$). This means that if the children were more attached to their mothers, the children were more prosocial in their behaviors.

Conclusion

Attachment theory holds that insecure attachment is harmful for children of both genders. However, we conjectured that because preoccupied attachment is more gender-typical for boys than for girls it might have more deleterious consequences for boys than for girls. The mothers of preoccupied boys tend to overprotect their sons, and they may also encourage or permit them to participate in female-typical activities; if so, they may communicate to their sons the message that feminine behaviors are acceptable. This may help prevent preoccupied boys from retaining the strong felt pressure for gender differentiation that was normative at an earlier age.

Children with secure attachments are often best equipped to form similarly strong attachments in adulthood, as they have experienced early on the ability to form a trusting bond,

and generally feel comfortable that their needs will be met. The Attached Family also highlights that successful attachment can also avoid poor outcomes in childhood development, such as dependency, misbehavior and excessive demands.

Prosocial behavior in the form of sharing, helping, and cooperating is a hallmark of social competence throughout childhood. Of direct relevance for schooling is that prosocial behavior has been related positively to intellectual outcomes, including classroom grades and standardized test scores. Displays of prosocial behavior also have been related positively to other socially competent outcomes, including social acceptance and approval among classmates and being liked by teachers. Most scholars assume that cognitive and affective skills such as perspective taking, prosocial moral reasoning, adaptive attributional styles, perceived competence, and emotional well-being provide a psychological foundation for the development of prosocial behavior. Individual differences such as genetic and temperament characteristics also have been noted. In addition, theoretical perspectives also propose environmental influences, to include parenting within authoritative structures and positive interactions with peers. Social developmental perspectives suggest that parents who encourage perspective taking and evoke empathic responses to the distress of others are likely to promote the internalization of prosocial values in their children. In addition, proponents of a peer socialization perspective typically argue that peer relationships provide opportunities for children to learn and practice prosocial skills. Collaborative interactions with peers also are believed to motivate the development of cognitive skills that support prosocial forms of behavior.

From the literature on social behavior and interactions, it is evident that children with high emotions, spontaneity in responding, and working memory show greater prosocial behavior as emotions play a vital role in social communications. Therefore, studies on prosocial behavior in children aged 2–5 years (Garner & Waajid, 2012; Kim et al., 2013; Di Norcia et al., 2015), suggest that emotions are directly proportional to interactions in children of this age. A study on children aged 4–6 years old (McQuade et al., 2013), reports greater cognitive skills to affect greatly on interaction with peers. In a study on 3–5 years old (Renouf et al., 2010), however suggest that the innate role of cognitive abilities in the form of emotional behavior may be differently processed by children depending on their ability to do so. A few other studies (Ostrov & Godleski, 2010) have suggested observational research on the development of prosocial behavioral patterns in early childhood boys and girls. In a study by Gur et al. (2012) girls exhibited higher goal-oriented cognitive abilities, on the other hand, Werner et al. (2006) observed that boys have higher intentions, beliefs, and desires that attributed to their mental status than girls whereas Yagmurlu's (2013) study was unclear about gender as a moderator across these mental statuses, especially in pre-school children.

Prosocial behavior is a hallmark of social competence in children of all ages. However, it is clear that the developmental and socialization foundations of positive behavior are rooted in early childhood. The importance of prosocial behavior is supported by evidence that positive forms of behavior are related positively to a range of psychological and emotional processes, to other socially competent outcomes, and to intellectual accomplishments in young children. Research findings also suggest that teachers and classmates have the potential to promote the development of prosocial behavior by communicating norms and expectations for positive

behavior, creating emotionally positive classroom environments, and scaffolding the use of effective social cognitive and self-regulatory skills.

Mother is like the queen of the family (Syamsuddin, 2019). The role of the mother has an influence on children's cognitive development (Hanifah & Oviyanti, 2022; Novita, 2018), children's morale (Nauli et al., 2019) and the level of children's welfare and health (Giroux et al., 2019). Research by Sarwono (2008) also states that the role of the mother is essential in the process of child growth and development, especially in the behavior of early childhood to early adolescence. If the role and treatment the mother gives are positive, the child's prosocial behavior results will also be positive. Vice versa, if the role that the mother gives is negative, the prosocial behavior that the child shows will also be harmful. Mothers who often invite children to tell stories or chat will relate to the behavior of children who are happy to cooperate and like to help. The role of the mother as a role model is in a very high category and has a good impact on children's prosocial behavior, such as helping and cooperating. It is in line with the opinion expressed by Juwariyah (2010) that if the roles of both parents and the people around get used to action and education or good things, then when they grow up, the child will behave like that, and vice versa. Likewise, the dimension of the role of a supervisor is also in a very high category which plays a crucial role in children's prosocial development, such as sharing and donating behavior. Mothers' attachment in children from an early age will be followed by good prosocial development. Conversely, if the mother-child attachment give to children are not good and not optimal, then the child's prosocial behavior tends to be low.

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RELATIONSHIP BETWEEN OCCUPATIONAL STRESS AND ACADEMIC OPTIMISM OF SECONDARY SCHOOL TEACHERS

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Abstract

The main purpose of the study was to investigate the occupational stress and academic optimism of secondary school teachers in Yangon Region. In this study, descriptive survey method and quantitative research design was used. Simple random sampling technique was used in this study. A total of 960 secondary school teachers were selected from Yangon Region in Myanmar. The Influence of Teachers' Occupational Stress Questionnaire (ITOSQ) developed by Mailumo (2018) and the School Academic Optimism Scale (SAOS) developed by (Hoy, Tarter, & Hoy, 2006) were used in this study. According to occupational stress, the results of means, standard deviations and independent samples *t*-test showed that SAT were higher than JAT in occupational stress; teachers experienced <20 years were higher than teachers experienced > 20 years in occupational stress; the teachers who described being inadequacy were higher than the teachers who described being adequacy in stress due to excessive workload, stress due to instructional materials, stress due to delay and non-payment of salaries, stress due to students' indiscipline and total occupational stress and there was not significantly different by class size in occupational stress. By one-way ANOVA, there were statistically significant differences in all dimensions of occupational stress by age. According to academic optimism, the results of means, standard deviations and independent samples *t*-test showed that JAT were higher than SAT in academic optimism, teachers experienced >20 years were higher than teachers experienced < 20 years in academic optimism, teachers who described being adequacy were higher than teachers who described being inadequacy in academic optimism, teachers teaching large class size were higher than teachers teaching small class size in each subscale of academic optimism except faculty trust in students and parents. By one-way ANOVA, there were statistically significant differences in collective teacher efficacy and academic emphasis by age. It was also found that higher level of occupational stress was significantly correlated with lower level of collective teacher efficacy.

Keywords: Occupational Stress, Academic Optimism, Academic Emphasis

Introduction

The Researchers recognized that teachers are the backbone of an educational activity. Then, the success and failure of educational activities depend mainly on their performance. Among teachers, secondary school teachers assist and guide the learning of adolescent students and facilitate them to develop adolescent's skills. Then, effective secondary teachers understand the perspectives and needs of adolescent students, cultivate and influence them with teaching effectiveness to achieve significant outcomes. So, they undergo greater stress than others.

Teacher stress, which causes teachers to develop various levels of psychological symptoms such as mild frustration, irritability, and anxiety as well as more serious psychosomatic and depressive symptoms, stems from some facets and conditions of their work as teachers (Kyriacou, 2001). Thus, the stress experienced by teachers endangers their own health and efficacy while also affecting student outcomes, and it has increasingly captured the attention of researchers as a major and widespread problem.

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Evidence from research indicates that teachers experience a variety of stress sources. Considerable ones among these sources are; having to teach unmotivated students, discipline problems, work overload, undefined roles or responsibilities, being evaluated by others, problematic relationships with colleagues and administrators, and poor working conditions (Kyriacou, 2001). On the other hand, building an effective learning environment along with improving student learning and achievement depend on teachers' belief about student academic achievement and their focus on academic tasks (Ballone & Czerniak, 2001; Kilinc, 2013; Pajares, 1992). This is because teachers are the central point of the classroom innovation, for continued growth and effective teaching, they need to be skilled, optimistic, motivated, and confident, believing that they can cultivate students and promote their learning outcomes. They must grow a sense of hope and job satisfaction that helps to reduce emotional and physical stress. They need to construct a culture called academic optimism because it contains a set of beliefs about the strengths and capabilities in schools in which is theme uniting efficacy and trust with academic emphasis.

So, to bolster teachers' job effectiveness, student success and to alleviate or restore occupational stress, it is important to discover academic optimism of teachers. With continuous demands placed on education, researchers and administrators focus mainly on the importance of academic optimism of teachers. Teacher academic optimism is made up of teacher efficacy, teacher trust in students and parents, and teacher academic emphasis (Beard, 2011). So, an attempt will be made in this study to find out occupational stress and academic optimism of secondary school teachers.

Objectives of the Study

Main Objective

The main purpose of the study is to investigate occupational stress and academic optimism of secondary school teachers from selected townships in Yangon region.

Specific Objectives

To examine occupational stress of secondary school teachers by age, designation, working experience, teacher adequacy and class size.

To examine academic optimism of secondary school teachers by age, designation, working experience, teacher adequacy and class size.

To investigate the relationship between occupational stress and academic optimism of secondary school teachers.

Definitions of the Key Terms

Occupational stress among teachers. Occupational stress refers to the experiences of teachers in their work place such as: unconducive working environment, inadequate infrastructural facilities, excess workload, inadequate instructional materials, delay of salaries, lack of in-service training and students' discipline which influence their job effectiveness in secondary schools (Mailumo, 2018).

Academic optimism. Academic optimism of school is a collective construct that includes the collective, affective and behavioral facets of collective efficacy, faculty trust in students and parents and academic emphasis (Hoy et al., 2006).

Teacher self-efficacy. It is a teacher's belief that what the teacher sets out to do with the students can actually be done and will have a positive effect on students (Hoy & Miskel, 2008).

Trust in parents and students. Trust in parents and students is a teacher's belief that student, parents and teachers can operate to improve student learning (Hoy & Tschannen, 2003).

Academic emphasis. Academic emphasis is the extent to which a school is driven by a quest for academic excellence (Hoy & Miskel, 2008).

Related Literature Review

The Demand-Control Theory by Karasek (1979)

The demand-control theory was propounded by Karasek (1979). The balance of job demands and individual autonomy is important for this theory. Workers who face high demands with minimal control are more prone to stress than others that is indicated by this theory. By the theory, if a person has minimal job demands and remarkable control, should meet the lowest levels of stress. For instance, a person who works in a busy tea shop would have high demand, they must make tea in the correct way within a very small time frame. This person would also have low control because he or she would not have the freedom to make choices about how or when the tea is made. According to the demands-control theory, a person in this situation would experience much more stress than someone with either more control or less demanding conditions.

According to the theory, when job demands are high and employees have little autonomy to influence their work processes, it often leads to increased stress, poor health outcomes, and lower job satisfaction. Stress is exacerbated by heavy workloads, infrequent breaks, lengthy hours, shift work, and routine tasks that lack intrinsic value, don't tap into workers' skills, and give little sense of control. Perceptions of stress and actual stress levels can be heavily affected by a person's sense of control and self-efficacy. Thus, an increase in control is positively correlated with job satisfaction.

The role of autonomy in workplace stress was particularly explained by the demand-control theory. Although it was commonly believed that high-demand jobs were more stressful than their low-demand jobs, the idea that control could impact this stress level was a novel discovery in the field of stress research. Karasek (1979) suggested that increased control could reduce stress, but only if the individual also possessed high self-efficacy. Since its development in the late 1970s, researchers critically evaluated and enhanced the demands-control theory, but its profound effect on organizational stress research is clear.

The demands-control theory has made a significant role on organizational stress research, demonstrating many relevant applications in the workplace. According to the demand-control theory, stress arises when there is a mismatch between the person and their environment or between the environment and the person. Essentially, when a person is overqualified for a given role or task, they may feel stress because the work could appear unsatisfying. Similarly, a lack of essential skills for a task can lead to feelings of being overwhelmed. In both cases, the employee's misalignment with the environment, leading to emotional distress.

The importance of demand-control theory for this study lies in the fact that principals must consider specific circumstances to improve teachers' job performance in secondary schools. The principal should view the decisions as relevant, and they must also gain support from

teachers and other critical players in the educational framework. If school administrators implement this theory in secondary schools, it could greatly alleviate teacher stress and lead to a noticeable enhancement in their job performance.

Theoretical Foundation of Academic Optimism

The goal of applying academic optimism is to educating teachers to lead the students to skill mastery and success. Academic optimism is a relatively new idea, as much of the work of Wayne K. Hoy and his colleagues have been done in the last two decades. If education leaders value academic optimism, then discovering which beliefs contribute to it might provide further advantages. From a historical view, the foundational theories of Dewey on learners, Festinger's cognitive dissonance, and Bandura's self-efficacy have collectively shaped the conceptual basis for Hoy's theories. Academic optimism of school is a collective construct that includes the collective, affective and behavioral facets of collective efficacy, faculty trust in students and parents and academic emphasis (Hoy, Tarter, & Hoy, 2006). The theoretical foundation of academic optimism are Bandura, 1986, 1997), Coleman's social capital theory (1990), Hoy and his colleagues' work on culture and climate (Hoy, Tarter & Kottkamp, 1990). All three elements have transactional relation with one another to form of academic optimism. The construct of academic optimism is based on results from several previous studies that focus on academic emphasis, collective efficacy and faculty trust in students and parents as properties related to student achievement (Goddard, et al., 2000).

Academic emphasis is the extent to which a school is driven by a quest for academic excellence (Hoy et al., 2006). In a press for academic achievement, schools set high but achievable academic goals for students, the learning is orderly and serious; students are motivated to work hard; and students respect academic achievement (Hoy et al., 2006). Some researchers highlight the significance academic emphasis has on student achievement (Lee & Bryk, 1989), while Hoy et al. (1991) identified academic emphasis as possibly the single most significant predictors of student achievement. The perception among teachers that their combined efforts will effectively benefit students and improve their performance that denotes collective efficacy. Faculty trust in students and parents is based in feelings that students and their parents are benevolent, reliable, competent, honest and open (Hoy & Tschannen-Moran, 1999).

The construct of academic optimism evolves from the general work of positive psychology. It goes beyond focusing on illness and pathology to look at areas of the human experience including well-being, hope, fulfillment, meaning academic optimism is rooted in humanistic psychology (Beard et al., 2009). Academic optimism is a set of beliefs about the strengths and capabilities in schools in which is theme uniting efficacy and trust with academic emphasis. The relationship between academic optimism and high achievement is influenced by collective faculty trust and collaborative efforts. It creates a school culture imbued with a sense of the possible (Hoy & Miskel, 2013).

The relationships between three major dimensions: academic emphasis, faculty trust in students and parents perceived collective efficacy of the faculty are graphically presented as a triadic set of interactions with each element functionally dependent on the others (Hoy et al., 2006). The postulated reciprocal causality between each pair of elements as shown in the figure .

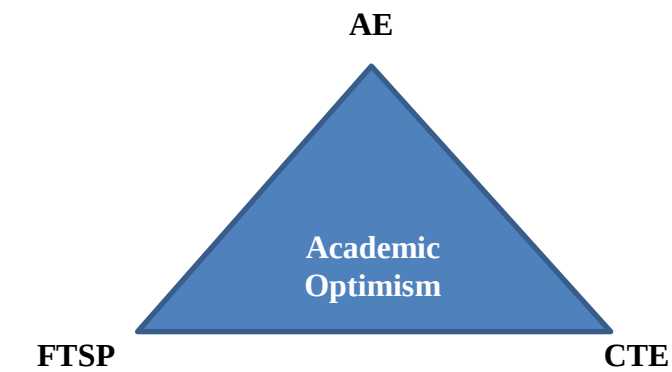


Figure 1 The Relationships of Academic Optimism

AE = Academic Emphasis

FTSP = Faculty Trust in Students and Parents

CTE = Collective Teacher Efficacy of the Faculty

Academic optimism is a collective construct comprising all three elements have transactional relation with one another to form a culture of academic optimism (Hoy et al., 2006). Hoy and colleagues theorized three dimensions that work together to form a single powerful force which could explain school performance. A shared belief among school faculty can be created by this force which is there conditions conducive to improving student performance and student performance will indeed improve. So, academic optimism creates a culture with a collective beliefs and norms that view teachers as capable, students as willing, parents as supportive, and academic success as achievable (Hoy & Miskel, 2013).

Method

Research Method

Design of this study was cross sectional in nature. Quantitative research design was used in this study. Descriptive survey method was used to measure secondary school teachers' occupational stress and academic optimism.

Participants of the Study

The participants were chosen by using random sampling technique. Firstly, from 16 townships located in Yangon Region, from 30 high schools located in the selected townships, the participants were randomly selected. Finally, 960 secondary school teachers participated in this study.

Instrumentation

The Influence of Teachers' Occupational Stress Questionnaire (ITOSQ) developed by Mailumo (2018) and The School Academic Optimism Scale (SAOS) developed by Hoy, Tarter, and Hoy (2006) were used as the research instruments in this study.

Data Collection Procedure

With the permissions of administrative personnel, pilot study was conducted with 50 secondary school teachers in BEHS 1 Hlaing Thar Yar in August, 2023. Afterwards, the actual data were collected, scored, and analyzed by using SPSS (version 22).

Data Analysis and Research Findings

Descriptive Statistics for Occupational Stress of Secondary School Teachers

To explore the occupational stress of secondary school teachers, descriptive statistics was carried out and the results were shown in Table 1. As the mean score of total occupational stress is 85.84 and the value of skewness of occupational stress is -0.366. So, the secondary school teachers in occupational stress were high. It may be interpreted they are likely to feel challenges, are not able to capable, show less adaptive capacities with environment and struggle to achieve student success.

Table 1 Descriptive Statistics of Occupational Stress of Secondary School Teachers

Variable	<i>N</i>	<i>M</i>	<i>Sk</i>	<i>SD</i>
Occupational Stress	960	85.84	-0.366	16.76

Table 2 Descriptive Statistics for Subscales of Occupational Stress of Secondary School Teachers

Variable	<i>N</i>	<i>M</i>	<i>SD</i>
Stress due to Poor Working Environment	960	11.93	2.67
Stress due to Inadequate Infrastructural Facilities	960	10.40	2.26
Stress due to Excessive Workload	960	12.42	2.94
Stress due to Inadequate Instructional Materials	960	11.24	3.45
Stress due to Delay and Non-payment of Salaries	960	14.31	3.99
Stress due to Lack of in-service Training	960	10.67	3.02
Stress due to Students' Indiscipline	960	14.88	3.50

By descriptive statistic, among seven subscales, stress due to students' indiscipline was the highest for the secondary school teachers in this study.

Comparison of Occupational Stress by Age

To investigate the differences in occupational stress of secondary school teachers by age, descriptive statistics was carried out and the results were shown in Table 3. It was clearly seen that the mean score of 20-30 age group was higher than that other age group in occupational stress.

Table 3 Descriptive Statistics for Occupational Stress by Age

Variable	Age	<i>N</i>	<i>M</i>	<i>SD</i>
Stress due to Poor Working Environment	20-30	54	12.83	2.49
	31-40	239	12.62	2.53
	41-50	250	11.94	2.80
	51 and above	417	11.41	2.57
Stress due to Inadequate Infrastructural facilities	20-30	54	11.11	2.50
	31-40	239	10.81	2.15
	41-50	250	10.36	2.36
	51 and above	417	10.09	2.18
Stress due to Excessive Workload	20-30	54	13.98	2.65
	31-40	239	13.31	2.77
	41-50	250	12.16	2.80
	51 and above	417	11.86	2.96

Variable	Age	N	M	SD
Stress due to Inadequate Instructional Materials	20-30	54	13.15	3.29
	31-40	239	11.67	3.26
	41-50	250	11.33	3.29
	51 and above	417	10.69	3.55
Stress due to Delay and Non-payment of Salaries	20-30	54	15.98	3.74
	31-40	239	15.12	3.71
	41-50	250	13.66	4.06
	51 and above	417	14.02	4.00
Stress due to Lack of In-service Training	20-30	54	11.74	2.40
	31-40	239	11.48	2.83
	41-50	250	10.80	2.88
	51 and above	417	9.98	3.12
Stress due to Students' Indiscipline	20-30	54	16.39	3.05
	31-40	239	15.32	3.17
	41-50	250	14.49	3.61
	51 and above	417	14.67	3.59
Total Occupational Stress	20-30	54	95.19	15.23
	31-40	239	90.33	14.90
	41-50	250	84.78	16.48
	51 and above	417	82.71	17.22

Then, one way ANOVA was calculated to obtain more detailed information on age-group about occupational stress. According to the results, there were statistically significant differences in all dimensions of occupational stress by age.

Table 4 ANOVA Results of Occupational Stress by Age

Variable		Sum of Squares	df	Mean Square	F	p
Stress due to Poor working environment	Between Groups	269.317	3	89.77	13.105***	.000
	Within Group	6549.007	956	6.85		
	Total	6818.324	959			
Stress due to Inadequate Infrastructural facilities	Between Groups	108.335	3	36.112	7.208***	.000
	Within Group	4789.248	956	5.01		
	Total	4897.583	959			
Stress due to Excessive Workload	Between Groups	468.729	3	156.243	19.137***	.000
	Within Group	7805.255	956	8.164		
	Total	8273.983	959			
Stress due to Inadequate Instructional Materials	Between Groups	368.243	3	122.748	10.642***	.000
	Within Group	11027.173	956	11.535		
	Total	11395.416	959			

Variable		Sum of Squares	df	Mean Square	F	p
Stress due to Delay and Non-payment of Salaries	Between Groups	449.087	3	149.696	9.680***	.000
	Within Group	14784.409	956	15.465		
	Total	15233.496	959			
Stress due to Lack of In-service Training	Between Groups	422.824	3	140.941	16.178***	.000
	Within Group	8328.841	956			
	Total	8751.666	959	8.712		
Stress due to Students' Indiscipline	Between Groups	225.342	3	75.114	6.247***	.000
	Within Group	11495.120	956	12.024		
	Total	11720.463	959			
Total Occupational Stress	Between Groups	13895.119	3	4631.70	17.343***	.000
	Within Group	255316.755	956	6		
	Total	269211.874	959	267.068		

*** $p < 0.001$

Again, Post-Hoc comparison was computed by Tukey HSD method to find out the difference about which age-group is higher than that of the others. It was apparent that there were statistically significant differences in all dimensions of occupational stress by age. More exactly, 20-30 age group was significantly different 41-50 and 51 and above age groups, then, 31-40 age group was significantly different from 41-50 and 51 and above age group in total occupational stress. Then, 20-30 age group had higher occupational stress than 41-50 and 51 and above age groups, then, 31-40 age group had higher occupational stress than 41-50 and 51 and above age group in total occupational stress. It may be interpreted that 20-30 and 31-40 age groups had more likely to struggle in their carriers, cannot handle a stimuli causing stress. This finding was consistent with Murali (2014). In his research, the teachers who belonged to the age group of 31-40 years had higher occupation stress and the teachers who are > 51 years of age had lesser occupational stress.

Table 5 Results of Tukey HSD Multiple Comparison for Occupational Stress by Age

Variable	Age (I)	Age(J)	Mean Difference (I-J)	p
Stress due to Poor Working Environment	20-30	51 and above	1.421**	.001
	31-40	41-50	0.679*	.022
		51 and above	1.207***	.000
Stress due to Inadequate Infrastructural Facilities	20-30	51 and above	1.025**	.009
	31-40	51 and above	0.721***	.000
Stress due to Excessive Workload	20-30	41-50	1.821***	.000
		51 and above	2.118***	.000
	31-40	41-50	1.154***	.000
		51 and above	1.450***	.000

Variable	Age (I)	Age(J)	Mean Difference (I-J)	p
Stress due to Inadequate Instructional Materials	20-30	31-40	1.475*	.021
		41-50	1.820**	.002
		51 and above	2.455***	.000
	31-40	51 and above	0.981**	.002
Stress due to Delay and Non-payment of Salaries	20-30	41-50	2.321**	.001
		51 and above	1.962**	.003
	31-40	41-50	1.461***	.000
		51 and above	1.102**	.003

Table 5 Continued Results of Tukey HSD Multiple Comparison for Occupational Stress by Age

Stress due to Lack of In-service Training	20-30	51 and above	1.762***	.000
	31-40	51 and above	1.503***	.000
	41-50	51 and above	0.822**	.003
Stress due to Students' Indiscipline	20-30	41-50	1.901**	.002
		51 and above	1.717**	.004
	31-40	41-50	0.830*	.041
Total Occupational Stress	20-30	41-50	10.445***	.000
		51 and above	12.461***	.000
	31-40	41-50	5.595**	.001
		51 and above	7.611***	.000

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Comparison of Occupational Stress by Designation

In order to make detailed investigation on occupational stress of participants with regard to their designation, means, standard deviations and independent samples *t*-test was conducted. The results revealed that there were significant differences in occupational stress by designation. The following table showed that there was significantly different between SAT and JAT in occupational stress. The mean scores of occupational stress of SAT were higher than that of JAT. It may be interpreted that SAT teachers take more responsibilities SAT teachers will suffer from stress with spare time cannot perform well for student achievement because of excess workload.

Table 6 Means, Standard Deviations and Results of Independent Samples *t*-test of Occupational Stress by Designation

Variable	Designation	N	M	SD	t	df	p
Stress due to Poor working environment	JAT	480	11.35	2.66	-6.930***	958	.000
	SAT	480	12.51	2.54			
Stress due to Inadequate Infrastructural facilities	JAT	480	9.97	2.23	-5.900***	958	.000
	SAT	480	10.82	2.21			
Stress due to Excessive Workload	JAT	480	11.73	2.89	-7.456***	958	.000
	SAT	480	13.11	2.82			
Stress due to Inadequate Instructional Materials	JAT	480	10.70	3.48	-4.937***	958	.000
	SAT	480	11.78	3.33			

Variable	Designation	N	M	SD	t	df	p
Stress due to Delay and Non-payment of Salaries	JAT	480	13.99	4.04	-2.485*	958	.01
	SAT	480	14.63	3.91			
Stress due to Lack of In-service Training	JAT	480	9.98	2.98	-7.180***	958	.000
	SAT	480	11.35	2.91			
Stress due to Students' Indiscipline	JAT	480	14.42	3.59	-4.152***	958	.000
	SAT	480	15.35	3.34			
Total Occupational Stress	JAT	480	82.14	16.92	-7.014***	958	.000
	SAT	480	89.55	15.75			

* $p < 0.05$, *** $p < 0.001$

Comparison of Occupational Stress by Working Experience

In order to make detailed investigation on occupational stress of participants with regard to their working experience, means, standard deviations and independent samples *t*-test was conducted. The following table showed that there were significantly different between teachers experienced < 20 years and teachers experienced > 20 years in occupational stress. Then, the mean scores of teachers experienced <20 years were higher than that of teachers experienced > 20 years in occupational stress. It can be assumed that teachers experienced <20 years may be high job expectation and concern their socioeconomic status. This finding was consistent with Murali (2014). In his research, high school teachers with less than 10 years of experience undergo greater stress.

Table 7 Means, Standard Deviations and Results of Independent Samples *t*-test of Occupational Stress by Working Experience

Variable	Service	N	M	SD	t	df	P
Stress due to Poor Working Environment	<20 years	467	12.39	2.62	5.268	958	.000
	>20 years	493	11.49	2.64			
Stress due to Inadequate Infrastructural Facilities	<20 years	467	10.71	2.35	4.271	958	.000
	>20 years	493	10.10	2.14			
Stress due to Excessive Workload	<20 years	467	13.05	2.82	6.640	958	.000
	>20 years	493	11.82	2.92			
Stress due to Inadequate Instructional Materials	<20 years	467	11.74	3.37	4.419	958	.000
	>20 years	493	10.77	3.45			
Stress due to Delay and Non-payment of Salaries	<20 years	467	14.68	3.91	2.797	958	.005
	>20 years	493	13.96	4.07			
Stress due to Lack of In-service Training	<20 years	467	11.39	2.84	7.453	958	.000
	>20 years	493	9.98	3.03			
Stress due to Students' Indiscipline	<20 years	467	15.30	3.34	3.641	958	.000
	>20 years	493	14.48	3.60			
Total Occupational Stress	<20 years	467	89.27	15.80	6.283	958	.000
	>20 years	493	82.60	17.00			

** $p < 0.01$, *** $p < 0.001$

Comparison of Occupational Stress by Teacher Adequacy

In order to make detailed investigation on occupational stress of participants with regard to their teacher adequacy, means, standard deviations and independent samples *t*-test was calculated. The following table showed that the number of teacher who described being inadequacy was not significantly different from the number of teacher who described being adequacy in total occupational stress but the number of teacher who described being inadequacy was significantly different from the number of teacher who described being adequacy in stress due to excessive workload, stress due to delay and non-payment of salaries and stress due to students' indiscipline. The mean scores of the stress of teacher who described being inadequacy were higher than that of the stress of teacher who described being adequacy in stress due to excessive workload, stress due to inadequate instructional materials stress due to delay and non-payment of salaries and stress due to students' indiscipline and total occupational stress but the mean scores of the number of teacher who described being adequacy were higher than that of the number of teacher who described being inadequacy in other subscales. It may be interpreted that these teachers confronted with excess workload and these teachers taught extra hour.

Table 8 Means, Standard Deviations and Results of Independent Samples *t*-test of Occupational Stress by Teacher Adequacy

Variable	Teacher Adequacy	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>P</i>
Stress due to Poor Working Environment	No	329	11.84	2.62	-0.738	958	.460
	Yes	631	11.98	2.69			
Stress due to Inadequate Infrastructural Facilities	No	329	10.37	2.30	-0.209	958	.835
	Yes	631	10.41	2.24			
Stress due to Excessive Workload	No	329	12.78	3.05	2.771**	958	.006
	Yes	631	12.22	2.86			
Stress due to Inadequate Instructional Materials	No	329	11.33	3.76	0.571	958	.568
	Yes	631	11.19	3.28			
Stress due to Delay and Non-payment of Salaries	No	329	14.75	4.04	2.571*	958	.011
	Yes	631	14.06	3.94			
Stress due to Lack of In-service Training	No	329	10.61	3.07	-0.419	958	.675
	Yes	631	10.69	3.00			
Stress due to Students' Indiscipline	No	329	15.24	3.38	2.345*	958	.019
	Yes	631	14.68	3.55			
Total Occupational Stress	No	329	86.92	17.29	1.478	958	.140
	Yes	631	85.46	16.48			

* $p < 0.05$, ** $p < 0.01$

Comparison of Occupational Stress by Class Size

In order to make detailed investigation on occupational stress of participants with regard to their class size, means, standard deviations and independent samples *t*-test was conducted. The results revealed that there was not significantly different in occupational stress by class size.

Table 9 Means, Standard Deviations and Results of Independent Samples *t*-test of Occupational Stress by Class Size

Variable	Class Size	N	M	SD	t	df	p
Stress due to Poor Working Environment	<50	371	11.97	2.78	0.370	958	.711
	> 50	589	11.90	2.59			
Stress due to Inadequate Infrastructural Facilities	< 50	371	10.44	2.33	0.532	958	.959
	> 50	589	10.37	2.21			
Stress due to Excessive Workload	< 50	371	12.57	2.95	1.239	958	.216
	> 50	589	12.33	2.93			
Stress due to Inadequate Instructional Materials	< 50	371	11.05	3.45	-1.352	958	.177
	>50	589	11.36	3.44			
Stress due to Delay and Non-payment of Salaries	< 50	371	14.43	3.94	0.712	958	.477
	> 50	589	14.24	4.01			
Stress due to Lack of In-service Training	< 50	371	10.88	2.87	1.736	958	.083
	> 50	589	10.53	3.11			
Stress due to Students' Indiscipline	< 50	371	15.02	3.50	1.101	958	.271
	> 50	589	14.78	3.49			
Total Occupational Stress	< 50	371	86.38	17.04	0.781	958	.435
	> 50	589	85.53	16.58			

Academic Optimism of Secondary School Teachers

To explore the academic optimism of secondary school teachers, standard Z Scores for School Academic Optimism Scale (SAOS) was carried out because SAOS contained two Likert scale and the results were shown in Table 10.

Table 10 Standard Z Scores for School Academic Optimism Scale (SAOS)

Attributes	No. of Items	Z scores
Collective Teacher Efficacy	12 items	-3.125E-08
Faculty Trust in Students and Parents	10 items	-8.02083E-07
Academic Emphasis	8 items	-8.75E-07

Among three sub-scales, the standard score of secondary school teachers was highest on collective teacher efficacy sub-scale. It can be interpreted that most of the participants can adjust with each other and they have ability to complete required challenges to positively student's achievement. On the other hand, the standard score of faculty trust in students and parents sub-scale was the second last stand. It can be interpreted that most of the participants had moderate mutually trustworthy partnership with the students and parents to improve student learning. Then, the standard score of secondary school teachers was found to be lowest on academic emphasis sub-scale. It can be due to the fact that the most secondary school teachers only possessed job

effectiveness and perspective that need to be modified in order to be able to perform responsibilities of a teacher towards academic press.

Comparison of Academic Optimism of Secondary School Teachers by Age

To investigate the differences in academic optimism of participants by age, descriptive statistical analysis was carried out and the results were shown in Table 11. It was clearly seen that the mean score of 20-30 age group was higher than that of other age group in faculty trust in students and parent subscale, then, 51 and above age group was higher than that of other age group in subscales of collective teacher efficacy and academic emphasis.

Table 11 Descriptive Statistics for Academic Optimism by Age

Variable	Age	N	M	SD
Collective Teacher Efficacy	20-30	54	51.81	5.57
	31-40	239	51.28	5.67
	41-50	250	51.36	6.26
	51 and above	417	52.59	5.09
Faculty Trust in Students and Parents	20-30	54	44.41	5.95
	31-40	239	43.21	6.95
	41-50	250	43.33	6.60
	51 and above	417	44.11	5.47
Academic Emphasis	20-30	54	26.02	3.91
	31-40	239	26.71	4.46
	41-50	250	26.76	4.72
	51 and above	417	27.94	4.07

Then, one way ANOVA was calculated to obtain more detailed information on age-group about academic optimism. According to the results, there were statistically significant differences in collective teacher efficacy, academic emphasis by age.

Table 12 ANOVA Results of Academic Optimism by Age

Variable		Sum of Squares	df	Mean Square	F	p
Collective Teacher Efficacy	Between Groups	362.041	3	120.680	3.865**	.009
	Within Group	29846.750	956	31.220		
	Total	30208.791	959			
Faculty Trust in Students and Parents	Between Groups	186.780	3	62.260	1.623	.182
	Within Group	36671.616	956	38.359		
	Total	36858.396	959			
Academic Emphasis	Between Groups	411.364	3	137.121	7.350** *	.000
	Within Group	17834.698	956	18.656		
	Total	18246.063	959			

** $p < 0.01$, *** $p < 0.001$

Again, Post-Hoc comparison was computed by Tukey HSD test to find out the difference about which age group was higher than that of the others in academic optimism. From this result, there were significantly different between 31-40 age group and 51 and above age group, 41-50 age group and 51 and above age groups in collective teacher efficacy. Then, there were significantly different between 20-30 age group and 51 and above, 31-40 age group and 51 and

above age group, 41-50 age group and 51 and above age groups in academic emphasis. More specifically, the mean score of 51 and above age group had higher academic optimism than that of 20-30, 31-40, and 41-50 age groups in collective teacher efficacy and academic emphasis. It may be interpreted 51 and above age groups are more likely to plan, teach effectively and show high learning expectation.

Table 13 Results of Tukey HSD Multiple Comparison for Academic Optimism by Age

Variable	(I) Age	(J) Age	Mean Difference (I-J)	p
Collective Teacher Efficacy	31-40	51 and above	-1.309*	.021
	41-50	51 and above	-1.225*	.032
Academic Emphasis	20-30	51 and above	-1.924*	.011
	31-40	51 and above	-1.235**	.002
	41-50	51 and above	-1.182**	.004

* $p < 0.05$, ** $p < 0.01$

Comparison of Academic Optimism by Designation

In order to make detailed investigation on academic optimism of participants with regard to their designation, means, standard deviations and independent samples *t*-test was conducted. The following table showed that there were significantly different between JAT teachers and SAT teachers in academic optimism. The mean scores of academic optimism of JAT were higher than that of SAT. It may be interpreted JAT teachers had more likely to seek challenges, set higher goals, put forth higher levels of exertion to accomplish goals and never give up easily as they have visualized positive results. This finding was inconsistent with Gilbert (2012). In his research, there was significant difference between elementary and secondary level teachers. Elementary teachers had higher academic optimism than secondary teachers.

Table 14 Means, Standard Deviations and Results of Independent Samples *t*-test for Academic Optimism by Designation

Variable	Designation	N	M	SD	t	df	p
Collective Teacher Efficacy	JAT	480	52.99	5.22	6.135***	958	.000
	SAT	480	50.81	5.78			
Faculty Trust in Students and Parents	JAT	480	44.51	5.60	4.083***	958	.000
	SAT	480	42.89	6.65			
Academic Emphasis	JAT	480	27.95	3.99	5.266***	958	.000
	SAT	480	26.49	4.59			

*** $p < 0.001$

Comparison of Academic Optimism by Working Experience

In order to make detailed investigation on academic optimism of participants with regard to their working experience, means, standard deviations and independent samples *t*-test was conducted. The following table showed that there were significantly different between teachers experienced > 20 years and teachers experienced < 20 years in subscales of academic optimism except faculty trust in students and parents. Then, the mean scores of teachers experienced >20 years were higher than that of teachers experienced < 20 years in subscales of academic optimism except faculty trust in students and parents. It may be interpreted the teachers experienced >20 years were capable and willing to be supportive and the tasks as achievable. The

finding was inconsistent with Gilbert (2012) that there was no significant difference on academic optimism by working experience.

Table 15 Means, Standard Deviations and Results of Independent Samples *t*-test of Academic Optimism by Working Experience

Variable	Working Experience	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Collective Teacher Efficacy	< 20 years	467	51.26	5.82	-3.458	958	.001
	> 20 years	493	52.50	5.35			
Faculty Trust in Students and Parents	< 20 years	467	43.68	6.69	-.103	958	.948
	> 20 years	493	43.72	5.69			
Academic Emphasis	< 20 years	467	26.73	4.49	-3.381	958	.001
	> 20 years	493	27.68	4.18			

**** $p < 0.01$**

Comparison of Academic Optimism by Teacher Adequacy

In order to make detailed investigation on academic optimism of participants with regard to their teacher adequacy, means, standard deviations and independent samples *t*-test was calculated. The following table showed that there were significant differences between the number of teacher who described being adequacy and the number of teacher who described being inadequacy in faculty trust in students and parents. The mean scores of the stress of teacher who described being adequacy were higher than that of the stress of teacher who described being inadequacy in academic optimism. It may be interpreted group of sufficient teacher can share beliefs with each other than other group and can be expected to accomplish job effectiveness.

Table 16 Means, Standard Deviations and Results of Independent Samples *t*-test of Academic Optimism by Teacher Adequacy

Variable	Teacher Adequacy	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Collective Teacher Efficacy	No	329	51.60	5.78	-1.157	958	.247
	Yes	631	52.04	5.53			
Faculty Trust in Students and Parents	No	329	42.99	6.31	-2.504*	958	.012
	Yes	631	44.04	6.11			
Academic Emphasis	No	329	26.86	4.38	-1.807	958	.072
	Yes	631	27.40	4.35			

*** $p < 0.05$**

Comparison of Academic Optimism by Class Size

In order to make detailed investigation on academic optimism of participants with regard to their class size, means, standard deviations and independent samples *t*-test was conducted. The following table showed that there were significantly different between teachers teaching small class size and teachers teaching large class size in collective teacher efficacy and academic

emphasis except faculty trust in students and parents. The mean scores of teachers teaching large class size were higher than that of teachers teaching small class size in each subscale of academic optimism. It may clearly be seen that teachers teaching large class size believed that every student in their class will succeed academically, fulfill their competencies and they can be better teachers.

Table 17 Means, Standard Deviations and Results of Independent Samples *t*-test of Academic Optimism by Class Size

Variable	Class size	N	M	SD	<i>t</i>	<i>df</i>	<i>p</i>
Collective Teacher Efficacy	< 50	371	51.36	5.753	-2.364*	958	.018
	> 50	589	52.24	5.500			
Faculty Trust in Students and Parents	< 50	371	43.28	6.350	-1.658	958	.098
	> 50	589	43.96	6.094			
Academic Emphasis	< 50	371	26.84	4.499	-2.134*	958	.033
	> 50	589	27.46	4.260			

* $p < 0.05$

Correlation between Occupational Stress and Academic Optimism

To examine whether there was correlation between occupational stress and academic optimism of participants, Pearson product-moment correlation was employed. The data revealed that higher level of occupational stress was significantly correlated with lower level of collective teacher efficacy.

Table 18 Correlation between Occupational Stress and Academic Optimism

Variable	Occupational Stress	CTE	FTSP	AE
Occupational Stress	1	-.120**	.041	.041
CTE		1	.454**	.400**
FTSP			1	.485**
AE				1

** $p < 0.01$

CTE = Collective Teacher Efficacy, FTSP=Faculty Trust in Students and Parents,

AE = Academic Emphasis.

Discussion and Recommendations

Teaching is art and mysterious and teachers today are under a great deal of stress exactly in any way. Stress among teachers is related to absenteeism, turnover, and early retirement, which negatively affect the climate of the school and lead to poor student outcomes, both academically and behaviorally (Brown & Uehara, 2008). Optimism of a person is a key to success in his life. Thus, a school with high academic optimism is a collectivity in which the faculty believes that it can make a difference, that students can learn, and academic performance can be achieved (Hoy et al., 2006).

In this study, the main purpose of this study was to investigate occupational stress and academic optimism of secondary school teachers. It can be explored that occupational stress and academic optimism of secondary school teachers affected the teachers' age, designation, working

experience, teacher adequacy and class size. By Pearson product-moment correlation, higher level of occupational stress was significantly correlated with lower level of collective teacher efficacy.

Based on the results, education leaders are in better understanding of occupational stress and academic optimism of secondary school teachers by each demographic and should facilitate with supportive and collaborative culture; should provide training for stress and time management, specific training to manage the behaviors of disruptive people and so on. To maintain academic optimism of secondary school teachers in Yangon region, teachers should be knowledgeable about, and utilize many different practices and hold various beliefs in order to adapt to meet various situations. Finally, in order to carry out academic excellence and to reduce occupational stress, secondary school teachers are essential high level of collective teacher efficacy.

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SCHOOL CONNECTEDNESS AND ACADEMIC MOTIVATION OF HIGH SCHOOL STUDENTS

Swe Swe Myint¹

Abstract

The aim of this study was to investigate school connectedness and academic motivation of high school students in Aungmye Township. This study conducted a survey research design and employed with a quantitative method. A total of 900 Grade 10 students (male=442, female= 458) from rural, suburban and urban high schools in Aungmye Township were selected by using random sampling techniques as the participants of the study. The research instruments: Measurement of School Connectedness (MOSC) questionnaire developed by Irina Sugar (2012) and Academic Motivation Scale (high school version) developed by Vallerand et al. (1993) were adapted and applied. The results pointed out that school connectedness of students was satisfactory. Female students were higher in school connectedness than males. Students from suburban areas have a greater sense of connection to their school compared to students from urban areas. There were no significant differences in school connectedness of students by subject combination. Moreover, students showed good motivation for their academic pursuits. There were no significant differences in academic motivation by gender, subject combination and school locality. Moreover, there was a significant positive correlation between school connectedness and academic motivation of students ($r = .505$). Thus, this study highlighted the fact that the stronger the students' school connectedness, the higher their academic motivation. Finally, the linear regression analysis indicated that 25% of the academic motivation of students can be predicted from school connectedness ($\text{Adj } R^2 = .254$).

Keywords: Connectedness, School Connectedness, Motivation, Academic Motivation

Introduction

Teenagers allocate a larger amount of time in school, extracurricular activities and socializing with peers. So, school holds the greatest influence in the lives of young people as a stabilizing factor (Blum, 2005). According to Niehaus et al., (2016), the school setting is crucial for young people and their educational growth, establishing positive relationships and a sense of attachment to school are essential for encouraging academic success. Students with high feelings of school connectedness also are more likely to attend school regularly and higher academically (Waters et al., 2009). Moreover, students who are more connected to school were less likely to initiate health risk behaviors such as cigarette smoking, drinking to the point of intoxication, marijuana use, suicidal ideation or attempt, sexual intercourse, and weapon-related violence (McNeely & Falci, 2004). So, students' sense of connectedness to school can assist in addressing health, social and academic obstacles.

In addition, students frequently do not have motivation to succeed in their academic pursuits at high school level due to their interest and attention among various things such as peer groups, participating activities like watching movies, using social media, going out, and engaging in everyday school and community events. However, students could be motivated to acquire a new set of competencies either by recognizing their potential significance or by giving opportunities that come with achieving a high grade. Through motivation, students are stimulated to successfully finish tasks in order to reach a goal, obtain a degree, or advanced level in their career (Mohammadi, 2006).

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The connected school environment may enhance the chances of academic motivation and success. School connectedness had positive and significant effects on academic motivation and academic achievement (Mohammadi et al., 2013). Connected, successful students tend to reach their academic and professional goals (Blum, 2005). Thus, by exploring school connectedness and academic motivation of high school students, this study may offer valuable insights in educational field and may assist to reduce problematic behaviors of students and dropout rates.

Aims of the Study

The main aim of this study was to investigate school connectedness and academic motivation of Grade 10 students from Aunglan Township (2019-2020 AY).

The specific objectives were

- To find out the differences in school connectedness and academic motivation of students by gender,
- To investigate the differences in school connectedness and academic motivation of students by subject combination,
- To explore the differences in school connectedness and academic motivation of students by school locality,
- To examine the relationship between school connectedness and academic motivation of Grade 10 students.

Definitions of Key Terms

Connectedness. Connectedness refers to movement toward others through affection and activity (Karcher & Lee, 2002).

School Connectedness. School Connectedness refers to the extent to which students feel personally accepted, respected, included, and close to others in the school social environment (Joyce, 2015).

Motivation. Motivation is a tri-dimensional phenomenon comprising of an individual's reasons and goals, emotional responses, and beliefs in ability and competence to successfully complete a specific task (Amrai et al., 2011).

Academic Motivation. Academic Motivation refers to a student's desire (as reflected in approach, persistence, and level of interest) regarding academic subjects when the student's competence is judged against a standard of performance or excellence (Wigfield & Eccles, 2002).

Review of Related Literature

Meaning and Nature of School Connectedness

School connectedness is a multidimensional concept manifested at emotional, behavioral and cognitive levels (Chapman et al., 2013). Students at school feel secure and have strong personal connections with both teachers and peers, receiving support and respect at the emotional level. School connectedness at the behavioral level entails the students' meaningful participation in school activities and their ability to influence significant decisions. At the cognitive level, students possess favorable opinions, values and judgements regarding the school. According to Blum (2005), school connectedness refers to the students' beliefs that adults in the school care about their learning and about them as individuals. The students' connection with their school determines the level of closeness in their relationship.

According to Libbey (2004), school connectedness can be separated into nine common themes: academic engagement, belonging, discipline and fairness, loving school, student voice, extracurricular activities, peer relations, safety, and teacher support. Teachers may foster a sense of connectedness in the classroom by promoting collaborative learning activities. When students feel connected to school, they are more likely to enhance emotional well-being and happiness (McNeely et al., 2002), succeed academically (Blum, 2005), decrease to drop out of school (Osterman, 2000), decrease health risk behaviors such as cigarette smoking, drinking to the point of intoxication and suicidal ideation (McNeely & Falci, 2004).

Students' academic achievements are not solely dependent on their skills and hard work, but also on their feeling of connectedness to the school (Goodenow, 1993). By high school, as many as 40 to 60 percent of all students—urban, suburban, and rural—are chronically disengaged from school (Klem & Connell, 2004). The lack of school connectedness is a reason why students fail to successfully complete high school (Romeo, 2015).

Meaning and Nature of Academic Motivation

In order to accomplish specific needs and goals in life, human beings need to attain sufficient motivation. The young people of today may lose interest in academic pursuits due to entertaining activities (Scheel et al., 2009). One of the most prominent academic problems plaguing today's teenage youth is lack of motivation towards academic activities (Wigfield et al., 2005). Motivated behaviors are permanent, oriented and energetic (Amrai et al., 2011). Teachers need to understand how motivation works, and more importantly, how it is linked to behavior and attitude. Academic behaviors can be seen as intrinsically motivated, extrinsically motivated or amotivated. Academic motivation is an important factor to produce higher graduation rates. Teachers may direct behaviors towards particular goals and lead to increase effort and energy. It drives an individual towards educational achievements (Kalaivani et al., 2016).

School connectedness and Academic Motivation

School is responsible for providing students with a safe environment to develop academically, emotionally and behaviourally. A student's feeling of connectedness to school helps meet health, social and academic challenges (Booth & Gerard, 2012). Students' perceptions of connection to school have significant implications for their behaviours inside and outside the classroom (Baumeister & Leary, 1995; Deci & Ryan, 2000). Furthermore, adolescents who perceive a positive school environment and share positive relationships with their teachers tend to have higher grades (Crosnoe et al., 2004; Davis, 2006; Roeser et al., 1996), higher classroom motivation (Davis, 2006; Patrick et al., 2007; Ryan et al., 1994).

Methodology

Sampling

The samples chosen for the present study consisted of 900 Grade 10 students from Aunglan Township in 2019-2020 academic year. The present study used simple random sampling method in selecting participants. Subsequently, the total number of participants was displayed in the following table.

Table 1 Number of Grade 10 Students Participated in the Study by Gender and School Locality in Aunglan Township

No	School	Number of Students		Total
		Male	Female	
1	Rural	133	167	300
2	Suburban	141	159	300
3	Urban	168	132	300
Total		442	458	900

Method

The quantitative research design and descriptive survey method were used in the present study. To investigate school connectedness and academic motivation of Grade 10 students, descriptive statistics and inferential statistics were used.

Instrumentation

In this study, Measurement of School Connectedness (MOSC) questionnaire developed by Irina Sugar (2012) was used to measure school connectedness of students. The questionnaire contained 42 items. Each item was assessed along a five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. However, the opposite items were scored from 5 (strongly disagree) to 1 (strongly agree). The reliability coefficient (Cronbach's Alpha) of School Connectedness was 0.843.

The key adapted to measure academic motivation of students was the high-school version of the Academic Motivation Scale (AMS) comprising 28 items developed by Vallerand et al. (1993). Each item was evaluated along a five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. However, the opposite items had scores ranging from (1) strongly disagree to (5) strongly agree. As the internal consistency, the reliability coefficient (Cronbach's Alpha) of Academic Motivation was 0.906.

Data Collection Procedure

The two questionnaires were prepared to investigate the effect of school connectedness on academic motivation. The expert review was made for face validity and internal consistency of questionnaires. After getting the content validity, the pilot testing was conducted. The results of pilot study were valid and reliable. Then, the data collection was conducted from 900 students of selected high schools in Aunglan Township during the first week of September, 2019. Before administering the test, the students were thoroughly explained the purpose of the study, instructed them how to answer the items and requested to answer all of the items carefully not to miss the items and to complete the personal data exactly. The researcher assured the participants about the confidentiality of the study and that their responses would be used only for research purpose.

Data Analysis and Findings

Descriptive Statistics for School Connectedness of Grade 10 Students

First, descriptive statistics was used to find out school connectedness of Grade 10 students. The results were presented in Table 2.

Table 2 Descriptive Statistics of Grade 10 Students' School Connectedness

Variable	N	Mean	SD	Minimum	Maximum
School Connectedness	900	164.02	16.082	109	215

According to Table 2, the mean and standard deviation for school connectedness of students were 164.02 and 16.082.

School connectedness levels were grouped as five different levels of very high, high, moderate, low and very low according to students' school connectedness scores. For that grouping, Grade 10 students with scale of +2 standard deviation above the sample mean were identified as the very high group, Grade 10 students with scale of +1 standard deviation above the sample mean were identified as the high group, Grade 10 students with scale of +1 standard deviation below the sample mean were considered as low group, Grade 10 students with scale of +2 standard deviation below the sample mean were considered as very low group. And then, Grade 10 students with scale between +1 standard deviation and -1 standard deviation were identified as the moderate group.

Therefore, 3% students who obtained below and equal the scores of 132 were very low in school connectedness and 12% of students who obtained the scores between 133-148 were low. 68% of students who obtained the scores between 149-179 were moderate in school connectedness. 5% of students who obtained the scores between 180-196 were high in school connectedness and 12% of students who got above and equal the scores of 197 were very high in school connectedness.

Table 3 Five Groups of Grade 10 Students' School Connectedness

Range	No. of Students	Percentage
Very Low Group(scores $\leq$ 132)	27	3%
Low Group (133 - 148)	111	12%
Moderate Group (149 - 179)	611	68%
High Group (180 - 196)	42	5%
Very High Group (scores $\geq$ 197)	109	12%

The percentage showed that the moderate group had the highest percentage (67%). The largest number of students was in the moderate group. Comparably few students have scores that are very low, low, high and very high. Thus, it may be interpreted that school connectedness of students was satisfactory.

Mean Comparison of School Connectedness for Grade 10 Students by Gender

To find out the significant differences in school connectedness between male and female students, independent samples *t*- test was conducted.

Table 4 Comparison of School Connectedness for Grade 10 Students by Gender

Variable	Gender	N	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>	<i>MD</i>
School Connectedness	Male	442	161.29	15.76	-5.08***	898	.000	-5.38
	Female	458	166.66	15.96				

Note. ****p* < .001

According to Table 4, the result showed that there was a significant difference in school connectedness of students by gender at 0.001 level. It was observed that female students were higher in school connectedness than male students. So, it can be interpreted that female students demonstrated a stronger connection to school compared male students.

Mean Comparison of School Connectedness for Grade 10 Students by Subject Combination

To determine the significance of the discrepancies, independent samples *t* test was computed.

Table 5 Comparison of School Connectedness for Grade 10 Students by Subject Combination

Variable	Subject	N	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>	MD
School Connectedness	Combination 1	463	163.24	16.32	-1.501	898	.134	-1.61
	Combination 7	437	164.85	15.79				

Table 5 revealed the result that there was no significant difference in school connectedness of students based on their subject combination. Therefore, it can be interpreted that school connectedness of Grade 10 students was not different by subject combination.

Descriptive Statistics for School Connectedness for Grade 10 Students by School Locality

Descriptive statistics was used to find out school connectedness of Grade 10 students by school locality.

Table 6 Descriptive Statistics for School Connectedness of Grade 10 Students in Rural, Suburban and Urban High schools

Variable	School Locality	N	Minimum	Maximum	Mean	SD
School Connectedness	Rural	300	109	215	163.41	16.15
	Suburban	300	121	197	166.29	15.36
	Urban	300	110	203	162.36	16.52

According to Table 6, the mean scores for school connectedness of students in Rural, Suburban and Urban High Schools were 163.41, 166.29 and 162.36 respectively.

To examine whether school locality had impact on school connectedness of students, one-way ANOVA was utilized.

Table 7 The Result of ANOVA for School Connectedness of Grade 10 Students by School Locality

School connectedness	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Between Groups	2488.722	2	1244.361	4.853**	.008
Within Groups	230011.877	897	256.423		
Total	232500.599	899			

Note. ** $p < .01$

ANOVA result showed that there was significant difference in the school connectedness of students according to school locality at 0.01level. To analyze more specific data for a particular group, Tukey HSD method was also used to do Post- Hoc test. The results were mentioned in Table 8.

Table 8 The Result of Tukey HSD test for School Connectedness by School Locality

Variable	(I)School	(J)School	Mean Difference (I-J)	<i>p</i>
School Connectedness	Suburban	Urban	3.93333*	.008

Note: * $p < .05$

According to Table 8, there was a significant mean difference in comparing school connectedness between students in suburban high schools and urban high schools at 0.05level. It can be interpreted that students from suburban areas have a greater sense of connection to their school compared to students from urban areas.

Descriptive Statistics for Academic Motivation of Grade 10 Students

Descriptive statistics was used to find out academic motivation of Grade 10 students. The results were presented in Table 9.

Table 9 Descriptive Statistics for Academic Motivation of Grade 10 Students

Variable	<i>N</i>	Mean	<i>SD</i>	Minimum	Maximum
Academic Motivation	900	111.79	13.086	73	140

According to Table 9, the mean and standard deviation for academic motivation of students were 111.79 and 13.086.

Academic motivation levels were grouped as five different levels of very high, high, moderate, low and very low according to students' academic motivation scores. For that grouping, Grade 10 students with scale of +2 standard deviation above the sample mean were identified as the very high group, Grade 10 students with scale of +1 standard deviation above the sample mean were identified as the high group, Grade 10 students with scale of +1 standard deviation below the sample mean were considered as low group, Grade 10 students with scale of +2 standard deviation below the sample mean were considered as very low group. And then, Grade 10 students with scale between +1 standard deviation and -1 standard deviation were identified as the moderate group.

Therefore, 3% students who obtained below and equal the scores of 86 were very low in academic motivation and 14% of students who obtained the scores between 87-99 were low. 67% of students who obtained the scores between 100-125 were moderate in academic motivation. 15% of students who obtained the scores between 126-138 were high in academic motivation and 1% of students who got above and equal the scores of 139 were very high in academic motivation.

Table 10 Five Groups of Grade 10 Students' Academic Motivation

Range	No. of Students	Percentage
Very Low Group (scores ≤ 86)	27	3%
Low Group (87 - 99)	126	14%
Moderate Group (100 – 125)	600	67%
High Group (126 -138)	136	15%
Very High Group (scores ≥ 139)	11	1%

The percentage showed that the moderate group had the highest percentage (67%). The largest number of students was in the moderate group. A small minority of students have scores that are very low, low, high and very high. So, it may be said that the academic motivation of students in each high school was satisfactory.

Mean Comparison of Academic Motivation for Grade 10 Students by Gender

To find out the significant differences in academic motivation between male and female students, independent samples *t*- test was conducted.

Table 11 Comparison of Academic Motivation for Grade 10 Students by Gender

Variable	Gender	N	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>	<i>MD</i>
Academic Motivation	Male	442	110.96	12.79	-1.876	898	.061	-1.63
	Female	458	112.59	13.33				

According to Table 11, the result showed that there was no significant difference in academic motivation of students by gender. So, it can be interpreted that academic motivation was not influenced by gender.

Mean Comparison of Academic Motivation for Grade 10 Students by Subject Combination

In order to determine whether the differences were significant or not, independent samples *t* test was computed.

Table 12 Comparison of Academic Motivation for Grade 10 Students by Subject Combination

Variable	Subject	N	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>	<i>MD</i>
Academic Motivation	Combination 1	463	111.46	12.88	-.755	898	.450	-.66
	Combination 7	437	112.13	13.30				

Table 12 revealed the result that there was no significant difference in academic motivation of students by subject combination. So, academic motivation of Grade 10 students was not different by subject combination.

Descriptive Statistics for Academic Motivation of Grade 10 Students by School Locality

Descriptive statistics was used to find out academic motivation of Grade 10 students by school locality.

Table 13 Descriptive Statistics for Academic Motivation of Grade 10 Students in Rural, Suburban and Urban High Schools

Variable	School Locality	N	Minimum	Maximum	Mean	SD
Academic Motivation	Rural	300	73	139	110.56	12.399
	Suburban	300	74	140	112.85	13.090
	Urban	300	58	140	111.95	13.679

According to Table 13, the mean scores for academic motivation of students in Rural, Suburban and Urban High Schools were 110.56, 112.85 and 111.95.

In order to assess the influence of school locality on academic motivation of students, one-way ANOVA was utilized.

Table 14 The Result of ANOVA for Academic Motivation by School Locality

Academic Motivation	Sum of Squares	df	Mean Square	F	p
Between Groups	796.827	2	398.413	2.334	.098
Within Groups	153144.213	897	170.729		
Total	153941.040	899			

ANOVA result showed that there was no significant mean difference in the academic motivation of students according to school locality. This result was consistent with the finding of Mallick et al. (2017) that academic motivation was not different by school locality.

The Relationship Between School Connectedness and Academic Motivation

Pearson product-moment correlation was undertaken to assess relationship between school connectedness and academic motivation. The result can be seen in Table 15.

Table 15 The Relationship Between School Connectedness and Academic Motivation

Variable	Academic Motivation
School Connectedness	.505**

Note. ** $p < .01$

According to Table 15, the result showed that there was a significant positive relationship between school connectedness and academic motivation at ($r=.505$, $p<0.01$). This result was consistent with the research of Mohammadi et al. (2013). In addition, the strength of the correlation was moderate. So, it may be interpreted that the stronger the students' school connectedness, the higher their academic motivation.

The Effect of School Connectedness on Academic Motivation of Students

In order to explore how well school connectedness predicts academic motivation of students and how many percent it predicts, a simple linear regression analysis was computed.

Table 16 The Result of Simple Linear Regression on School Connectedness and Academic motivation

Model	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>Adj R</i> ²	<i>F</i>
(Constant)	44.367		11.488***	.505	.255	.254	11.299
School Connectedness	.411	.505	17.540***				

Note: Correlation is significant at 0.001level.

The linear regression analysis indicated that 25% of the academic motivation of students can be predicted from school connectedness ($\text{Adj } R^2 = .254$). According to enter method's results showed that school connectedness had a substantial impact on academic motivation because the two variables had a positive correlation. According to Cohen (1988), this is considered typical (0.342). The resultant model of linear regression expression between school connectedness and academic motivation was presented in the following equation.

$$AM = 44 + .41 SC$$

Where, AM= Academic Motivation
SC= School Connectedness

**Figure 1** Predictive Power of Grade 10 Students' School Connectedness on Academic Motivation

Discussion and Recommendations

School connectedness and academic motivation are crucial for achieving higher academic achievements and increased graduation rates. The results pointed out that school connectedness of students was satisfactory. Female students were higher in school connectedness than male students. This may be because females generally revealed greater social connectedness to teachers, friends and peers of other cultures, and to reading, religion and school. Females are more likely emphasize their relatedness to others whereas males are more likely to stress their independence from others (Cross & Madson, 1997).

Erdley and Kingery (2007) suggested that females are attentive for close friendship groups as well as they have greater resilience on friends for social support at school. Moreover, females are generally more attached, trusted, friendly and dependent upon people they communicate with. Past research has also shown that females have a higher sense of relatedness with their teachers (Furrer & Skinner, 2003), stronger feelings of school belonging (Diaz, 2005), and more positive perceptions of teacher support (Rueger et al., 2010; Wentzel et al., 2010) than do boys. The boys' lower connectedness to school could indicate that they were less engaged

academically, enjoyed school less and did not experience as much teacher support as the girls (Libbey, 2004).

In Myanmar, the prevalence of female teachers is significant, potentially enhancing the beneficial effects of school connectedness for girls to a greater extent than for males. Boys are more likely to report that they have no one at school with whom they can discuss emotional concerns, leaving them at a great risk for poor school adjustment (Ryan et al., 1994). In addition, Ewing and Taylor (2009) suggested that teachers tend to think better of their connections with girls than they do with boys. Teachers and other adults need to concentrate on developing more supportive relationships with boys. So, male students should be cultivated to feel more connected to school. This result was consistent with the studies of Lang- Takac and Osterweil (1992), Ma (2003), Townsend and McWhirter (2005) and that indicated which female had higher mean scores in school connectedness than males.

In examining subject combination difference in school connectedness of students, there was no significant difference in school connectedness of students by subject combination. This may be because both students with Combination 1 and 7 in Aunglan Township have been probably given equal opportunities to feel more cared for and supported when they are at school without segregation of specialized subject. Thus, it may be concluded that students with Combination 1 and Combination 7 are connected to school equally.

In addition, students in suburban high schools are more connected to school than students in urban high schools. Students may be connected to the aspects of school that are unrelated to social relationships, including classes, activities and conditions of school and sense of school spirit. Moreover, students in urban area from Aunglan Township may enjoy among many things like watching movie, playing games and dating with friends in restaurant. Thus, urban students may also attach to other things. Suburban students may probably more attach to school due to the lack of entertaining facilities. This result was consistent with the studies of Lohmeier and Lee (2011).

Based on the findings of descriptive statistics for academic motivation, it may be said that academic motivation of Grade 10 students in each high school was satisfactory. According to the independent samples *t* test result for academic motivation of students by gender, there was no significant difference between male and female students in overall academic motivation. This may be due to the fact that people can be motivated because they value an activity or because there is strong external coercion. They can be urged into action by an abiding interest or by a bribe. So, both male and female students can be motivated for activities by cultivating their needs, desires and interests without segregation of gender. Thus, it may be that both males and females are more likely to possess academic motivation equally. This result was consistent with the studies of Krishnamurthy (2000) and Harackiewicz et al. (2002) that mentioned that there is no association between academic motivation and gender.

Concerning about significant mean difference in academic motivation of students by subject combination, there was no significant mean difference between students with Combination 1 and Combination 7. This may be because students choose subject that they are interested. So, both Combination 1 and Combination 7 students may acquire motivation to study learning materials. They may possess interest and persistence in the academic activities.

Therefore, there was no significant difference between art and science subject in relation to their academic motivation. This result was consistent with finding of Radhamani and Arulsamy (2011).

Moreover, the result revealed that there was no significant mean difference in comparing academic motivation of students by school locality. This is because almost all students in urban, suburban or rural areas had the desire to attend to school regularly and study their learning materials. So, it can be interpreted that all students in rural, suburban and urban high schools feel academic motivation equally. This result was consistent with the finding of Mallick et al. (2017).

In the present study, the relationship between school connectedness and academic motivation of students was also explored by the use of Pearson product-moment correlation. The result showed that there was a significant positive correlation between school connectedness and academic motivation. This result was consistent with the research of Mohammadi et al. (2013) that also found there was significant positive correlation between school connectedness and academic motivation. The correlation between school connectedness and academic motivation was 0.505. The strength of the correlation was moderate. According to the result, school connectedness predicted 25% of the academic motivation of students. Thus, it can be interpreted that the stronger students' school connectedness, the higher their academic motivation.

Conclusion

Students' connectedness to school is a critical component for their education experiences and students can benefit from close, supportive relationships at school. Teachers should encourage students to talk openly with friends and teachers about their ideas, needs, difficulties and worries. Sometimes, teachers should discuss about students' grades, behaviors and accomplishments with pupils and their parents. The results of the study revealed that girls showed higher school connectedness than boys. Boys are more likely to perceive a less supportive school environment as compared to girls. It may be that females who desired to live very close together with peers and teachers would be more likely to receive care and feel pleasure or positive effect from school community than do boys. So, teachers support and care for boys to feel more connected to school by discussing their emotional concern and building more supportive relationship.

Additionally, teachers and parents should have the ability to motivate by offering challenging tasks, stimulating curiosity, allowing students to have control their own results and engaging in activity. The findings of this study could also help teachers to fully understand how to handle and teach their students. In future, if students feel that they are part of school and they believe that they are accepted from everybody in the school community, they will gain higher academic motivation and also achieve higher graduation rates.

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TEACHER EDUCATORS' CAREER ADAPTABILITY AND PROFESSIONAL ENGAGEMENT AND CAREER ASPIRATIONS IN TEACHER EDUCATION INSTITUTIONS

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Abstract

The main purpose of the study was to investigate Career Adaptability and Professional Engagement and Career Aspirations of teacher educators in Teacher Education Institutions. The descriptive survey research method was applied and quantitative data analysis was executed in this study. The instruments used in this study were Career Adaptability Scale to examine teacher educators' career adaptability and Professional Engagement and Career Aspirations Scale to examine teacher educators' professional engagement and career aspirations. A total of 992 teacher educators (144 males and 848 females) from three Universities of Education and sixteen Education Degree Colleges participated in this study. Regarding teacher educators' career adaptability, career control is the highest in the four subscales of career adaptability. The result of the independent samples *t*-test revealed that there was no gender difference in the career adaptability of teacher educators. ANOVA results indicated that there was a significant difference in the career adaptability of teacher educators by designation. Regarding teacher educators' professional engagement and career aspirations, the professional effort subscale is the highest in the four subscales of professional engagement and career aspirations. The result of the independent samples *t*-test revealed that there was no gender difference in professional engagement and career aspirations of teacher educators. ANOVA results indicated that there was a significant difference in professional engagement and career aspirations of teacher educators by designation. Additionally, the results indicated that there was a positive correlation between career adaptability and professional engagement and career aspirations.

Keywords: Career Adaptability, Professional Engagement and Career Aspirations

Introduction

Education is one of the important stages in the formation of a society. Education, or pedagogy, or teaching, or whatever one chooses to call it, is a profession for many obvious reasons (Khin Zaw, 2001b). Educational quality is being discussing all of the countries. In these discussions, teachers are considered the essential persons determining, to a large extent, the quality of educational systems. Khin Zaw (2001b) pointed out that no educational system can be better than its teachers. The great teacher brings to his business accurate and wide knowledge, an informed technique, intelligence, energy, initiative, adaptability, common sense, high standards of personal character and professional achievement, singleness of purpose, sympathy, a rich social background, and a convincing sincerity of personality, said by Professor Frank (1935), as cited in Khin Zaw (2001b). In addition, as education is the whole system in which morality, attitude, information, and skills are given, teachers are the important persons for constructing these human being behaviors. Therefore, it is very important to improve the quality of teachers in all countries.

Purpose of the Study

The main purpose of the study is to investigate Career Adaptability and Professional Engagement and Career Aspirations of teacher educators in Teacher Education Institutions.

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The specific objectives of the study are:

1. To investigate career adaptability and professional engagement and career aspirations of teacher educators by gender and designation
2. To investigate the relationship between career adaptability and professional engagement and career aspirations of teacher educators.

Definition of Key Terms

Career Adaptability. Psychosocial resources of individuals who are self-adjusting in response to various tasks and roles (Savickas, 1997).

Career Aspirations. Career-related desires and ambitions provide impulses for career-related behaviors leading to career success (Rojewski, 2005).

Professional Engagement. The efforts that teachers have decided to put forward when they start to work and their insistence on continuing the profession (Watt & Richardson, 2008).

Review of Related Literature

Career Adaptability

Career adaptability can be defined as the state of preparation or psychosocial resources of individuals who are self-adjusting in response to various tasks and roles (Savickas, 1997). It reflects the challenges that individuals have in their ability to cope with professional or working conditions in their career development. Individuals with high career adaptability can deal with the loss of work; they will find opportunities (Perera & McIlveen, 2017).

Savickas' career construction theory (1997) identified career adaptability as a central construct of individuals' career development. The dimensions for career adaptability include career concern, career control, career curiosity and career confidence which are general adaptive resources and strategies that people draw upon during building their careers and approaching challenging conditions.

Savickas (2002) postulated that career concern is related to individuals' sense of optimism about the future and results in investing time and effort planning for prospective career options. Career control indicates an individuals' sense to take responsibility to construct their career. Individual with career control can decide on which job and career that should be taken based on his/ her own. Career curiosity refers to individuals' efforts to explore their surroundings to understand the ways their identity can fit into the world of work (Savickas, 2013). *Career confidence* relates to the anticipation of success in solving the complex problems inherent in career choices and vocational development (Savickas, 2005). Without career confidence, individuals are likely to experience career inhibition, which compromises goal progress and thwarts actualizing roles (Savickas, 2005).

Koç (2019) proposed that a teacher's work is to educate the next generation and help them acquire knowledge, abilities, or virtues. Throughout their works, they should develop their knowledge and abilities in all aspects, take on new responsibilities in this ever-changing era, and seek to improve their skills. The world of professions is changing. Being adaptable is a key to continuing to develop individuals' professional development and retaining their profession in the future (Fraser, 2018). Nilforooshan and Salimi (2016) have found that professional engagement can be affected by the career adaptability of teachers.

What is a Professional?

Khin Zaw (2001b) stated that a professional must have a collective personality of expertise, autonomy, commitment and responsibility. In addition, Little (2002) stated that the word “professional” is a specialized and technical knowledge base, and a service-oriented member who meets client needs, having a strong collective identity to a practice. Teacher professional engagement provides a lens through which self-assessments and planned behavior in teachers are viewed (Watt & Richardson, 2008).

Professional Engagement and Career Aspirations

Professional engagement refers to the efforts that teachers have decided to put forward when they start to work and their insistence on continuing the profession (Watt & Richardson, 2008). Professional engagement is an appreciated aspect of professional learning or professional development required for educators to grow in their work (Scherz, 2015). Career development aspiration is a concept that defines individuals’ desire to develop themselves professionally and the degree of enjoyment, excitement and pleasure teachers typically experience in their professional activities (Watt & Richardson, 2008).

Watt and Richardson (2008) developed the Professional Engagement and Career Development Aspirations Framework to investigate professional engagement and career development aspirations of in-service and pre-service teachers (Watt & Richardson, 2008). The background theoretical framework includes four dimensions. They are planned effort, planned persistence, professional development aspirations and leadership aspirations (Watt & Richardson, 2008). Planned effort is the effort that teachers plan to put forward to increase their professional development aspirations. Planned persistence helps foster effective teaching. Professional development aspirations are individuals’ desires to develop themselves professionally and the degree of enjoyment, excitement and pleasure teachers typically experience in their professional activities. Leadership aspirations are aspirations of promotion to a prescribed administrative leadership role (e.g., principal).

Teachers’ professional engagement is a vital element of the profession’s sustainability. To address the current issues facing the teaching profession, such as teacher development, quality, and retention, it is critical to obtain a greater understanding of teachers’ professional engagement and career objectives. Many nations view teacher education professional development as a critical element of curriculum reform, and it plays a growing role in improving and promoting educational practice. To ensure the quality of teacher education and thus the advancement of the educational field, teacher educators need to update their practice and expertise with the most relevant knowledge in their field (Smith, 2003).

Method and Procedure**Sample of the Study**

Teacher educators from Teacher Education Institutions participated in this study. A total of 992 teacher educators (144 males and 848 females) from three Universities of Education and sixteen Education Degree Colleges were examined in this study. The participants were selected by random sampling method.

Instrumentation

Career Adaptability Scale, adapted by Kho et al. (2020) was used to investigate the career adaptability of teacher educators. Career Adaptability Scale includes four subscales (career concern, career control, career curiosity, career confidence) and consists of 24 items. Each subscale has 6 items. The internal consistency is $\alpha = 0.92$. To investigate the professional engagement and career aspirations of teacher educators, the Professional Engagement and Career Aspirations Scale was used. This scale was adapted by the researcher based on the framework of Professional Engagement and Career Aspirations (Watt & Richardson, 2008) and includes five subscales (professional effort, work persistence, career management aspirations, professional growth aspirations, leadership aspirations) and consists of 37 items. The internal consistency is $\alpha = 0.96$.

Research Method

Quantitative research design and descriptive survey were used.

Procedure

Firstly, literature review was done by reading intensively from a variety of sources and gathered the necessary information. Then, the research instruments were prepared to investigate the constructs of the study. For content validity and face validity, draft instruments were reviewed by the experts. The subscales of the instruments were confirmed by using exploratory factor analysis and confirmatory factor analysis. Pilot testing was conducted with 203 teacher educators from Patheingyi Education Degree College, Thingangyun Education Degree College, Monywa Education Degree College and Mawlamyaing Education Degree College. After constructing the reliable instruments, the required data were collected. And then, the collected data were analyzed and interpreted. Finally, the conclusion of the research was drawn.

Results and Findings

Findings of Teacher Educators' Career Adaptability

To explore the career adaptability of teacher educators, the data analysis was carried out. Career Adaptability of teacher educators was identified by using the four subscales: career concern, career control, career curiosity and career confidence. The descriptive statistics was computed to analyze data.

Table 1. Descriptive Statistics of Teacher Educators' Career Adaptability

Variables	<i>N</i>	<i>M</i>	<i>SD</i>	Minimum	Maximum
Career Concern	992	28.85	3.31	8	36
Career Control	992	29.94	2.70	11	36
Career Curiosity	992	28.71	3.00	12	36
Career Confidence	992	29.45	2.46	13	36
Career Adaptability	992	116.95	9.20	54	144

Table 1 showed that the mean value of teacher educators was the highest in career control subscale ($M = 29.94$), which means that the teacher educators from Universities of Education and Education Degree Colleges have the abilities to control their present and future situations (e.g., efforts, persistence, and decisiveness). Secondly, the mean value of teacher educators was the

second highest in career confidence subscale ($M = 29.45$), which can be interpreted that the teacher educators from Universities of Education and Education Degree Colleges are more confident about their career and have higher self-efficacy to overcome obstacles and achieve their aspirations. Moreover, teacher educators also got nearly the same mean values and the third highest in career concern ($M = 28.85$) and career curiosity ($M = 28.71$). Therefore, the results indicated that most of the teacher educators have well career-adapt abilities.

Gender Differences in Career Adaptability of Teacher Educators

In order to confirm the gender difference in teacher educators' career adaptability, the independent samples *t*-test was applied.

Table 2. The Independent Samples *t*-test Results for Teacher Educators' Career Adaptability by Gender

Variables	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Career Concern	Male	144	28.44	3.67	-1.625	990	.105
	Female	848	28.92	3.25			
Career Control	Male	144	29.48	3.25	-1.892	990	.060
	Female	848	30.02	2.58			
Career Curiosity	Male	144	28.90	3.27	.834	990	.405
	Female	848	28.67	2.90			
Career Confidence	Male	144	29.02	3.19	-1.824	990	.070
	Female	848	29.53	2.30			
Career Adaptability	Male	144	115.83	11.43	-1.310	990	.192
	Female	848	117.14	8.77			

Note. *M* = Mean, *SD* = Standard Deviation

Results indicated that there were no significant differences for gender in all the factors of teacher educators' career adaptability. This finding is consistent with the previous findings of Zhang (2010), which indicated that there is no significant effect on the factors of career adaptability. So, it can reasonably be said that male and female teacher educators from Teacher Education Institutions is able to adapt their work, face challenges and handle their obstacles.

Comparison of Teacher Educators' Career Adaptability by Designation

In order to obtain the detailed information on the difference of teacher educators' career adaptability and its subscales by designation, one-way Analysis of Variance (ANOVA) was conducted.

Table 3. ANOVA Results of Teacher Educators' Career Adaptability by Designation

Variable		<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Career Adaptability	Between Groups	3	324.890	.880*	.004
	Within Groups	989	83.739		
	Total	992			

Note. * $p < 0.05$

According to Table 3, concerning the designations group (tutor, assistant lecturer, lecturer, associate professor, and professor), ANOVA results indicated that there was significant

difference in teacher educators' career adaptability, $F(3, 989) = 3.880$, $p < .05$. Post Hoc test was executed by Tukey HSD. The results were presented in Table 4.

Table 4. Results of Tukey HSD Multiple Comparisons for Teacher Educators' Career Adaptability by Designation

Dependent Variable	Designation (I)	Designation (J)	Mean Difference (I-J)	Std. Error	p
Career Adaptability	Tutor	Assistant Lecturer	3.460*	.925	.002

Note. * $p < 0.05$

Post hoc analyses using Tukey HSD indicated that the mean scores of tutors ($M = 117.90$) are significantly higher than assistant lecturers ($M = 114.44$) at the 0.05 level. It can be concluded that tutors are more adapt their career than assistant lecturers.

Findings of Teacher Educators' Professional Engagement and Career Aspirations

To explore the professional engagement and career aspirations of teacher educators, the data analysis was carried out. Professional engagement and career aspirations of teacher educators was identified by using the five subscales: professional effort, work persistence, career management aspirations, professional growth aspirations and leadership aspirations. The descriptive statistics was computed to analyze data.

Table 5. Descriptive Statistics of Teacher Educators' Professional Engagement and Career Aspirations

Variables	N	M	M%	SD	Maximum	Minimum
Professional Effort	992	32.41	81%	3.80	21	40
Work Persistence	992	33.45	76.02%	4.15	14	44
Career Management Aspirations	992	18.52	66.14%	3.86	7	28
Professional Growth Aspirations	992	17.88	74.50%	2.40	8	24
Leadership aspirations	992	13.23	66.15%	2.73	5	20
Professional Engagement and Career Aspirations	992	115.46	73.64%	12.17	64	156

Note. M = Mean, SD = Standard Deviation

According to Table 5, results indicated that the mean percentage value of teacher educators was the highest in professional effort subscale (Mean%=81%), which means that the teacher educators from Universities of Education and Education Degree Colleges have the effort that they planned to put forward to increase their professional development aspirations. Secondly, the mean percentage value of teacher educators was the second highest in work persistence subscale (Mean%=76.02%) which can be interpreted that teacher educators from Universities of Education and Education Degree Colleges have the persistence to foster effective teaching.

Gender Differences in Professional Engagement and Career Aspirations of Teacher Educators

In order to confirm the gender difference in teacher educators' professional engagement and career aspirations, the independent samples *t*-test was applied.

Table 6. The Independent Samples *t*- test Results for Teacher Educators' Professional Engagement and Career Aspirations by Gender

Variables	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Professional Effort	Male	144	32.99	4.89	-1.997	990	.046*
	Female	848	33.53	4.01			
Work Persistence	Male	144	18.77	4.33	-1.458	990	.145
	Female	848	18.47	3.77			
Career Management Aspirations	Male	144	31.83	4.04	.860	990	.390
	Female	848	32.51	3.76			
Professional Growth Aspirations	Male	144	17.89	2.60	.048	990	.961
	Female	848	17.88	2.37			
Leadership Aspirations	Male	144	13.17	2.86	-.281	990	.778
	Female	848	13.24	2.71			
Professional Engagement and Career Aspirations	Male	144	114.64	14.13	.871	990	.384
	Female	848	115.59	11.80			

Note. * $p < 0.05$

Results indicated that there was a significant difference in professional effort subscale of teacher educators' professional engagement and career aspirations by gender. However, there were no significant differences in all the other subscales of teacher educators' professional engagement and career aspirations by gender. This finding is consistent with the previous findings of Watt and Richardson (2008) which indicated that gender is not an important factor in professional engagement. So, it can reasonably be said that male and female teacher educators from Teacher Education Institutions are able to engage their profession and have the aspirations to improve their career.

Comparison of Teacher Educators' Professional Engagement and Career Aspirations by Designation

In order to obtain the detailed information on the difference of teacher educators' professional engagement and career aspirations by designation, one-way Analysis of Variance (ANOVA) was conducted.

Table 7. ANOVA Results of Teacher Educators' Professional Engagement and Career Aspirations by Designation

Variable		Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Professional Engagement and Career Aspirations	Between Groups	4364.130	4	1091.033	8.339*	.000
	Within Groups	129127.833	988	130.829		
	Total	133491.964	992			

Note. * $p < 0.05$

According to Table 7, concerning the designations group (tutor, assistant lecturer, lecturer, associate professor, and professor), ANOVA results indicated that there was significant difference in teacher educators' professional engagement and career aspirations, $F(4, 988) = 8.339, p < .05$. Post Hoc test was executed by Tukey HSD. The results were presented in Table 8.

Table 8. Results of Tukey HSD Multiple Comparisons for Teacher Educators' Professional Engagement and Career Aspirations by Designation

Dependent Variable	Designation (I)	Designation (J)	Mean Difference (I-J)	Std. Error	p
Work Persistence	Tutor	Assistant Lecturer	1.165*	.417	.042
	Assistant Lecturer	Associate Professor	-1.394*	.480	.031
		Professor	-2.062**	.543	.001
Career Management Aspirations	Tutor	Assistant Lecturer	2.182***	.381	.000
		Lecturer	1.534***	.324	.000
		Associate Professor	1.508***	.351	.000
		Professor	1.470**	.421	.005
Professional Growth Aspirations	Tutor	Lecturer	.801**	.202	.001
		Associate Professor	1.094***	.219	.000
		Professor	1.310***	.263	.000
Leadership Aspirations	Tutor	Assistant Lecturer	1.005**	.270	.002
		Lecturer	.750*	.229	.010
		Assistant Professor	1.545***	.248	.000
		Professor	1.008**	.298	.003
Professional Engagement and Leadership Aspirations	Tutor	Assistant Lecturer	5.500***	1.244	.000
		Lecturer	3.844**	1.030	.002
		Assistant Professor	4.251**	1.115	.001

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In work persistence, there were significant differences in tutors with assistant lecturers. and there were significant differences in assistant lecturers with associate professors and professors. The mean score of tutors ($M=33.54$) is significantly higher than assistant lecturers ($M=32.38$) at 0.05 level and the mean score of assistant lecturers ($M=32.38$) is lower than the mean scores of associate professors ($M=33.77$) and professors ($M=34.44$) at 0.05 level. In career management aspirations, there were significant differences from tutors to professors. The mean score of tutors ($M=19.34$) is the highest among assistant lecturers ($M=17.36$), lecturers ($M=18.00$), associate professors ($M=18.03$) and professors ($M=18.07$) at 0.05 level. In professional growth aspirations, there were significant differences in tutors with lecturers, associate professors and professors. The mean score of tutors ($M=18.45$) is the highest among lecturers ($M=17.65$), associate professors ($M=17.35$) and professors ($M=17.14$) at 0.05 level. In

leadership aspirations, there were significant differences from tutors to professors. The mean score of tutors ($M=13.89$) is the highest among assistant lecturers ($M=12.89$), lecturers ($M=13.14$), associate professors ($M=12.35$) and professors ($M=12.80$) at 0.05 level. In total professional engagement and career aspirations, there were significant differences in tutors with assistant lecturers, lecturers and associate professors. The mean score of tutors ($M=118.00$) is the highest among assistant lecturers ($M=112.50$), lecturers ($M=114.16$), and associate professors ($M=113.75$) at 0.05 level. These findings are consistent with the previous findings of Watt and Richardson (2008).

Relationship between Career Adaptability and Professional Engagement and Career Aspirations of Teacher Educators

Table 9. Relationship between Career Adaptability subscales and Professional Engagement and Career Aspirations of Teacher Educators

Variables	1	2	3	4	5	6
1.Career concern	1	.540**	.436**	.499**	.792**	.471**
2.Career control		1	.509**	.644**	.823**	.495**
3.Career curiosity			1	.598**	.787**	.473**
4.Career confidence				1	.828**	.550**
5.Career Adaptability					1	.613**
6.Professional Engagement and Career Aspirations						1

Note. ** $p < 0.01$

Table 9 showed that career adaptability was positively related with professional engagement and career aspirations of teacher educators ($r = .614$, $p < .01$). It indicated that the higher career the adaptability of teacher educators, the higher the professional engagement and career aspirations of teacher educators. The results also indicated that the subscales of career adaptability (career concern, career control, career curiosity, career confidence) were positively related with professional engagement and career aspirations of teacher educators.

Discussion

Teacher Educators in this study got the higher mean values in career control and career confidence than that of career concern and career curiosity. It can be said that teacher educators have the abilities to control their present and future situations and are more confident about their career and have higher self-efficacy to overcome obstacles and achieve their aspirations.

Concerning the gender, the results indicated that there were no significant differences in all the factors of teacher educators' career adaptability by gender. Looking across the gender, although it was found that the slight difference in the mean scores exists in all subscales as well as the overall scale, a significant difference was not found in teacher educators' career adaptability by gender. This finding is consistent with the previous findings which indicated that gender differences in career adaptability are not significant (Hirschi, 2009, Tien et al., 2014, Zacher, 2014). The same result was also found with Hong Kong university students (Cheung & Jin, 2015) (as cited in Tien et al., 2014). which indicated that there is no significant effect on the

factors of career adaptability. So, it can reasonably be said that male and female teacher educators from Teacher Education Institutions are able to adapt their work, face challenges and handle their obstacles.

Looking across the designations group (tutor, assistant lecturer, lecturer, associate professor and professor), tutors would have higher career adaptability than assistant lecturers. This finding is consistent with the previous findings of Kulbaş and Kara (2021), which indicated that there was a difference between the career adaptability of teachers by designation.

Additionally, teacher educators in this study got the highest mean percentage in professional effort subscale and got the second highest mean percentage in work persistence subscale. It can be reasonably concluded that the teacher educators from Teacher Education Institutions in Myanmar have the effort that they planned to put forward to increase their professional development aspirations and have the persistence to foster effective teaching.

Concerning the gender, there was a significant difference in male and female teacher educators only in one subscale, professional effort. However, there were no significant differences in male and female teacher educators in the subscales of professional engagement and career aspirations. This finding is consistent with the previous findings of Schmitt et al. (2008) investigated that women and men demonstrate similar levels of professional engagement and career aspirations. Fitzsimmons (2014) suggested that when individuals are put in similar conditions, gender does not significantly predict differences in occupational aspirations. So, it can reasonably be said that male and female teacher educators from Teacher Education Institutions are able to engage their profession and have the aspirations to improve their career.

Looking across the designations group (tutor, assistant lecturer, lecturer, associate professor and professor), there were significant main effects in teacher educators' work persistence, career management aspirations, professional growth aspirations, leadership aspirations and the overall professional engagement and career aspirations. According to the results, tutors would have higher work persistence than assistant lecturers. Associate professors and professors would have higher work persistence than assistant lecturers. Similarly, tutors would have the highest career management aspirations among assistant lecturers, lecturers, associate professors and professors. Moreover, tutors would have the highest professional growth aspirations among lecturers, associate professors and professors. The tutors have the highest leadership aspirations among assistant lecturers, lecturers, associate professors and professors. In the overall professional engagement and career aspirations, tutors would have the highest among assistant lecturers, lecturers and associate professors. Significant differences were not found only on professional effort subscale.

The relationship between career adaptability and professional engagement and career aspirations was examined. The result of the study explained that the career adaptability has a positive relationship with their professional engagement and career aspirations ($r = 0.614$, $p < .01$). Therefore, it can be interpreted that the higher the career adaptability of teacher educators, the higher the professional engagement and career aspirations of teacher educators.

Recommendation and Suggestion

Teacher educators play an important role in nurturing student teachers in Teacher Education. The quality of student teachers depends on teacher educators' qualification. It's critical to understand teacher educators' professional engagement and career development goals to solve current problems affecting the teaching profession, such as retention, quality, and professional growth for teachers. Through their efforts, teacher educators contribute significantly to the education of the next generation of student teachers. In addition, teacher educators in Teacher Education Institutions contribute significantly to the advancement and maintenance of the societies they work with. Improving career adaptability leads to develop teacher educators' professional engagement and career aspirations. Career adaptability is an important factor for developing teacher educators' professional engagement and career aspirations.

The growing interest in teacher educators are responsible for preparing future teachers. By investigating and observing teacher educators' career adaptability and professional engagement and career aspirations, this study would be a potentially powerful tool for promoting growth and change in teacher education. This study enables teacher educators to better understand their own career adaptability and professional engagement and career aspirations.

Limitation and Future Research

Based on the findings of this study and literature reviews, some suggestion for future research were given. To develop career adaptability and professional engagement and career aspirations of teachers, training programs should be implemented as future research. Secondly, this study was a cross-sectional study which showed the relationships between career adaptability and professional engagement and career aspirations. Longitudinal studies should be carried out to get deeper information of career adaptability and professional engagement and career aspirations of teacher educators. Additionally, more empirical studies among other populations such as in-service teachers in basic education and student teachers in Teacher Education Institutions should be done to reveal the importance of career adaptability and professional engagement and career aspirations.

To sum up, career adaptability and professional engagement and career aspirations are important variables to educational profession. It is hoped that this study can provide teacher educators the way how to get successful profession and great suggestions for educational administrators.

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PSYCHOMETRIC PROPERTIES OF GRIT SCALE AND EMOTION REGULATION QUESTIONNAIRE FOR STUDENT TEACHERS

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Abstract

The primary purpose of the study is to investigate the number of items and the dimensions of grit scale and emotion regulation questionnaire for student teachers. Descriptive survey research method was applied and quantitative data analysis was executed in this study. For grit scale, three instruments were used with 30 items. For emotion regulation questionnaire, two instruments were used with 42 items. A total of 1185 student teachers from teacher institutions (539 males and 646 females) were randomly selected. Student teachers in Sagaing Region, Mandalay Region, Shan State, Magway Region, Yangon Region, Kayin State and Mon State were examined. And then, exploratory factor analysis (EFA) was used to investigate the number of items and the dimensions of the scale. It was also used to reduce data to a smaller set of summary variables and to postulate that there is a smaller set of unobserved (latent) variables or constructs that underlie the variables that actually were observed. Confirmatory factor analysis (CFA) is a multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs. CFA was conducted to determine the existing structure of the scale and to test how the variables are related to underlying constructs. For grit scale, two subscales (perseverance of effort and consistency of interest) were used with 14 items. For emotion regulation questionnaire, two subscales (cognitive reappraisal and expressive suppression) were used with 21 items.

Keywords: grit, emotion regulation and student teachers

Introduction

Modern technological advancements and the globalization of culture have profoundly altered people's lifestyles and raised the bar for success in life. With respect to Duckworth et al., (2007), a grit person is able to persevere through disappointments and failures in order to achieve a goal. Grit is viewed as a common quality across leaders and a critical prerequisite for success and genius in all areas (Duckworth et al., 2007; Duckworth & Yeager, 2015). In the educational community, grit reinforcement may be crucial for developing students' character and maximizing their potential. According to Gratz and Roemer (2004), emotion regulation is the term used to describe autonomic and cognitive processes that work together to affect the expression, intensity and duration of emotions. The capacity to manage one's experience and expression of emotions is known as emotion regulation (Gross, 2002). Due to their lack of participation in specific learning activities, student teachers may need to learn how to control a range of emotions in the classroom. The quality of life of student teachers can be significantly improved by their capacity to adjust to changes in their lives or deal with challenging circumstances.

Purpose of the Study

The main purpose of the study is to investigate the number of items and the dimensions of the Grit Scale and the Emotion Regulation Questionnaire for student teachers.

Definitions of Key Terms

Grit. Grit is defined as perseverance and passion for long-term goals (Duckworth et al., 2007).

Emotion regulation. Emotion regulation is a process through which people manage their thoughts and behaviours given an emotion-eliciting event (Gross & John, 2003).

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Student teachers. Student teachers are individuals engaged in a phase of supervised practice within their teacher preparation programs and implement theoretical knowledge in actual classroom environments to enhance their teaching abilities (Darling-Hammond, 2006).

Review of Related Literature

Grit

According to Duckworth and Quinn (2009), grit is the tenacity and enthusiasm combined with a desire to achieve long-term objectives. Two first-order characteristics, perseverance and passion, combine to form the higher order construct known as grit. Numerous students struggle in their courses and institutions due to a lack of persistence and/or a desire for long-term goals. Perseverance in effort was linked to learning strategies that encourage self-regulated, engaging academically, and university performance (Hodge et al., 2017); on the other hand, to be consistent interest was linked to a lower chance of major changes and a lower intention to change careers among university students (Akos & Kretchmar, 2017; Bowman et al., 2015). The person actively looks for other courses of action in response to setbacks and barriers. Put simply, over extended periods of time, a hardworking person strives to consistently advance in the direction of their area of great interest.

Emotion Regulation

According to Gross (2002), emotion regulation refers to the techniques we use to manage the feelings we feel, interact with and express. According to Gross (2001), emotion regulation refers to a person's ability to control the types of emotions they feel, recognize when they arise, and modify how they express themselves. The technique of managing and altering one's own or other people's emotions is known as emotion regulation. According to Huang and Guo (2001), this process involves a specific approach and method that results in a shift in the expression of behavior, physiological activity, subjective experience, and other aspects of emotion. As a result, the process of changing an emotion's latent period, its occurrence time, duration and manifestation in behavior, psychological experience, physiological response and other factors are all included in the regulation of emotions. This procedure is dynamic (Chen, 2016).

Method

Research Design

Simple random sampling method was used in this study.

Participants of Study

A total of 1185 student teachers (539 males and 646 females) in Sagaing Region, Mandalay Region, Shan State, Magway Region, Yangon Region, Kayin State and Mon State participated in this study.

Instrumentation

In order to study the Grit Scale of student teachers, the instrument adapted from the Grit Scale (Grit- O) developed by Duckworth et al. (2007), the Triarchic Model of Grit Scale (TMGS) developed by Datu et al. (2017) and the Multi-Dimensional Scale of Grit (MDSG) developed by Singh and Chukkali (2021) were used. Total number of items in the Grit Scale is 30 items.

In order to study the Emotion Regulation Questionnaire, the Emotion Regulation Questionnaire (ERQ) developed by Gross and John (2003) and the Difficulties in Emotion Regulation Scale (DERS) developed by Gratz and Roemer (2004) were applied. Total number of

items in the Emotion Regulation Questionnaire is 42 items. These items are measured on 4 point Likert scales such as 1 (Strongly Disagree), 2 (Disagree), 3 (Agree) and 4 (Strongly Agree).

Procedure

Firstly, the related literature was studied through intensive reading from a variety of sources such as books, journals, thesis, research papers and internet sources. Next, research instruments were prepared under the guidance of the supervisor to collect data. In order to validate the prepared instruments, expert reviews were requested. According to the validation of the experts, pilot testing was carried out to assess the reliability coefficients of the respective questionnaires. After that, data collection was done and the researcher analyzed the received data.

Exploratory Factor Analysis (EFA) of the Grit Scale

Firstly, exploratory factor analysis was conducted with 30 items for grit and some of the results in Extraction of Communalities were found unsatisfactory. Thus, 16 items were excluded from 30 items and 14 items were finally used to continue the subsequent procedures.

Next, Kaiser-Meyer-Olkin (KMO) and Bartlett's test were used for data analysis.

Table 1 KMO and Bartlett's Test of the Grit Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.867
Bartlett's Test of Sphericity	Approx. Chi-Square	3753.885
	Df	91
	Sig.	.000

According to Table 1, the KMO value of 14 items was 0.867; it was greater than 0.60 that is indicating sufficient items for each factor. The Bartlett's test was found to be significant. This meant that the variables were highly correlated enough to provide a reasonable basis for factor analysis. Thus, the data from grit were appropriate to run EFA. To calculate eigenvalue, a scree plot method was used. The result was shown in the following Figure 1.

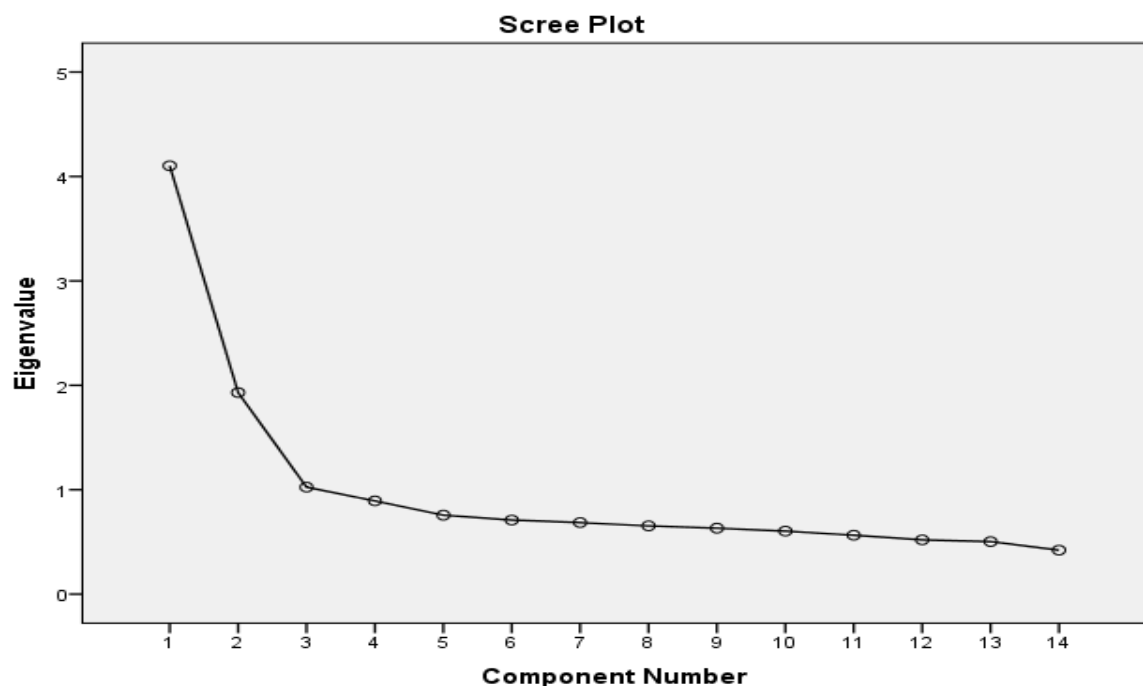


Figure 1 Scree Plot of the Grit Scale

One of the reasons for running a factor analysis in this study is to reduce the large number of variables that describe a complex concept such as grit to a few interpretable latent variables (factor). Based on Figure 1, eigenvalues of two factors were found to be greater than one.

Table 2 Factor Loadings for the Grit Scale

Item Numbers	Factor	
	1	2
T_21	.719	
T_7	.693	
T_20	.678	
T_16	.674	
T_25	.673	
T_8	.658	
T_23	.644	
T_28	.630	
T_4	.543	
T_17		.654
T_29		.652
T_30		.600
T_14		.585
T_18		.576

After factor rotation, the number of items for each factor was determined. The first factor, Perseverance of Effort (P) included 9 items with factor loadings ranging from .72 to .54 and the second factor, Consistency of Interest (C) included 5 items with factor loadings ranging from .66 to .58. With these factor loading values of the items, the Grit Scale indicated a good result. If the factor loading value of the item is 0.5 or higher, it is an indicator of a good result (Taherdoost et al., 2014).

Confirmatory Factor Analysis (CFA) of the Grit Scale

Confirmatory factor analysis (CFA) is a multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs.

Table 3 Model Fit Indices of Grit Factors

Chi-square	p-value	Df	CMIN/Df	CFI	NFI	GFI	AGFI	RMSEA
544.341	< .001	76	2.894	.925	.912	.907	.905	0.047

If the CFI, NFI, GFI and AGFI values are higher than 0.9 (Schumacker & Lomax, 2004), the model fit is acceptable. If RMSEA value is $\leq .06$, it could be considered acceptable (Hu & Bentler, 1999), and the data fit to the model. If the CMIN/DF value is ≤ 3 it indicates an acceptable fit (Kline, 1998). If the CMIN/DF value is ≤ 5 it indicates a reasonable fit (Marsh & Hocevar, 1985) and similarly, CMIN/Df (Chi-square/Df) was not exceeded 3, the data fit to the

model (as cited in Al-Mamary, Shamsuddin, 2015). Therefore, the model fit psychological flexibility with 14 items for the measurement grit of student teachers. The confirmatory factor analysis of the Grit Scale was expressed in Figure 2.

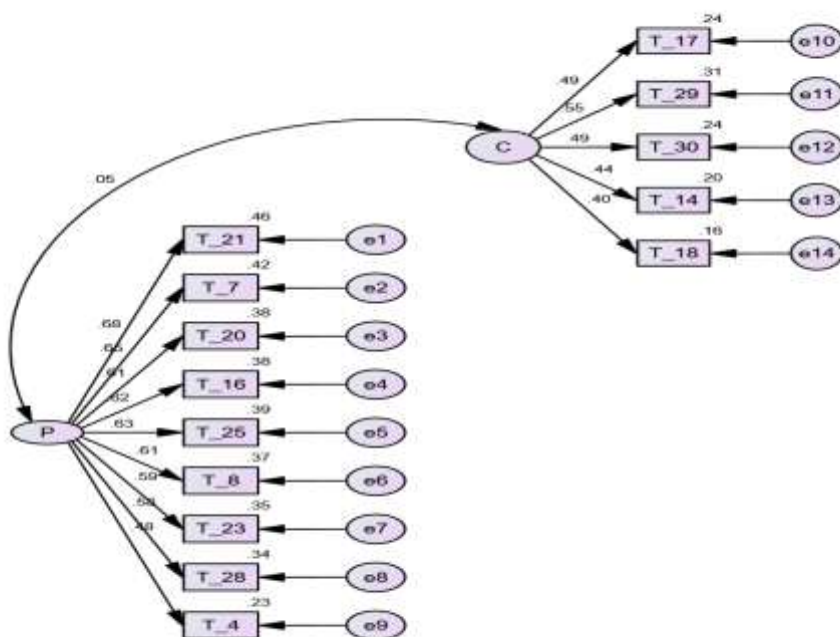


Figure 2 The Confirmatory Factor Analysis of the Grit Scale

And then, the evaluated fit indices were also calculated. These indices involved the unstandardized estimates (b), standard errors (S.E), critical ratio (C.R) and standardized estimates (β). At the significant level of 0.05, the magnitude of C.R is higher than 1.96, it could be considered as significant (as cited in Arbuckle, 2012). The significant level (p values) and R^2 values were also calculated.

Convergent Validity of the Grit Scale

Convergent validity is also an evidence to test construct validity. To establish convergent validity, factor loadings of the indicator variables, composite reliability (CR) and average variance extracted (AVE) were used.

Table 4 Composite Reliability (CR) and Average Variance Extracted (AVE) of Grit Scale

Factors	Number of Items	CR	AVE
Perseverance of Effort	9	0.81	0.37
Consistency of Interest	5	0.85	0.28

The AVE values range from 0.28 to 0.37. The CR values range from 0.81 to 0.85. According to Hunang et al. (2013), AVE should be above 0.5 and CR should be 0.7 and above. stated that if AVE values were below the acceptable minimum cutoff point of 0.5, convergent validity may be adequate because all latent factors had CR values above 0.7 (as cited in Hamid et al., 2017). So, grit scale was assumed that it was a valid instrument to measure the grit of student teachers.

Discriminant Validity of the Grit Scale

Discriminant validity was used to show that the construct is actually differing from one another empirically. Discriminant validity was evaluated with square root of AVE with correlations of latent constructs.

Table 5 Square Root of AVE with Correlations of Latent Factors of the Grit Scale

Factors	Perseverance of Effort	Consistency of Interest
Perseverance of Effort	<i>0.61</i>	
Consistency of Interest	0.017	<i>0.53</i>

The diagonal numbers *in italic* are the square root of AVE values

According to Table 5, all the square root of AVE values was greater than 0.5 and these values were greater than all the inter-latent factor correlations for all factors in the relevant rows and columns. Thus, the results of the discriminant validity of grit were congruent with Hair et al. (2011). Overall, discriminant validity can be accepted for the measurement model and the discriminant validity between the constructs.

Reliability Coefficients of Grit Scale

Table 6 Number of Items and Reliability Coefficients in Each Subscale of the Grit Scale

Subscales	Number of Items	Cronbach's Alpha
Perseverance of Effort	9	.823
Consistency of Interest	5	.769
Total	14	.854

Based on Table 6, reliability coefficient of each subscale ranged from 0.769 to 0.823. Thus, the Grit Scale was reliable to measure the grit of student teachers.

Exploratory Factor Analysis of the Emotion Regulation Questionnaire

Exploratory factor analysis was conducted with 42 items for emotion regulation and some of the results in Extraction of Communalities were found unsatisfactory. Thus, 20 items were excluded from 42 items and 22 items were finally used to continue the subsequent procedures.

Table 7 KMO and Bartlett's Test of the Emotion Regulation Questionnaire

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.843
Bartlett's Test of Sphericity	Approx. Chi-Square	6765.380
	Df	231
	Sig.	.000

The KMO value of the 22 items, as shown in Table 7, was 0.843; it was higher than 0.60, suggesting that there were enough items for each factor. It was determined that the results of the Bartlett's test were significant (Chi-square=6765.380, Df = 231, $p < .05$). This indicated that there was sufficient correlation between the variables to give factor analysis a plausible foundation. Therefore, the emotion regulation data were suitable for running EFA. The scree plot approach was applied in order to compute the eigenvalue. Figure 3 below displayed the outcome.

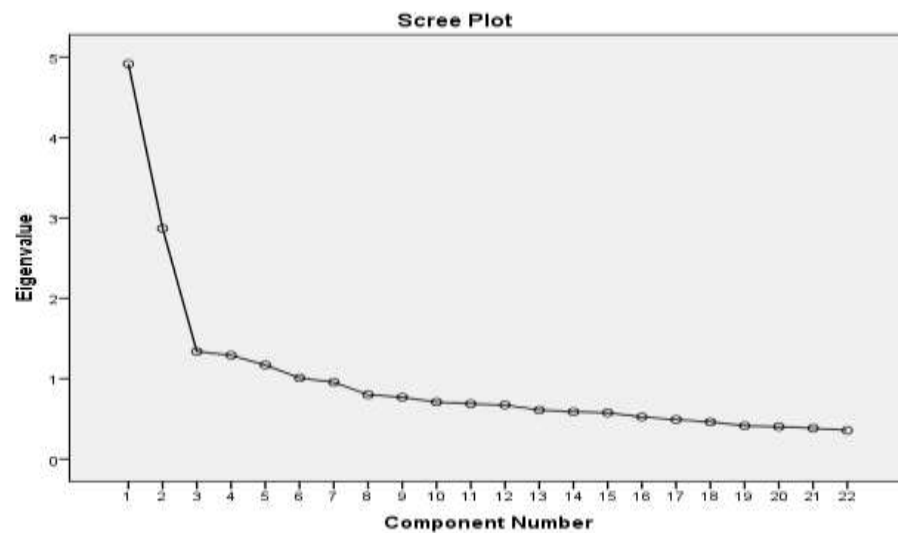


Figure 3 Scree Plot of the Emotion Regulation Questionnaire

Based on Figure 3, eigenvalues of six factors were found to be greater than one.

Table 8 Factor Loadings for the Emotion Regulation Questionnaire

Item Numbers	Factor	
	1	2
E_35	.685	
E_19	.637	
E_37	.631	
E_16	.631	
E_11	.628	
E_13	.625	
E_33	.597	
E_8	.592	
E_18	.580	
E_29	.575	
E_24	.573	
E_7	.548	
E_31	.525	
E_3		.595
E_14		.569
E_20		.567
E_39		.566
E_25		.546
E_4		.531
E_38		.523
E_23		.507
E_5		.502

After factor rotation, the number of items for each factor was determined. The first factor, Cognitive Reappraisal (C) included 13 items with factor loadings ranging from .69 to .53 and the second factor, Expressive Suppression (E) included 9 items with factor loadings ranging from .60 to .50. The factor loading values of the item is 0.5 or higher, emotion regulation questionnaire is an indicator of a good result (Taherdoost et al., 2014).

Confirmatory Factor Analysis of Emotion Regulation Questionnaire

Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed variables.

Table 9 Model Fit Indices of Emotion Regulation Factors

Chi-square	<i>p</i> -value	Df	CMIN/Df	CFI	NFI	GFI	AGFI	RMSEA
2255.015	< .001	228	2.978	.862	.811	.849	.873	0.044

If the CFI, NFI, GFI and AGFI values are higher than 0.90 (Hooper et al., 2008; Sumer, 2000) and CMIN/Df (Chi-square/Df) was not exceeded 3, the data fit to the model (as cited in Al-Mamary & Shamsuddin, 2015). Because of the above values of CFI, NFI, GFI and AGFI were low; the data do not fit to the model. However, Hooper et al. (2008) expressed that it is good to remove the items with low R^2 values (less than 0.2) from the analysis to improve a better model fit. In the present analysis, one item that R^2 value was less than 0.2 were removed from the study. Therefore, the Emotion Regulation Questionnaire included 21 items and the next model fit indices were shown in Table 10.

Table 10 Next Model Fit Indices of Emotion Regulation Factors

Chi-square	<i>p</i> -value	Df	CMIN/Df	CFI	NFI	GFI	AGFI	RMSEA
1970.390	< .001	188	2.693	.948	.925	.912	.911	0.041

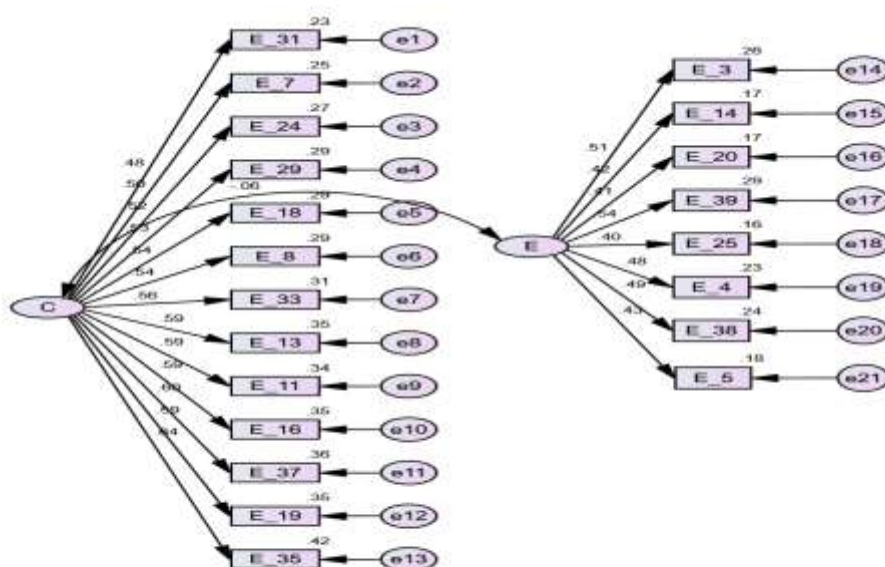


Figure 4 The Confirmatory Factor Analysis of the Emotion Regulation Questionnaire

Next, calculations were made for the assessed fit indices. The critical ratio (C.R.), standard estimates (β), standard errors (S.E) and unstandardized estimates (b) were included in these indexes. When the coefficient of determination (C.R.) is greater than 1.96 at the 0.05 level of significance, it may be deemed significant (as stated in Arbuckle, 2012). Also computed were the R^2 values and the significant level (p values).

Convergent Validity of the Emotion Regulation Questionnaire

To prove convergent validity, factor loadings of the indicator variables, composite reliability (CR) and average variance extracted (AVE) were used.

Table 11 Composite Reliability (CR) and Average Variance Extracted (AVE) of the Emotion Regulation Questionnaire

Factors	Number of Items	CR	AVE
Cognitive Reappraisal	13	0.81	0.34
Expressive Suppression	8	0.74	0.29

According to Table 11, Fornell and Larcker (1981) stated that if AVE values were below the acceptable minimum cutoff point of 0.5, convergent validity may be adequate because all latent factors had CR values above 0.7 (as cited in Hamid et al., 2017). So, the Emotion Regulation Questionnaire was assumed that it was a valid instrument to measure the emotion regulation of student teachers.

Discriminant Validity of the Emotion Regulation Questionnaire

Discriminant validity was evaluated with square root of AVE with correlations of latent constructs.

Table 12 Square Root of AVE with Correlations of Latent Factors of the Emotion Regulation Questionnaire

Factors	Cognitive Reappraisal	Expressive Suppression
Cognitive Reappraisal	<i>0.58</i>	
Expressive Suppression	0.018	<i>0.54</i>

AVE values was represented by the diagonal numerals that are italicized.

Table 12 showed that for every factor in the pertinent rows and columns, the square root of the AVE values was larger than 0.5 and exceeded the inter-latent factor correlations for every component. As a result, both the measuring model's and the constructs' discriminant validity can be acknowledged.

Reliability Coefficients of the Emotion Regulation Questionnaire

Table 13 Number of Items and Reliability Coefficients in Each Subscale of the Emotion Regulation Questionnaire

Subscales	Number of Items	Cronbach's Alpha
Cognitive Reappraisal	13	.841
Expressive Suppression	8	.734
Total	21	.855

Based on Table 13, reliability coefficient of each subscale ranged from 0.734 to 0.841. Thus, the Emotion Regulation Questionnaire was reliable to measure the emotion regulation of student teachers.

Conclusion and Suggestion

This study tried to investigate the psychometric properties of the Grit Scale with 30 items and the Emotion Regulation Questionnaire with 42 items for student teachers. These items are analyzed and reduced by calculating exploratory factor analysis and confirmatory factor analysis. After running these, 14 items were finally left in the Grit Scale and 21 items were left in the Emotion Regulation Questionnaire. The instruments for grit and emotion regulation are valid instruments to measure. And then, this study adapted the instruments which are reliable to find out the grit and emotion regulation of student teachers in Myanmar societies. So, these instruments should be used in the future researches of educational psychology fields.

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THE EFFECT OF PEDAGOGICAL BELIEFS ON INSTRUCTIONAL PRACTICES OF SCHOOL TEACHERS

Khin Aye Soe¹

Abstract

This study aims to investigate the effect of pedagogical beliefs on instructional practices of school teachers. The participants were selected from a random sample of 938 school teachers from Yangon Region and Rakhine State. Descriptive survey research method and quantitative data analysis were used in this study. As a research instruments, the Pedagogical Beliefs Questionnaire (PBQ) and the Instructional Practices Questionnaire (IPQ) were applied in this study. In the analysis of the data, descriptive statistics, independent samples *t*-test, one-way ANOVA, Post Hoc test, Pearson's correlation analysis and Regression analysis were used in this study. The results of *t*-test revealed that there were no significant differences in traditional beliefs and subscales of instructional practices (traditional practice, interactive instructional practice and guided discovery practice) by gender but were significant differences in constructivist belief and flexible grouping practice subscale of instructional practices by gender. Then, the significant differences in subscales of pedagogical beliefs and instructional practices of school teachers were found among teacher position. Regression analysis revealed that traditional belief could highly positively predict traditional practice, and least positively predict guided discovery practice, flexible grouping practice and interactive instructional practice. Moreover, the constructivist belief could strongly positively predict guided discovery practice, flexible grouping practice and interactive instructional practice and could negatively predict traditional practice.

Keywords: Pedagogical Beliefs, Instructional Practices

Introduction

In this 21st century, the new challenge of education is to equip the students with 21st century skills such as innovation, creativity, critical and analytical thinking, communication, collaboration and problem solving skills which are essential in their real life out there after school (Rao, 2004). The ability of education system to adapt with the new trend in society had become one of crucial issues (Rao, 2004).

Thus, in the 2016-2017 academic year a new curriculum was launched in primary education in Myanmar. Then, secondary and high school curricula were gradually developed. Through these alterations, some changes had also been made in basic education in 2016. Thus, teachers need to learn more sophisticated teaching method, instructional strategies, assessment and how to apply them in teaching and learning situation. To adapt with changes the teacher's effort is important in which new curriculum is implemented.

Moreover, teachers' beliefs play vital role in the application of new instructional methods and techniques in classrooms and bringing change in schools. The pre-existing beliefs of teachers hinder the true implementation of curriculum in which they are not in congruence with the basic philosophy of curriculum (Cronin- Jones, 1991). Fullen (2007) also said that there are three elements at stake in curriculum innovation: the possible use of new instructional material, the possible use of new instructional approaches, and possible changes in the beliefs of teachers. Therefore, teachers need to bring necessary conceptual changes in their approaches, rethink their practices and beliefs. Pedagogical beliefs of teachers are influential factors and their

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impact on instructional practices. Pajares (1992) emphasized the importance of understanding teacher beliefs.

Teachers are the most important elements in educational reforms and at the same time the biggest hurdles in the way of implementation of reforms in education (Bryan, 2012). Teachers' pedagogical beliefs play vital role in the application of new instructional methods and techniques in classrooms and bringing change in schools. Bryan (2012) was of the view that there would be issues in the implementation of the reform when beliefs of teachers are not in line with the philosophical foundations of the reform. Therefore, this study investigates the effect of pedagogical beliefs on instructional practices of school teachers in Myanmar.

Purpose of the Study

The main purpose of the study is to investigate the effect of pedagogical beliefs on instructional practices of school teachers.

Objectives of the Study

- To study pedagogical beliefs and instructional practices of school teachers with respect to gender and teacher position
- To investigate the relationship between pedagogical beliefs and instructional practices of school teachers
- To investigate whether pedagogical beliefs act as the predictor of instructional practices of school teachers

Definitions of Key Terms

Pedagogical beliefs. Pedagogical beliefs refer to the conceptions about teaching and learning that we hold to be true (Chan & Elliot, 2004).

- **Traditional belief.** A teacher who adheres to traditional beliefs views teaching as the transfer of knowledge from the instructor to the students and learning as the absorption of this information by the learners (Smith, 2022).
- **Constructivist belief.** A teacher who accepts constructivist belief views teaching as the facilitation of learners' exploration and learning as the process of constructing knowledge through personal experiences and interactions (Dewey, 2018).

Instructional practices. Instructional practices refer to the methods, strategies, and techniques that teachers use to facilitate learning and effectively deliver curriculum content. These practices are designed to engage students, accommodate diverse learning needs, and promote a deeper understanding of the subject matter (Gagnon & Collay, 2001).

- **Traditional practice.** It is the kind of teacher-centered instructional practice which is emphasized delivering lectures, giving notes; transmitting knowledge, giving only known knowledge instead of encouraging construction of knowledge from the practical experiences of learners (Smith, 2023).
- **Interactive instructional practice.** It is the kind of instructional practice, which is emphasized actively engaging students in the learning process through discussions, collaboration, hands-on activities, and feedback (Smith, 2022).
- **Guided discovery practice.** It is the kind of instructional practice which is emphasized providing students with opportunities and choices to solve "real world" problems in freely

learning environment as well as stimulating students to decipher the meanings of the tasks for themselves (Johnson, 2020).

- **Flexible grouping practice.** It is the kind of instructional practice, which is more responsive to students at different levels and it emphasizes a cooperative rather than an individualized learning environment (Wahlstrom and Louis, 2008).

Related Literature Review

Teachers play a foundational role in education, serving as the primary facilitators of learning and development for students. Beyond imparting knowledge, they are crucial in shaping students' critical thinking, problem-solving abilities, and social skills. Teachers create and maintain the learning environment, adapt instructional methods to meet diverse student needs, and provide the guidance and support necessary for students to reach their full potential. They also serve as role models, influencing students' attitudes toward learning, motivation, and self-esteem. By fostering a positive, inclusive, and challenging educational experience, teachers contribute to the holistic development of students, preparing them not only for academic success but also for life beyond the classroom. Therefore, in order to provide such good education for students, teachers need to have good attitudes, mindsets and beliefs about education.

It was generally acknowledged that teachers possess theoretical beliefs about teaching and learning and those beliefs and theories tend to shape the nature of their instructional practices (Davis & Wilson, 1999). According to Nespor (1987) teachers were likely to teach in different ways because teachers' beliefs are more powerful than their knowledge in influencing the way in which they teach. Haney and associates (1996) determined that teachers' beliefs were significant indicators of the behaviors that will be present in the classroom.

Although the reality might be complex and multifaceted, teachers with teacher centered and content-oriented perspectives tend to adopt didactic teaching practices (Chai & Khine, 2008). In contrast, teachers with student-centered and learning-oriented perspectives tend to adopt constructivist teaching practices (Chai & Khine, 2008). Despite more recently, teacher-directed instruction has been re-emphasized (Kirschner, Sweller, & Clark, 2006), constructivist teaching and learning approaches has been advocated in western countries, such as the United States. The advocacy encourages student learning by providing students with opportunities and choices to solve "real world" problems in a freely dialogic environments as well as stimulating students to decipher the meanings of the tasks for themselves (Newmann, 1996; Wahlstrom & Louis, 2008).

The traditional practice emphasizes on delivering lectures, giving notes; transmitting knowledge, giving only known knowledge to the learners (Kirschner, Sweller, & Clark, 2006). The interactive instructional practice focuses on discussion and sharing provide learners with opportunities to react to the ideas, experience, insights, and knowledge of the teacher or of peer learners and to generate alternative ways of thinking and feeling (Chai & Khine, 2008). Wahlstrom and Louis (2008) have identified two main areas of convergence: (1) flexible grouping, as articulated by Gamoran (1987) and Cohen (1994), which highlights ability grouping and opportunities for cooperative learning of students; and (2) guided discovery practice, which emphasizes the teachers' role in directing students' attention toward learning goals, providing students with plenty of choices as well as motivating them to think (Reosenhine, 1995, Wahlstrom & Louis, 2008). Guided discovery practice focuses on problem-based and learner-

centered instruction in the U.S. context. Flexible grouping practice emphasizes the organization of the classroom to differentiate instruction according to purpose, and implies the use of different variables to form groups (Wahlstrom & Louis, 2008).

Although efforts toward educational reforms, teachers need to transform their classrooms from traditional, teacher-centered environments into more constructivist environments that help facilitate autonomous student learning (Chai & Khine, 2008). Teachers need to acquire a new set of beliefs and practices to facilitate transformation toward constructivist teaching and learning (Richardson & Placier, 2001). Therefore, it is important to examine how the pedagogical beliefs of school teachers affect their instructional practices.

Method

The descriptive survey research method and quantitative data analysis were applied in this study.

Participants of the Study

The participants of the study were selected by using the random sampling method. The sample was composed of 938 school teachers (52 males and 886 females) from Yangon Region and Rakhine State in the study.

Instruments

In order to study pedagogical beliefs, the 18 items of the Pedagogical Beliefs Questionnaire (PBQ) were developed and adapted by the researcher from the questionnaire of Teaching and Learning Conceptions Questionnaire developed by (Chan & Elliot, 2004) and Instructional Beliefs Questionnaire developed by Khan (2018). The 22 items of the Instructional Practices questionnaire (IPQ) were developed and adapted by the researcher from the instructional practices questionnaires of developed by Khan (2018), Berger and Kaiser (2008) and Wahlstrom and Louis (2008) to find out instructional practices of school teachers. The items were rated on five-point Likert Scale (1=strongly disagree to 5=strongly agree). The approximate time duration to accomplish all the items was about 25 minutes.

Data Collection Procedure

The expert review was conducted for face validity and content validity from nine well-experienced experts in the field of Educational Psychology. Based on the advice and the suggestions of the experts, some items were revised and omitted to avoid overlapping and uncertainty of items. The instrumentation procedure was done from August to September in 2023. To investigate the effect of pedagogical beliefs on instructional practices of school teachers, quantitative data analysis was performed.

Data Analysis and Research Findings

Teachers' Pedagogical Beliefs and Instructional Practices from all Selected Schools

To investigate the teachers' pedagogical beliefs, descriptive and inferential statistics were carried out. Table 1 shows descriptive statistics of pedagogical beliefs of school teachers.

Table 1 Descriptive Statistics of Pedagogical Beliefs of School Teachers

Pedagogical Beliefs	N	Mini- mum	Maxi- mum	Mean	Mean%	Std. Deviation
Traditional Belief	938	11	40	25.10	62.75%	4.315
Constructivist Belief	938	15	35	29.94	85.54%	3.144

According to table 1, the mean percentage of traditional belief and constructivist belief was 62.75% and 85.54% respectively. The results stated that the teachers who prefer constructivist belief were greater than the teachers who prefer traditional belief in teaching and learning.

Teachers' Instructional Practices from all Selected Schools

To investigate the teachers' instructional practices, descriptive and inferential statistics were carried out. Table 2 shows descriptive statistics of instructional practices of school teachers.

Table 2 Descriptive Statistics of Instructional Practices of School Teachers

Instructional Practices	N	Mini- mum	Maxi- -mum	Mean	Mean%	Std. Deviation
Traditional Practice	938	9	33	20.32	58.06%	3.644
Flexible Grouping Practice	938	15	40	30.84	77.1%	3.117
Interactive Instructional Practice	938	18	35	28.98	82.8%	2.645
Guided Discovery Practice	938	15	35	28.89	82.54%	2.555

According to table 2, the mean percentage of guided discovery practice scale (82.54%) was the highest and the value of the traditional practice scale was the lowest. The results stated that most of the teachers were more likely prefer using guided discovery practice, interactive instructional practice and flexible grouping practice than traditional practice in classroom.

Comparison of the Teachers' Pedagogical Beliefs by Gender

The independent samples *t*-test was applied to examine whether there were significant differences in the teachers' pedagogical beliefs by gender or not. The *t*-test results for each subscale of pedagogical beliefs of school teachers were shown in Table 3.

Table 3 Results of Independent Samples *t*-test of Pedagogical Beliefs for Each Subscale by Gender

	Subscales	Gender	N	Mean	<i>t</i>	<i>df</i>	Mean Difference	<i>p</i>
Pedagogical Beliefs	Traditional Belief	Male	52	25.19	.160	936	0.099	.873
		Female	886	25.09				
	Constructivist Belief	Male	52	30.17	.559*	936	0.251	.036
		Female	886	29.92				

* $p < 0.05$

According to the results of table 3, there was no significant difference in traditional beliefs by gender but was significant difference in constructivist beliefs by gender at 0.05 level. Thus, male teachers were higher than female teachers in constructivist belief. The finding was consistent with the result of Chan, 2010.

Comparison of the Teachers' Instructional Practices by Gender

To find out whether there were significant differences in the teachers' instructional practices according to gender or not, independent samples *t*-test was conducted. Table 4 shows the independent samples *t*-test results for each subscale of instructional practices of school teachers.

Table 4 Results of Independent Samples *t*-test for Each Subscale of Instructional Practices by Gender

	Subscales	Gender	N	Mean	<i>t</i>	<i>df</i>	Mean Difference	<i>p</i>
Instructional Practices	Traditional practice	Male	52	21.12	1.62	936	0.842	0.105
		Female	886	20.27				
	Guided Discovery Practice	Male	52	28.73	-0.46	936	-0.168	0.646
		Female	886	28.90				
	Flexible Grouping Practice	Male	52	30.02	-1.96*	936	-0.870	0.030
		Female	886	30.89				
	Interactive Instructional Practice	Male	52	28.60	-1.07	936	-0.407	0.281
		Female	886	29.00				

* $p < 0.05$

According to the results of table 4, there was significant difference in flexible grouping practice subscale of instructional practices by gender at 0.05 level but were no significant differences in other subscales (traditional practice, interactive instructional practice and guided discovery practice) by gender. Thus, female teachers were higher than male teachers in flexible grouping practice. This finding was consistent with the result of Chan, 2010.

Comparison of the Teachers' Pedagogical Beliefs by Teacher Position

To find out the differences in the pedagogical beliefs of teachers according to teacher position, the descriptive statistics and one-way ANOVA was conducted. The descriptive statistics and ANOVA results are shown in table 5.

Table 5 Descriptive Statistics and ANOVA Results of Pedagogical Beliefs among Teacher Position

Pedagogical Beliefs	Teacher Position	N	Mean	SD	<i>F</i>	<i>p</i>
Traditional Belief	PAT	246	25.22	4.257	.436	0.646
	JAT	371	25.14	4.389		
	SAT	321	24.92	4.333		
Constructivist Belief	PAT	246	29.79	3.133	2.616*	0.044
	JAT	371	30.22	3.046		
	SAT	321	29.72	3.246		

Note. JAT= Junior Assistant Teacher, PAT= Primary Assistant Teacher, SAT= Senior Assistant Teacher, * $p < 0.05$

According to table 5, there was no significant differences traditional belief among teacher position. But there existed significant difference in constructivist belief among teacher position at 0.05 level. To obtain more detailed information in teacher position performed better than others position, the post hoc analysis was applied. The post hoc test was executed by Tukey HSD method and the results were presented as table 6.

Table 6 The Results of Tukey HSD Multiple Comparison for Constructivist Belief by Teacher Position

	(I) Teacher Position	(J) Teacher Position	Mean Difference (I-J)	<i>p</i>
Constructivist Belief	JAT	SAT	0.507*	0.046
		PAT	0.502*	0.038

Note. JAT= Junior Assistant Teacher, PAT= Primary Assistant Teacher, SAT= Senior Assistant Teacher, * $p < 0.05$

Based on the results of table 6, junior assistant teachers were significantly different from primary assistant teachers and senior assistant teachers at 0.05 level. Thus, junior assistant teacher preferred more constructivist belief than that of primary assistant teachers and senior assistant teachers.

Comparison of the Teachers' Instructional Practices by Teacher Position

Then, to find out the significant differences in each subscale of instructional practices according to teacher position, the descriptive statistics and one-way ANOVA was conducted. The descriptive statistics and ANOVA results are shown in table 7.

Table 7 Descriptive Statistics and ANOVA Results of Instructional Practices by Teacher Position

Instructional Practices	Teacher Position	N	Mean	SD	<i>F</i>	<i>p</i>
Traditional Practice	PAT	246	20.74	3.400	3.235*	0.040
	JAT	371	20.11	3.761		
	SAT	321	20.09	3.738		
Guided Discovery Practice	PAT	246	28.56	2.470	3.858*	0.021
	JAT	371	29.03	2.532		
	SAT	321	29.11	2.664		
Flexible Grouping Practice	PAT	246	30.93	3.405	4.175*	0.016
	JAT	371	31.12	2.086		
	SAT	321	30.45	3.112		
Interactive Instructional Practice	PAT	246	28.67	2.532	3.458*	0.031
	JAT	371	29.07	2.598		
	SAT	321	29.26	2.824		

Note. JAT= Junior Assistant Teacher, PAT= Primary Assistant Teacher, SAT= Senior Assistant Teacher, * $p < 0.05$

According to table 7, there existed significant differences in traditional practice, guided discovery practice, flexible grouping practice and interactive instructional practice at 0.05 level respectively by teacher position. To obtain more detailed information in teacher position performed better than others teacher position, the post hoc analysis was applied. The post hoc test was executed by Tukey HSD method and the results were shown in table 8.

Table 8 The Results of Tukey HSD Multiple Comparison for Instructional Practices Among Teacher Position

Instructional Practices	(I) Teacher Position	(J) Teacher Position	Mean Difference (I-J)	<i>p</i>
Traditional Practice	PAT	JAT	0.631*	0.060
		SAT	0.645*	0.092
Guided Discovery Practice	SAT	PAT	0.545*	0.031
		JAT	0.469*	0.042
Flexible Grouping Practice	JAT	SAT	0.673*	0.013
Interactive Instructional Practice	SAT	PAT	0.593*	0.022

Note. JAT= Junior Assistant Teacher, PAT= Primary Assistant Teacher, SAT= Senior Assistant Teacher, * $p < 0.05$

According to table 8, the primary assistant teachers preferred more traditional practice than the junior assistant teachers and the senior assistant teachers. The senior assistant teachers preferred more guided discovery practice than that of the primary assistant teachers and the junior assistant teachers. The junior assistant teachers preferred more flexible grouping practice than that of the senior assistant teachers. The senior assistant teachers preferred more interactive instructional practice than that of the primary assistant teachers.

Relationship between Pedagogical Beliefs and Instructional Practices of School Teachers

To find out whether there is the relationship between pedagogical beliefs and instructional practices of school teachers the correlational analysis was conducted. The results were shown in the following table 9.

Table 9 The Inter-Item Correlation Matrix between Pedagogical Beliefs and Instructional Practices of School Teachers

	TB	CB	TP	FGP	IIP	GDP
Traditional Belief	1					
Constructivist Belief	-.003	1				
Traditional Practice	.617**	-.136*	1			
Flexible Grouping Practice	.175*	.460**	.172*	1		
Interactive Instructional Practice	.182*	.563**	.054	.587**	1	
Guided Discovery Practice	.174*	.552**	.038	.601**	.790**	1

* $p < 0.05$, ** $p < 0.01$

Note. TB= Traditional Belief, CB= Constructivist Belief, TP= Traditional Practice, FGP= Flexible Grouping Practice, IIP= Interactive Instructional Practice, GDP= Guided Discovery Practice

According to table 9, the traditional belief was highly positively correlated with traditional practice ($r=0.617$, $p < 0.01$) and had lowest correlations with flexible grouping practice ($r=0.175$, $p < 0.5$), interactive instructional practice ($r=0.182$, $p < 0.05$) and guided discovery practice ($r=0.174$, $p < 0.05$). The constructivist belief was highly positively correlated with flexible grouping practice ($r=0.460$, $p < 0.01$), interactive instructional practice ($r=0.563$, $p < 0.01$), and guided discovery practice ($r=0.552$, $p < 0.01$).

0.01) and guided discovery practice ($r=0.552$, $p < 0.01$) and negatively correlated with traditional practice ($r= - 0.136$, $p < 0.5$). From the correlational analysis, it could be generally estimated that pedagogical beliefs of school teachers can affect their instructional practices. And multiple regression analysis was performed. The results were shown in table 10, 11, 12 and 13.

Table 10 Multiple Regression Analysis for Predicting Traditional Practice in terms of Pedagogical beliefs

Variable	B	β	t	p	R	R ²	Adjusted R ²	F
Traditional Practice	11.416		8.700	.000	.652	.425	.421	97.866
Predictor Variables								
Traditional Belief	.461	.546	18.869	.000				
Constructivist Belief	-.132	-.113	-3.813	.000				

*** $p < .001$

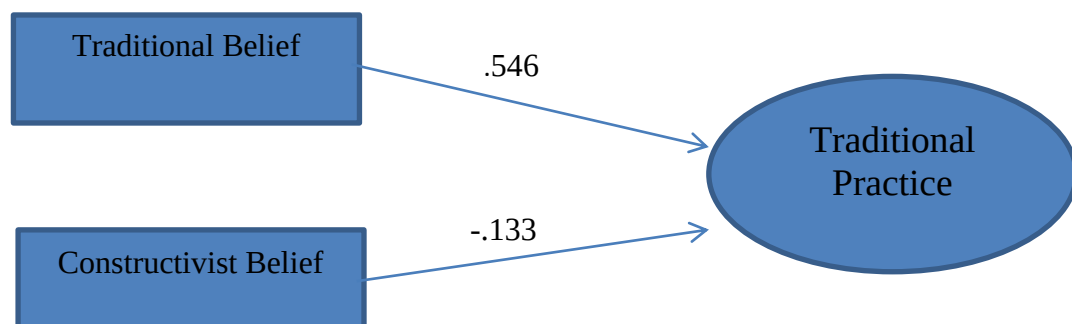


Figure 1 Model of Pedagogical Beliefs on Traditional Practice

The adjusted R Square value is .421. This indicates that approximately 42.1% of the variance in traditional practice can be predicted from traditional belief, constructivist belief. The model equation is to predict the traditional practice from teacher's traditional belief, constructivist belief is;

$$\text{Traditional Practice} = 11.416 + .546\text{TB} - .133\text{CB}$$

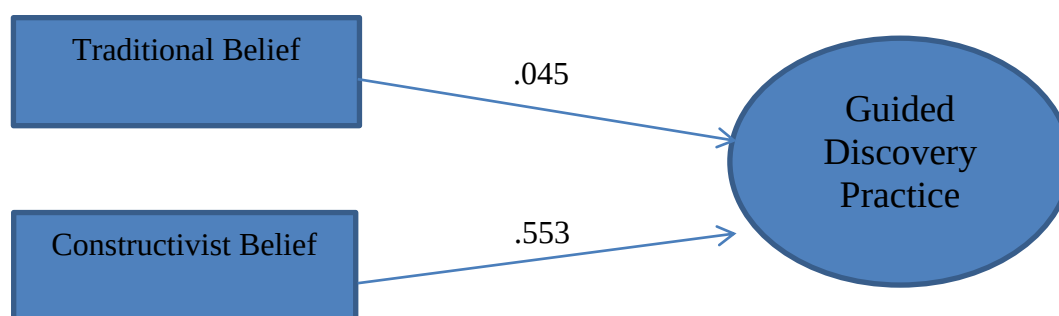
Note. TB=Traditional Belief, CB= Constructivist Belief

From the regression analysis, traditional belief could positively predict traditional practice ($\beta=.546$), and constructivist belief could negatively predict traditional practice ($\beta= -.133$).

Table 11 Multiple Regression Analysis for Predicting Guided Discovery Practice in terms of Pedagogical beliefs

Variable	B	β	<i>t</i>	<i>p</i>	R	R ²	Adjusted R ²	<i>F</i>
Guided Discovery Practice	8.831		9.208	.000	.613	.376	.471	79.64
Predictor Variables								
Traditional Belief	.086	.045	4.802	.000				
Constructivist Belief	.452	.533	13.978	.000				

*** $p < .001$

**Figure 2 Model of Pedagogical Beliefs on Guided Discovery Practice**

The adjusted R Square value is .471. This indicates that approximately 47.1 % of the variance in guided discovery practice can be predicted from traditional belief and constructivist belief. The model equation is to predict the guided discovery practice from teacher's traditional belief, constructivist belief is;

$$\text{Guided Discovery Practice} = 8.831 + .045\text{TB} + .553\text{CB}$$

Note. TB=Traditional Belief, CB= Constructivist Belief

From the regression analysis, traditional belief, constructivist belief could positively predict guided discovery practice ($\beta = .045$), ($\beta = .533$).

Table 12 Multiple Regression Analysis for Predicting Flexible Grouping Practice in terms of Pedagogical beliefs

Variable	B	β	<i>t</i>	<i>p</i>	R	R ²	Adjusted R ²	<i>F</i>
Flexible Grouping Practice	7.676		6.205	.000	.549	.302	.497	57.21
Predictor Variables								
Traditional Belief	.109	.089	9.075	.000				
Constructivist Belief	.421	.423	6.790	.000				

*** $p < .001$

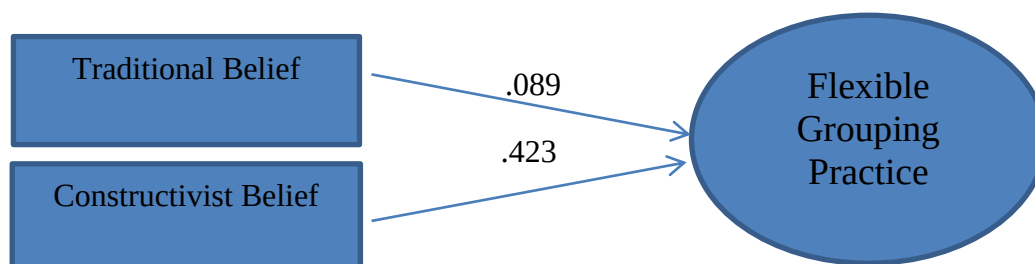


Figure 3 Model of Pedagogical Beliefs on Flexible Grouping Practice

The adjusted R Square value is .497. This indicates that approximately 49.7 % of the variance in flexible grouping practice can be predicted from traditional belief, constructivist belief. The model equation is to predict the flexible grouping practice from teacher's traditional belief, constructivist belief is;

$$\text{Flexible Grouping Practice} = 7.676 + .089\text{TB} + .423\text{CB}$$

Note. TB=Traditional Belief, CB= Constructivist Belief

From the regression analysis, traditional belief, constructivist belief could positively predict flexible grouping practice ($\beta = .089$), ($\beta = .423$).

Table 13 Multiple Regression Analysis for Predicting Interactive instructional Practice in terms of Pedagogical beliefs

Variable	B	β	<i>t</i>	<i>p</i>	R	R ²	Adjusted R ²	<i>F</i>
Interactive Instructional Practice	7.178		7.383	.000	.633	.401	.492	88.55
Predictor Variables								
Traditional Belief	.096	.083	4.559	.000				
Constructivist Belief	.438	.469	14.42	.000				

*** $p < .001$

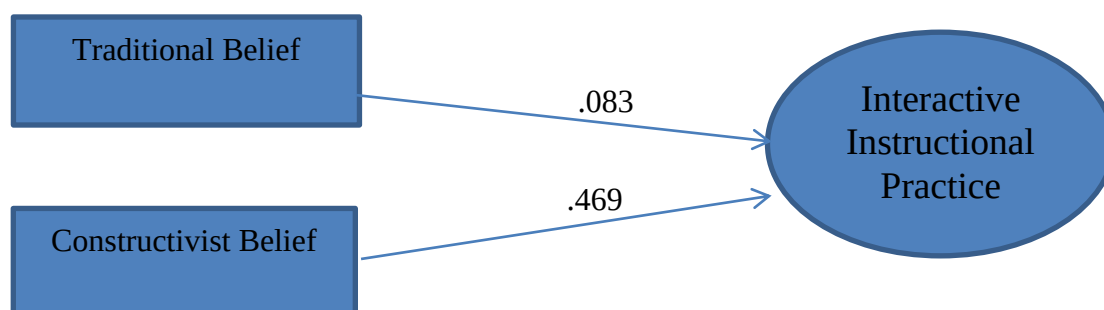


Figure 4 Model of Pedagogical Beliefs on Interactive Instructional Practice

The adjusted R Square value is .492. This indicates that approximately 49.2 % of the variance in interactive instructional practice can be predicted from traditional belief, constructivist belief. The model equation is to predict the interactive instructional practice from teacher's traditional belief, constructivist belief is;

Interactive Instructional Practice = 7.178+.083TB+.469CB

Note. TB=Traditional Belief, CB= Constructivist Belief

From the regression analysis, traditional belief, constructivist belief could positively predict interactive instructional practice ($\beta=.083$) and ($\beta=.469$).

Conclusion

The results of descriptive statistics of pedagogical beliefs of school teachers revealed that the mean percentage of traditional belief and constructivist belief was 62.75% and 85.54% respectively. So, it was found that most of the teachers more preferred in constructivist belief than those of traditional belief. In addition, the results of descriptive statistics of instructional practices of school teachers revealed that the mean percentage of guided discovery practice scale (82.54%) was the highest and the value of the traditional practice scale (59.08%) was the lowest. Therefore, it was found that most of the teachers more likely prefer using guided discovery practice, interactive instructional practice and flexible grouping practice than traditional practice in classroom.

In pedagogical beliefs, the results of independent samples *t*-test revealed that there was no significant difference in traditional beliefs by gender but was significant difference in constructivist beliefs by gender at 0.05 level. Thus, male teachers were higher than female teachers in constructivist belief. The finding is consistent with the results of Chan, 2010. Again the results of *t*-test revealed that there was significant difference in flexible grouping practice subscale of instructional practices by gender at 0.05 level but was no significant difference in other subscales (traditional practice, interactive instructional practice and guided discovery practice by gender. Thus, female teachers were higher than male teachers in flexible grouping practice. This finding was consistent with the results of Chan, 2010.

ANOVA results of pedagogical beliefs revealed that there was no significant differences traditional belief among teacher position. But there existed significant differences in constructivist belief among teacher position at 0.05 level. The junior assistant teachers preferred more constructivist belief than the primary assistant teachers and the senior assistant teachers.

Again ANOVA results of instructional practices revealed that there existed significant differences traditional practice, guided discovery practice, flexible grouping practice and interactive instructional practice at 0.05 level respectively by teacher position.

For traditional practice, the result of post hoc test revealed that the primary assistant teachers were significantly different from the junior assistant teachers and the senior assistant teachers at 0.05 level. For guided discovery practice, the result of post hoc test revealed that the senior assistant teachers were significantly different from the primary assistant teachers and the junior assistant teachers at 0.05 level. For flexible grouping practice, the result of post hoc test revealed that junior assistant teachers were significantly different from the senior assistant teachers at 0.05 level. For interactive instructional practice, the result of post hoc test revealed that the senior assistant teachers were significantly different from the junior assistant teachers at 0.05 level.

By applying Pearson correlation analysis, the results showed that the traditional belief was highly positively correlated with traditional practice ($r = 0.617$, $p < 0.01$) and had lowest correlations with flexible grouping practice ($r = 0.175$, $p < 0.5$), interactive instructional practice

($r = 0.182, p < 0.05$) and guided discovery practice ($r = 0.174, p < 0.05$). The constructivist belief was highly positively correlated with flexible grouping practice ($r = .460, p < 0.01$), interactive instructional practice ($r = .563, p < 0.01$) and guided discovery practice ($r = .552, p < 0.01$) and negatively correlated with traditional practice ($r = -0.136, p < 0.05$).

Finally, multiple regression analysis was conducted to investigate whether pedagogical beliefs act as the predictor of instructional practices of school teachers. From the results of the regression analysis, traditional belief could highly positively predict traditional practice ($\beta = .546$), and least positively predict guided discovery practice ($\beta = .045$), flexible grouping practice ($\beta = .089$) interactive instructional practice ($\beta = .083$). The constructivist belief could positively predict guided discovery practice ($\beta = .533$), flexible grouping practice ($\beta = .423$), interactive instructional practice and ($\beta = .469$), and could negatively predict traditional practice ($\beta = -.133$).

Discussion and Recommendations

Research findings can provide a general overview on the importance of pedagogical beliefs towards instructional practices. The finding of the study showed that most of teachers more preferred in constructivist beliefs than those of traditional belief. Moreover, it was found that most of the teachers were more likely to prefer using guided discovery practice, interactive instructional practice and flexible grouping practice than traditional practice in classroom.

As regards the influence of gender, the female teachers appeared to be more inclined to hold a constructivist conception regarding teaching and learning, and conversely, less likely to hold a traditional conception about teaching and learning compared to male teachers. This finding occurs with another study using the instrument of (Chan, 2010) which indicates that Turkish student teachers strongly preferred the constructivist conception in teaching and learning, and female student teachers' mean score on constructivist conception was significantly higher than that of their male counterparts (Aypay, 2010).

In comparing teachers' pedagogical beliefs by teacher position, the junior assistant teachers preferred more constructivist belief than the primary assistant teachers and the senior assistant teachers. In comparing teachers' instructional practices by teacher position, the primary assistant teachers preferred more traditional practice than the junior assistant teachers and the senior assistant teachers. The senior assistant teachers preferred more guided discovery practice than the primary assistant teachers and the junior assistant teachers. The junior assistant teachers preferred more flexible grouping practice than the senior assistant teachers. The senior assistant teachers preferred more interactive instructional practice than the primary assistant teachers. These findings were consistent with the results of (Chan and Elliott, 2004).

More importantly, the findings reveal that teachers' constructivist conceptions were significantly and positively correlated with standard contemporary practice, focused instruction, and flexible grouping practice. However, teachers' traditional conceptions were identified as a significantly negative predictor of standard contemporary practice, and did not have significant effects on focused instruction and flexible grouping practices. More follow up case studies will be needed to understand these relationships.

As regards the influence of gender, it was found that male teachers appeared to be more inclined to hold a constructivist belief regarding teaching and learning, and conversely, less

likely to hold a traditional belief about teaching and learning compared to female teachers. More importantly, the findings reveal that teachers' constructivist beliefs were identified as a highly positive predictor of guided discovery practice, interactive instructional practice, and flexible grouping practice and did not have significant effect on traditional practice. In addition, the teachers' traditional beliefs were identified as a highly positive predictor of traditional practice, and had little effect on guided discovery practice, flexible grouping practice and interactive instructional practice.

Therefore, by addressing teachers' pedagogical beliefs, educational institutions can foster a culture of continuous professional growth and create more effective and inclusive learning environments for students. Moreover, it is certainly important that the teachers should have constructivist beliefs in order to implement the effective teaching learning process in 21st century. These beliefs equip teachers with the necessary mindset and skills to create student-centered, adaptable, and inclusive learning environments. Moreover, they can foster critical thinking, inquiry, and a commitment to lifelong learning, ultimately enhancing the educational experiences and outcomes for students.

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AN INVESTIGATION OF STUDENT TEACHERS' ANXIETIES AND COPING STRATEGIES RELATED TO THE TEACHING PRACTICUM

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Abstract

The aim of the study was to identify the levels of anxiety experienced by the student teachers about their practicum. Moreover, it is intended to compare the anxiety levels experienced by the student teachers about the practicum activities by gender, age, and year, and to analyze how the student teachers handled their anxieties. The participants were selected using a simple random sampling technique. The sequential explanatory mixed methods design was adopted in this study. As the research instrument, the Student Teacher Anxiety Scale (Ngidi & Sibaya, 2003), which consists of 26 items, was applied in this study. This questionnaire is classified into five dimensions: Evaluation anxiety, Class control anxiety, Professional preparation anxiety, School staff relations anxiety, and Unsuccessful lesson anxiety. The reliability coefficient (Cronbach's alpha) resulting from the pilot study was 0.84. A total of 211 student teachers (77 males and 134 females) from Taunggyi Education Degree College participated in this study. The findings showed that evaluation and class control anxieties were found to be the highest anxieties of student teachers during their teaching practicum. The results showed that the student teachers have felt moderate anxiety in professional preparation and unsuccessful lessons, and low anxiety in school staff anxiety. In this study, a significant difference was found in anxiety during practicum, along with gender and age. There was no significant difference in any of the dimensions across school years. This study also found that there were several ways to cope with the anxieties. The strategies used by student teachers to cope with their anxiety were thinking positively, creating a good learning atmosphere, discussing with their supervisors, mentors, and peers, building good relationships with school staff, and preparing everything well. Thus, this study might help student teachers, lecturers, and mentors prepare for a quality teaching practicum by reducing student teachers' anxieties.

Keywords: Practicum, Anxiety, Coping, Coping Strategy

Introduction

Education Degree Colleges are producing qualified student teachers with the competencies needed to teach effectively in Myanmar's primary and middle school classrooms. The four-year Education Degree College curriculum provides an integrated approach where teaching subject knowledge and understanding educational theories are learned through a supportive learning process of relevant and practical application and experience. The Education Degree Colleges offer student teachers both on-campus and off-campus practice teaching. On-campus practice teaching refers to the time when student teachers are allowed to handle actual classes in their colleges, whereas off-campus practice teaching is conducted by sending the student teachers to the partner schools for them to experience teaching in the actual field. Before the student teachers go to the partner school, the colleges give orientations about the practicum to be comfortable and reduce the anxiety of student teachers. Practicum is an essential element in teacher education. It involves the activities of preparing the lesson plan, teaching in class, assessing the students' achievement, and practicing the art of teaching.

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According to Abdullahi (2010), a good teaching practicum should stimulate student teachers to be greatly committed to the attainment of excellence, and the process should furthermore enable them to be more serious and devoted to work to meet professional expectations. In the teaching practicum, student teachers will present lessons and materials approved by their mentor teachers, who have experience teaching real students in various real school settings. So, they have to master them all. Additionally, their mentors and supervisors will assess and evaluate them during their practicum. Thus, many student teachers felt anxious about the practicum. Anxiety during practicum may have negatively impacted the performance of student teachers. Hence, student teachers need to manage their worries to be successful in their teaching practicum. This research seeks to uncover the anxiety levels of student teachers and identify strategies to reduce them.

Purposes of the Study

The main purpose of the study was to identify the levels of anxiety experienced by the student teachers about their practicum and to analyze how they overcome these anxieties. The specific objectives of this study were as follows:

1. To identify the levels of anxiety experienced by the student teachers during their practicum.
2. To compare the anxiety levels of the student teachers during the practicum activities by their gender, age, and school year.
3. To analyze how the student teacher copes with their practicum anxiety.

Definitions of Key Terms

Anxiety: Anxiety is a part of human emotion that includes fear, uncertainty, uneasiness, frustration, or tension (Brown, 2000).

Practicum: Practicum refers to the course of study in teacher training. It involves the practical experiences that trainee teachers receive before taking up student teaching and other responsibilities as teachers; that is, it is the practical and experiential learning and exploration of the teaching practice under a mentor's supervision (Teachmint, 2022).

Coping: Coping refers to the conscious or unconscious strategies used to reduce unpleasant emotions (Lazarus & Folkman, 1984).

Coping strategy: Coping strategy refers to "how people respond to stress as they contend with real-life problems" (Skinner & Zimmer-Gembeck, 2007).

Review of Related Literature

Perry (2004, cited in Charisma & Nurmallasari, 2020) asserts that teaching practicum can be both exciting and challenging, resulting in a mixture of anticipation, anxiety, excitement, and apprehension. She also emphasizes that this excitement can be elaborated in two folds: excitement about being part of a real classroom setting, getting to know students, planning and organizing classroom tasks, and having doubts about their ability to cope with unfamiliar situations, such as controlling and managing learners or establishing a working relationship with field-based and faculty-based supervisors. Based on these statements, the teaching practicum can be both more exciting and challenging, evoking emotions of anxiety, uncertainty, nervousness, and eagerness.

Anxiety was a feeling containing tension, nervousness, apprehension, and worries, whose level varied depending on each person (Spielberger, 1983, cited in Andrean, 2017). Several studies have been conducted to investigate the nature of anxiety experienced by student teachers during teaching. It was found that student teachers in Great Britain experience anxiety from factors such as evaluation, pupil and professional concerns, class control, and teaching practice requirements (Hart, 1987). In Canada, Morton et. al. (1997) report that student teacher anxieties were related to evaluation, pedagogical, classroom management, and staff relations factors. Capel (1997) reported in her study, conducted among student teachers in Canterbury, that anxiety was attributed to evaluation, professional preparation, class control, and school staff factors. In a study of student teachers who were attending a faculty of education at a Canadian University, it was observed that females experienced higher levels of anxiety than males before practice teaching (Morton et al., 1997). However, Preece (1979) did not find sex-linked differences concerning class control problems.

In their study of Turkish English Foreign Language (EFL) teacher candidates, Aydin and Bahce (2001) report classroom management as the most cited source of anxiety (43%); other factors that cause anxiety are the teaching process, relationships with the students, and problems caused by the student teachers' status. Evaluation anxiety caused by being observed and assessed by the supervisor is often cited as a major source of anxiety in the practicum (Caple, 1997). Anxiety may also be induced by the reaction of the supervisor to an unsuccessful lesson (Heeralal, 2014). Anxiety related to controlling the classroom, managing and maintaining discipline, and dealing with disruptive behavior may lead to high levels of anxiety (Preece, 1997). Kyriacou and Stephens (1999) identified not being regarded as a real teacher, difficulty in behavior management, and the heavy workload as sources of anxiety for student teachers. Cross-country studies suggest that student teachers in Europe, the Americas, and Asia all experience anxiety while they are deployed for their practicum (Eksi & Yakisik, 2016). While other researchers suggest that anxiety levels could vary individually, as personality plays an important role in how a person experiences or perceives anxiety, other factors could also include gender as well as culture (Heinrichs et al., 2006). Likewise, Ameen et. al. (2002) found that 80% of respondents with teaching anxiety stated that possible causes were non-recognition of materials and students, pre-preparation class, and student evaluation.

Student teachers may experience anxiety during the teaching practicum. This could impact the performance of student teachers in teaching. Hence, some steps need to be taken to address the anxiety to improve performance during the teaching practicum. To cope with the anxiety, people will need to remember that they will undergo anxiety and that they will need to accept it, recognize the level of anxiety, minimize their time around people with anxiety, look for anxiety relievers, utilize off-the-job diversions, look in the mirror, and give themselves time and space to refocus (Mortensen, 2014). In a limited number of studies on the coping strategies (e.g., some anxiety management tactics like self-control, accepting and facing the situation, and setting clear goals) with practicum stress, it was revealed that self-control (Sammephet & Wanphet, 2013) and holding positive attitudes and establishing strong ties with peers and mentors (Lampadan, 2014) are the main coping strategies of the pre-service teachers. There are other types of coping strategies, as mentioned by Costa and Kellick (2000), such as self-reflection,

which may enable student teachers to construct meaning from their work in the classroom and encourage growth and confidence.

Method

Research Method

In this study, a sequential explanatory mixed methods design was used.

Participants

The sample of the study included 211 student teachers from Taunggyi Education Degree College. For gender, there are 77 males and 134 female respondents. In order to get the required sample, the researcher selected the participants by using a simple random sampling method.

Table 1 Number of Student Teachers from Selected Years

Taunggyi Education Degree College	First Year		Second Year		Total
	Male	Female	Male	Female	211
	41	59	36	75	
Total	100		111		

Instruments

Only two instruments were used to get the required data. The first instrument, the Student Teacher Anxiety Scale (STAS), designed by Ngidi and Sibaya (2003), which consists of 26 items, was applied. The original instruments, developed by Hart (1987) and modified by Capel (1997), Morton et. al. (1997), and Ngidi and Sibaya (2003), were run on the STAS by using factor loading. This questionnaire is divided into five factors: Evaluation anxiety, Class control anxiety, Professional preparation anxiety, School staff relations anxiety, and Unsuccessful lesson anxiety. It was a 5-point Likert scale of very much, moderately, somewhat, rarely, and never.

The second instrument in this study was an interview section. The purpose of the interview was to get in-depth information. For the main questions, this study chose to be concerned about what their anxiety levels were and how they coped with their anxieties. The question for the interviews was, “How do the student teachers cope with their practicum anxiety?” This study presented only five interview data points due to the participants’ limited availability to take the interview section. Each interview lasted 5 minutes. The interview records were translated into English. Finally, this study wanted to combine the two instruments to obtain more accurate and reliable data from the participants.

Data Collection Procedure

The Student Teacher Anxiety Scale, developed by Ngidi and Sibaya (2003), was used in this study. After translating these questions into the Myanmar Version, the experts (teachers from Educational Studies) reviewed the content for validity. Then, after preparing the instruments, a pilot study was conducted with 30 student teachers (Second Year) from Taunggyi Education Degree College. The internal consistency reliability for this study, measured by Cronbach’s alpha, was 0.84 for the whole scale (Evaluation anxiety, Class control anxiety, Professional preparation anxiety, School staff relations anxiety, and Unsuccessful lesson anxiety). So, it was evident that the Student Teacher Anxiety Scale towards teaching practicum has high reliability to measure the student teachers’ anxiety towards teaching Practicum.

After the pilot study, the researcher obtained permission from the head of the school. Then, a 26-item questionnaire was administered to student teachers (Second Year and First Year) during their teaching practicum. In addition, four randomly selected student teachers from Taunggyi Education Degree College were interviewed after their teaching practicum. The interview was comprised of open-ended questions. All the interviews were audio-recorded with permission from the interviewees. The interview records were translated into English.

Data Analysis and Findings

In this study, the findings based on quantitative and qualitative studies will be presented. The questionnaire was requested by the student teachers from Taunggyi Education Degree Colleges to collect their anxiety levels. To obtain the levels of anxiety related to the teaching practicum, mean values and standard deviations were used. The results were described in Table 2.

Table 2 Anxiety Levels Experienced by the Student Teachers along the Various Practice Teaching Activities (N = 211)

Variables	N	Mean	SD	Remark
Evaluation Anxiety	211	3.89	.34	High Anxiety
Class Control Anxiety	211	4.34	.29	High Anxiety
Professional Preparation Anxiety	211	3.07	.65	Moderate Anxiety
School Staff Anxiety	211	1.57	.30	Low Anxiety
Unsuccessful Lesson Anxiety	211	2.98	.71	Moderate Anxiety
All	211	3.31	.26	Moderate Anxiety

Scoring direction:

1.00-2.33=low Anxiety 2.34-3.67=Moderate Anxiety 3.68-5.00=High Anxiety

Table 2 shows the anxiety levels experienced by the student teachers during the various practice teaching activities. The results show that student teachers have felt anxiety very much in class control and evaluation, moderate anxiety in professional preparation and unsuccessful lessons, and low anxiety in school staff anxiety, respectively.

To find out the significance by gender, age, and school year, the independent samples *t*-test was used. The results were shown in Table 3.

Table 3 The Results of the Independent Samples *t*-test for Each Dimension of Student Teachers' Anxiety by Gender (N=211)

Variables	Gender	N	Mean	SD	<i>t</i>	<i>p</i>
Evaluation Anxiety	Male	77	3.83	0.32	-1.871	.063
	Female	134	3.92	0.35		
Class Control Anxiety	Male	77	4.30	0.30	-1.539	.125
	Female	134	4.37	0.28		
Professional Preparation Anxiety	Male	77	3.02	0.72	-.771	.441
	Female	134	3.09	0.61		
School Staff Anxiety	Male	77	1.56	0.32	.615	.539

Variables	Gender	N	Mean	SD	t	p
	Female	134	1.59	0.28		
Unsuccessful Lesson Anxiety	Male	77	2.84	0.66	-2.228	.027*
	Female	134	3.06	0.72		
All	Male	77	3.25	0.27	-2.305	.022*
	Female	134	3.34	0.25		

Note: N = number of respondent student teachers.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3 indicates that female student teachers had higher mean scores on the overall anxiety scale compared to male student teachers. It can be interpreted that female student teachers have more anxiety in teaching practice than male student teachers.

Table 4 The Results of Independent Samples *t*-test for Each Dimension of Student Teachers' Anxiety by Age (N=211)

Variables	Age	N	Mean	SD	t	p
Evaluation Anxiety	18-19 year	89	3.90	0.34	-.117	.907
	20-21 year	122	3.89	0.34		
Class Control Anxiety	18-19 year	89	4.36	0.31	.859	.392
	20-21 year	122	4.33	0.27		
Professional Preparation Anxiety	18-19 year	89	3.15	0.66	-1.709	.897
	20-21 year	122	3.00	0.64		
School Staff Anxiety	18-19 year	89	1.58	0.31	-.433	.665
	20-21 year	122	1.56	0.29		
Unsuccessful Lesson Anxiety	18-19 year	89	3.16	0.63	-2.510	.013*
	20-21 year	122	2.85	0.73		
All	18-19 year	89	3.36	0.25	-3.26	.001**
	20-21 year	122	3.27	0.26		

Note: N = number of respondent student teachers.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4 shows that the mean scores of student teachers (18-19 years) were higher than those of student teachers (20-21 years). According to Table 4, there were significant differences between the different age groups for the overall anxiety scale by age.

Table 5 The Results of Independent Samples *t*-test for Each Dimension of Student Teachers' Anxiety by School Year (N=211)

Variables	Year	N	Mean	SD	t	p
Evaluation Anxiety	First	100	2.96	0.73	-.567	.571
	Second	111	3.01	0.68		
Class Control Anxiety	First	100	4.34	0.28	-.092	.927
	Second	111	4.35	0.30		
Professional Preparation Anxiety	First	100	3.02	0.68	-1.108	.269
	Second	111	3.12	0.51		

Variables	Year	N	Mean	SD	t	p
School Staff Anxiety	First	100	1.60	0.29	.981	.328
	Second	111	1.55	0.30		
Unsuccessful Lesson Anxiety	First	100	2.96	0.73	-.567	.571
	Second	111	3.01	0.68		
All	First	100	3.30	0.26	-.397	.692
	Second	111	3.31	0.26		

Note: N = number of respondent student teachers.

According to Table 5, the total mean score of second-year students was slightly different from that of first-year students by school year. It can be clearly seen that there were no significant differences in the overall anxiety scale by school year.

Coping Strategies

The question for the interviews was, “How do the student teachers cope with their practicum anxiety?” During their teaching practicum, the student teachers employed various coping strategies to manage their anxiety. The following strategies were discussed:

Table 6 Student Teachers’ Coping Strategies for Their Practicum Anxieties

No	Category	Strategies	Excerpts
1	Evaluation Anxiety	Thinking positively	“I decided to ignore teaching practicum remarks given by supervisors or mentors, and I tried to finish my teaching.” (Male student teacher) “I thought positively that I could do it and avoided negative thoughts, feelings, moods, perceptions, and emotions.” (Male student teacher) “I always considered comments and feedback that came from mentors or supervisors as a tool for professional development.” (Female student teacher) “I tried to benefit from the suggestions of my mentor and supervisors because they are experienced in teaching and learning.” (Female student teacher)

No	Category	Strategies	Excerpts
2	Class Control Anxiety	Creating a good learning atmosphere	“I tried to create a happy learning process, interactive teaching, and a stress-free and relaxing atmosphere in the class.” (Male student teacher) “I used game-based learning to get students’ attention.” (Female student teacher) “I tried to control eye contact, a clear voice, and a smiling face with students.” (Female student teacher) “I did practice several times to get ready for it before my teaching.” (Male student teacher)
3	Professional Preparation Anxiety	Discussing with supervisors, Mentors and peers	“Firstly, I knew the subject matter well, and then I discussed with supervisors and mentors how to use teaching methods and when appropriate assessment methods are used.” (Male student teacher) “I discussed with friends whether lesson plans are good or not, the teaching aids are suitable or not, and the teaching strategies are appropriate or not.” (Female student teacher) “I showed my teachers and mentors to check the lesson plans.” (Female student teacher) I suggested the best ways from peers before doing the teaching practice.” (Male student teacher)
4	School Staff Anxiety	Building a good relationship	“We greeted every staff member in the morning to become familiar with them and participated in cleaning the school campus.” (Male and female student teachers) “We helped school staff in our free time and communicated politely and respectfully during our interactions with them.” (Male and Female student teachers) “I went back after greeting the principal and office staff every day.” (Male student teacher)
5	Unsuccessful Lesson	Preparing everything well	“I tried my best to prepare everything before teaching.” (Female student teacher) “I asked class teachers about students’ conditions to control and change the misbehavior attitude before teaching.” (Female student teacher) “I prepared lesson plans in detail.” (Male student teacher)

No	Category	Strategies	Excerpts
			"I searched teaching resources on the internet, search engines, Google Scholar, and YouTube channels for my topics." (<i>Male student teacher</i>)

Table 6 shows the coping strategies that student teachers utilized during their teaching practicum. According to the findings, it was revealed that five coping strategies were applied by the student teachers to cope with their anxiety during their teaching practicum. For evaluation anxiety, the student teachers replied that they can overcome their anxiety by thinking positively. For school staff anxiety, they built good relationships with the school staff. For class control anxiety, the student teachers responded that they created a good learning atmosphere. For professional preparation anxiety, the student teachers replied that they discussed it with their supervisors, mentors, and peers. And finally, for unsuccessful lesson anxiety, they can overcome their anxiety by preparing everything well.

Conclusion

This study aimed at investigating the levels of anxiety experienced by student teachers about their practicum and analyzing how the student teachers overcame their anxieties. There are some stress factors involved in evaluation, class control, professional preparation, school staff, and unsuccessful lessons. They were more anxious about evaluation and class control than professional preparation and unsuccessful lessons. There was a low level of anxiety among school staff. In this study, a significant difference was found in anxiety during practicum, along with gender and age. There was no significant difference in any of the dimensions across school years. Female student teachers are more anxious compared to their male counterparts during the teaching practicum.

Overcoming those anxieties, five strategies were applied by the student teachers during the teaching practicum, such as thinking positively, creating a good learning atmosphere, discussing with their supervisors, mentors, and peers, building good relationships with school staff, and preparing everything well. Student teachers' anxiety levels will decrease, and their instruction will become more proficient as they gain more teaching experience.

Discussions

The student teachers experience anxiety during practicum activities. There are many causes of anxiety among student teachers, which include evaluation, class control, professional preparation, school staff, and unsuccessful lessons. According to the findings, the student teachers were high on anxiety related to the teaching practicum. The result showed that the student teachers have felt anxiety very much in evaluation and class control, and moderate anxieties in professional preparation and unsuccessful lessons. Finally, the student teachers never feel anxious around school staff. According to the independent sample *t*-test result, there was a significant difference in anxiety related to the teaching practicum by gender and age in the present study. In the analysis by school year, there was no significant difference in all dimensions. Previous studies do not support this finding, as age, sex, and field of specialization were found not to have any significant effect on student teachers' anxiety (Albasin-Lacaba,

2022). This is also consistent with the study by Kwarteng (2018), which found that age has no association with student teachers' anxiety during their practicum. Ngidi and Sibaya (2003) discovered that as student teachers get older, their anxiety levels increase.

The question is, "How do the student teachers cope with their practicum anxiety?" It was also found that to overcome the practicum anxieties, some strategies were employed by the student teachers during their teaching practicum, such as thinking positively, creating a good learning atmosphere, discussing with their supervisors, mentors, and peers, building good relationships with school staff, and preparing everything well. Charisma and Nurmallasari (2020) pointed out that there are six categories for coping with anxiety: adapting, preparing, building a good relationship with the mentor and the students, boosting self-confidence, developing positive thinking, and keeping calmness and excitement.

This study has several limitations. For the quantitative study, the number of participants was small. To sum up, research studies with a larger sample size from different Education Degree Colleges would be more desirable so that more generalized, reliable, and valid research results would be achieved. For the qualitative study, only four student teachers participated. Moreover, the researcher used and compared the themes identified as a result of the individual analysis of each data point. In further research, the researcher compared the three-step data analysis process: individual analysis, group analysis, and cross-group analysis to ensure the identification of coping strategies. This research could assist student teachers, instructors, and mentors in better preparing for a successful teaching practicum by reducing anxieties among student teachers.

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THE INTERPERSONAL SKILLS OF HIGH SCHOOL STUDENTS IN YAMETHIN TOWNSHIP

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Abstract

The main purpose of this research was to investigate the interpersonal skills of high school students in Yamethin Township and to find out significant difference in their interpersonal skills with respect to the gender, grades, school locations, parental jobs and parental education. In this study, the participants were totally 988 (421 males and 567 females) high school students from selected five high schools in Yamethin Township during 2014-15 academic year. Interpersonal Skills Questionnaires were used as an instrument. It includes twelve categories; namely nonverbal communication, reinforcement, questioning, reflecting, opening and closing, explanation, listening, self-disclosure, influencing, assertiveness, group interaction and leadership. Quantitative research design was used in this study. Descriptive analysis and inferential statistical statistics such as independent samples *t*-test and ANOVA were conducted to analyze the collected data. The participants possessed the moderate level of interpersonal skills. The result of the study also found that there was no significant difference in the interpersonal skills of high school students with respect to their gender, grades and parental jobs. But, significant difference was found in the interpersonal skills of high school students with respect to parental education and school at different locations. Thus, parents play an essential role for the development of interpersonal skills of their children and the parents should make a warm environment which can enhance interpersonal skills level of children to get success in their future lives.

Keywords: Interpersonal Intelligence, Interpersonal Skill, Non-verbal Communication.

Introduction

Interpersonal skill (IPS) is the ease and comfort of communication between individuals and their colleagues, supervisors, subordinates, clients, and other stakeholders (Peled, 2000). Interpersonal skill includes the ability to motivate others, conflict management, effective communication, and team building (Sunindijo & Zou, 2011; Strohmeier, 1992). Moreover, interpersonal skills are essential for maintaining peace and avoiding manners that can cause conflicts. To train students to have good interpersonal skills is one of the aims of education. If the aim of education is to prepare the children for their future, it needs to actively prepare the children for peace. To achieve the aim of education, educators need to provide students with information about issues affecting peace, with educational psychology to cope with this information and the personal resources necessary to live peacefully.

Interpersonal skills are the communication skills that can be seen between people who have some relationships. Therefore, interpersonal communication consists of the interaction between a child and his parent, a supervisor and a candidate, two cousin, two relatives, two

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friends, and so on. In spite of being dyadic in nature, interpersonal communication sometimes occurs among small intimate groups such as family. But even within a family, the interpersonal relationships that take place are often dyadic, mother to child, sister to brother, etc. Therefore, interpersonal skills should be learned and studied well.

Studying human's interpersonal skills is a major assistant in the advancement of their learning process as good interpersonal skill can support good learning process. Again, understanding the growth of student's interpersonal skills is essential in the field of education. Besides, interpersonal skill is related with interpersonal intelligence. Interpersonal intelligence is a kind of intelligence that is defined in Howard Gardner's Theory of Multiple Intelligence and it is closely related to theory of mind. Gardner (1992) stated that interpersonal intelligence denotes a person's capacity to understand the intentions, motivations and desires of other people and consequently to work effectively with others. Shopkeepers, professors, doctors, and monks and actors and all need good interpersonal intelligence.

Interpersonal skills play a crucial role in our daily routines and social interactions both within and beyond traditional work settings. It may be argued that the most pressing social problems are concerned with the relationships between people, and that these are an essential part of human nature (Argyle, 1968; cited in Klein, 2009).

Interpersonal skills are important for personal success and happiness. Interpersonal skills can make and maintain close friends and romantic relationships. Besides, the success of family relationships depends heavily on the interpersonal skills among the family members. Interpersonal skill is also important in problem solving. A person who has the ability in interpersonal skill will be open to the ideas of others and willing to put forward views of his own essential activities in the process of problem solving. So, a person who is good in interpersonal skill will be able to communicate and work with a wide variety of people, negotiate differences, handle conflicts, make requests effectively and receive information objectively.

Therefore, interpersonal skill is the process by which people exchange information, feelings, and meaning through verbal, non-verbal messages, and face-to-face communication skill. Studying interpersonal skill of high school students will be valuable for both teachers and students in their teaching-learning process.

Purposes of the Study

The primary purpose of the study is to investigate the interpersonal skills of high school students in Yamethin Township.

The specific objectives of this study are:

1. To study the differences in interpersonal skills of high school students by gender
2. To analyze whether high school students' interpersonal skills differ by their grades
3. To study the interpersonal skills of high school students according to the locations of schools
4. To examine the interpersonal skills of high school students by their parents' jobs
5. To study the interpersonal skills of high school students by their parental education

Definitions of Key Terms

Interpersonal intelligence. A capacity of a person to comprehend the intentions, motivations, and wishes of other people, and as a consequence, to work better with others.

Interpersonal skills. The skills of nonverbal communication, reinforcement, questioning, reflecting, opening and closing, explanation, listening, self-disclosure, influencing, assertiveness, group-interaction and leadership are called interpersonal skills.

Non-verbal communication: A range of non-verbal signals including facial expression, gaze, gestures, posture, bodily contact, spatial behaviour, clothes and appearance, nonverbal vocalizations and smell.

Related Literature Review

Interpersonal Skills

The ability to communicate effectively is the interpersonal competence or skills. The greater a person's interpersonal skills, the more options a person will have for communicating with friends, lover's family; with colleagues on the job; and in just about any situation in which a person will communicate with another person. The greater the person's skills, the greater the person's power to accomplish successfully what a person wants to accomplish. In short, interpersonal skills includes knowing how interpersonal communication works and how to best achieve a person's purposes by adjusting his messages according to the context of the interaction, the person with whom are being interacted.

To apply interpersonal skills effectively in conversation, a person needs to be mindful of the unique communication situation of a person's available communication options, and of the reasons why one option is likely to be better than the others (Burgoon, Berger, & Waldron, 2000; Elmes & Gemmill, 1990).

In the world, interpersonal skills are thought as a very important human ability for both individual and work place development particularly in the present reality of life. Thus, researchers in many fields of studies have recommended for the necessities to provide the students in high school with this skill. In addition, several departments in business sector in both developed and developing countries in most parts of the world have identified and suggest that the teaching of these important skills should include interpersonal skills by integrating them into their school subjects. Therefore, it is essential for the teachers to ensure the transfer of these skills to the new generations of youth. Thus, the United Nations Education, Scientific and Cultural Organization, (2008) suggested that integrating interpersonal skills into the school subjects can help countries especially the developing nation to build and reinforce their education for the continuously changing world.

Generally, everyone needs to use interpersonal skills in the course of everyday living to be able to acquire the success and happiness of life. The range of what includes interpersonal skills is enormous, as it is earlier stated. They accepted the interpersonal skills as parts of the 21st century life skills for work (Deba, Jabol, Buntat & Hatib Musta'mal, 2014). Interpersonal skills are composed of a person's knowledge, attitudes, and skills related to at least six components: (1) being aware of one's own and others' mental situations, (2) managing feelings and behaving appropriately, (3) making communication effectively, (4) building good and meaningful

relationships, (5) cooperating well with others, and (6) solving the problem. Besides, interpersonal skills are the skills that are greatly concerned with the social development. So, social development is one of the factors needs to be considered in the fields of interpersonal skills.

Interpersonal skills are the life skills people apply every day to have communication and interaction with other people, not only individually but also in groups. People who try to develop good interpersonal skills are more successful in both their business and family lives.

Interpersonal Skills Include:

- Verbal Communication
- Non-Verbal Communication
- Listening Skills
- Negotiation
- Problem Solving
- Decision Making
- Assertiveness

Moreover, the persons who are good at interpersonal skills are good at interpersonal intelligence. Interpersonal intelligence is one of the components of Gardner's multiple intelligences. Interpersonal intelligence is the intelligence that operates primarily through person-to-person relationships and communication.

Method

Research Method

In this study, descriptive research design and survey method were used.

Participants of the Study

The target population of the study was the high school students from Yamethin Township and the participants were selected by simple random sampling technique. A total number of 988 high school students (421 males and 567 females) from five high schools in Yamethin Township were selected as the participants to respond the questionnaire in order to explore their interpersonal skills. The characteristics of the participants were described in Table 1 in detail.

Table 1 Characteristics of the Participants

	Grade 10		Grade 11		Total
	Males	Females	Males	Females	
School 1	50	58	20	22	150
School 2	37	43	21	24	125
School 3	79	102	47	82	310
School 4	29	30	11	42	112
School 5	49	40	78	124	291
Total	244	273	177	294	988

Research Instrumentation

Based on Interpersonal Skills Model of Hartley (2001), the instrument was developed. The sources of questionnaire were collected and modified from Skills You Need Website. Then, the 60-items questionnaires were constructed based Peter Hartley's Interpersonal Skills Model. It

includes twelve subscales and each subscale was composed of 5 items respectively. Of all the items, 16 items were reverse items. The instrument was scored on a 5-point Likert scale ranging from 1 to 5, indicating a response of Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree for positively stated items whereas the scoring was reversed for negatively stated items.

Firstly, the items were translated from English version to Myanmar version. After preparing the questionnaire, expert review was conducted for face validity and content validity by the experts in the field of Education, Educational Psychology and Educational Test and Measurement from Sagaing University of Education and Yangon University of Education. Next, revision in length, word length, and sentence length were carried out with the help of experts' review. Finally, pilot study was done with a sample of 43 Grade 10 students and 46 Grade 11 students to check whether the wording of statements had clarity and was relevant to the Grade 10 and Grade 11 students or not. Based on the pilot result, questionnaire was revised and applied.

From the result of the pilot study, the reliability coefficient of the questionnaire was 0.797. Thus, this Cronbach's alpha value indicates that this questionnaire has satisfactory reliability to assess high school student's interpersonal skills.

Data Analysis Procedure

The data collection was done with the randomly selected 988 high school students in their regular classrooms in four schools and the special hall room in one school by the permission of the headmasters during the second and third weeks of November, 2014. At the time of data collection, the researcher explained the participants about the purpose and the importance of their participation in this study. It was also informed that any collected data from them would be kept in confidence. Then, the questionnaires were distributed and the participants were requested to complete both the participants' demographic factors and the measuring tools without leaving any empty items. The required data such as student's date of birth were asked from the teachers of the concerned schools in Yamethin Township. Then, the collected data was analyzed by using descriptive analysis, independent samples *t*-test and one-way ANOVA with the help of SPSS (version 16).

Results and Findings

Interpersonal Skills of High School Students

The data collected from the survey was analyzed and computed by quantitative methods including both descriptive statistics and inferential statistics. Specifically, descriptive statistics was computed to identify the mean, standard deviation, frequency, minimum and maximum scores of high school students' interpersonal skills. Independent samples *t*-test was also used to examine whether there was significant difference in interpersonal skills by gender, grade, subject streams and schools at different locations. In addition, one-way ANOVA was conducted to inspect the significant differences between students' interpersonal skills and their ages, parental educational and parental job. The results and interpretation can be seen as follow;

Table 1 Descriptive Analysis for High School Students' Interpersonal Skills

Variables	<i>M</i>	<i>SD</i>	Minimum	Maximum
Nonverbal Communication	18.05	3.090	9	25
Reinforcement	18.84	2.378	9	25
Questioning	17.34	2.523	9	25

Variables	<i>M</i>	<i>SD</i>	Minimum	Maximum
Reflecting	16.10	2.514	8	25
Opening and Closing	16.87	2.545	7	25
Explanation	16.60	2.621	8	24
Listening	18.43	3.353	7	25
Self-disclosure	14.60	2.841	7	25
Influencing	16.79	2.660	7	25
Assertiveness	16.38	2.735	7	25
Group Interaction	17.00	2.905	6	25
Leadership	15.87	2.693	8	25
Interpersonal Skills	202.87	18.903	138	270

Table 1 indicated that the mean score and standard deviation for the whole sample were 202.87 and 18.903. The minimum and maximum scores of interpersonal skills were 138 and 270. The mean score of reinforcement was the highest among the other components of interpersonal skills.

Comparison of High School Students' Interpersonal Skills by Gender

Descriptive analysis was made to find out gender difference for interpersonal skills of the high school student. Independent samples *t*-test was conducted. The results were reported in Table 2.

Table 2 Results of Independent Samples *t*-test of High School Students' Interpersonal Skills by Gender

Variable	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Interpersonal Skills	Male	421	201.66	19.24	-1.736	986	.083
	Female	567	203.77	18.61			

According to Table 2, the mean values of interpersonal skills were 201.66 and 203.77 for the male and female students respectively. The results of independent samples *t*-test showed no significant difference in high school students' interpersonal skill by gender.

Comparison of High School Students' Interpersonal Skills by Grade

Table 3 The Results of Independent Samples *t*-test of High School Students' Interpersonal Skills by Grade

Variable	Grade	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Interpersonal Skills	Grade 10	517	201.87	17.81	-1.734	986	.083
	Grade 11	471	203.96	19.99			

According to Table 3, the mean score of Grade 10 students did not differ significantly from that of Grade 11 students on interpersonal skills ($p = .083$).

Comparison of High School Students' Interpersonal Skills by Location of Schools

The means, standard deviations and independent samples *t*-test were conducted to find out the difference in the interpersonal skills of high school students from urban schools and rural schools and the results were reported in Table 4.

Table 4 Result of Independent Samples *t*-test on High School Students' Interpersonal Skills by Location of Schools

Variable	Location of Schools	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>

Interpersonal Skills	Urban	585	204.86	16.71	2.003*	986	.045
	Rural	403	201.37	17.89			

* $p < .05$

Table 4 showed that a significant difference in mean scores at 0.05 level. Hence, high school students from urban schools seemed to possess significantly higher interpersonal skills than those from rural schools.

Comparison of High School Students' Interpersonal Skills by Father's Job

Descriptive analysis was conducted to know the mean and standard deviation of students' interpersonal skills by father's job.

Table 5 Means and Standard Deviations for High School Students' Interpersonal Skills by Father's Job

Variable	Father's Job	N	M	SD	Minimum	Maximum
Interpersonal Skills	Government's Servant	72	203.25	20.31	138	260
	Seller	36	195.97	22.48	145	240
	Merchant	55	203.45	22.01	143	252
	Farmer	682	203.34	18.33	150	270
	Others	143	201.92	18.48	156	255

Table 5 showed a slight difference in mean scores of high school students' interpersonal skills among the five types of father's job. One-way ANOVA was computed to find more valid evidence in investigating the differences of high school students' interpersonal skills by their father's job.

Table 6 Results of ANOVA for High School Students' Interpersonal Skills by Father's Job

Variable		Sum of Squares	df	Mean Square	F	p
Interpersonal Skills	Between Groups	2025.768	4	506.442	1.420	.225
	Within Groups	350635.127	983	356.699		
	Total	352660.895	987			

Table 6 showed that there was no significant difference of high school students' interpersonal skills in relation to their father's job ($F(4,983) = 1.420, p > .05$). So, it can be obviously identified that father's job has no significant effect on students' interpersonal skills. Similarly, See Sir (2014) found that there was no significant difference among students' social intelligence by fathers' jobs. In contrast, the previous research by Ahmetar (2012) revealed that significant difference was found on students' social skills by their parent's occupation.

Comparison of High School Students' Interpersonal Skills by Father's Education Level

To know the mean and standard deviation of students' interpersonal skills by father's educational level, descriptive analysis was conducted and the result can be seen in Table 7.

Table 7 Means and Standard Deviations for High School Students' Interpersonal Skills by Father's Education

Variable	Father's Education	N	M	SD	Minimum	Maximum
Interpersonal Skills	Primary	528	202.69	18.60	143	266
	Middle	365	202.19	18.74	145	270

	High	62	205.35	18.70	174	259
	Graduate	31	211.03	21.54	170	255
	Postgraduate	2	170.00	45.26	138	202

Table 7 shows that there were slight differences in high school students' interpersonal skills by their father's educational level. Students whose fathers are graduates possessed the highest mean scores (211.03). Hence, one-way analysis of variance (ANOVA) was carried out and the result can be seen in Table 8.

Table 8 ANOVA Results of High School Students' Interpersonal Skills by Father's Education Level

Variable		Sum of Squares	df	Mean Square	F	p
Interpersonal Skills	Between Groups	4795.097	4	1198.774	3.387**	.009
	Within Groups	347865.797	983	353.882		
	Total	352660.895	987			

** $p < .01$

Table 8 showed that there was significant difference of students' interpersonal skills regarded with their father's educational level ($F(4,983) = 3.387, p < .01$). Then, Post Hoc test was consequently carried out by Tukey HSD method and the result can be seen in Table 9.

Table 9 The Result of Tukey HSD for High School Students' Interpersonal Skills by Father's Education Level

Variable	Father's Education (I)	Father's Education (J)	Mean Difference (I-J)	p
Interpersonal Skills	Graduate	Postgraduate	41.032*	.024

* $p < .05$

Table 9 showed that the mean score of high school students with graduated father were significantly higher than that of students whose father finished postgraduate level with mean difference of 41.032 at 0.05 level.

Comparison of High School Students' Interpersonal Skills by Mother's Job

Descriptive analysis was used to find out the differences of high school students' interpersonal skills by their mother's jobs and the result can be seen in Table 10.

Table 10 Means and Standard Deviations of High School Students' Interpersonal Skills by Mother's Job

Variable	Mother's Job	N	M	SD	Minimum	Maximum
Interpersonal Skills	Government's Servant	32	209.12	23.45	175	255
	Seller	132	200.14	20.37	138	242
	Merchant	209	202.78	17.24	150	244
	Farmer	574	203.17	18.57	143	270
	Others	41	203.02	22.10	157	247

Table 10 shows that there was a slight difference in high school students' interpersonal skills by mother's job. Students whose mothers are government's servant possessed the highest mean scores (209.12). Then, one-way analysis of variance (ANOVA) was computed to find out whether high school students' interpersonal skills significantly differed by their mother's job. The result can be seen in Table 11.

Table 11 The Result of ANOVA of High School Students' Interpersonal Skills by Mother's Job

Variable		Sum of Squares	df	Mean Square	F	p
Interpersonal Skills	Between Groups	2285.566	4	571.391	1.603	.171
	Within Groups	350375.329	983	356.435		
	Total	352660.895	987			

Table 11 showed that there was no significant difference in high school students' interpersonal skills by their mother's job ($F(4, 983) = 1.603, p > 0.05$). Similarly, the previous research found that significant difference does not exist among the social intelligence of students with their mother's jobs (See Sir, 2014). Thus, it can be concluded that mother's job cannot have significant influence on high school student's interpersonal skills.

Comparison of High School Students' Interpersonal Skills by Mother's Education Level

Descriptive analysis was conducted to find out the mean and standard deviation differences in high school students' interpersonal skills by their mother's education level. The result can be seen in Table 12.

Table 12 Means and Standard Deviation of High School Students' Interpersonal Skills by Mother's Education Level

Variable	Mother's Education	N	M	SD	Minimum	Maximum
Interpersonal Skills	Primary	693	201.59	18.35	143	270
	Middle	226	205.30	19.71	138	260
	High	29	206.86	16.35	183	242
	Graduate	38	207.95	22.34	174	255
	Postgraduate	2	218.00	45.26	186	250

Table 12 showed that high school students whose mother with postgraduate level possessed the highest mean scores (218) among the others. It was also found that students whose mother with primary education level possessed the lowest mean scores (201.59).

Then, one-way analysis of variance (ANOVA) was performed to examine these mean differences were significant or not and the results can be seen in Table 13.

Table 13 ANOVA Results of High School Students' Interpersonal Skills by Mother's Education Level

Variable		Sum of Squares	df	Mean Square	F	p
Interpersonal Skills	Between Groups	4377.870	4	1094.468	3.089*	.015
	Within Groups	348283.024	983	354.306		
	Total	352660.895	987			

Table 13 showed that high school students' interpersonal skills significantly differed mother's education level ($F(4,983) = 3.089, p < 0.05$). Similarly, See Sir (2014) found that there was significant difference among the students' social intelligence according to their mothers' education level. Thus, it can be surely said that mother's education was one of the factors which can influence the interpersonal skills of high school students.

Conclusion

Discussion

It was found that High School students participated in the study were high in interpersonal skill level. There was no gender effect on interpersonal skills. Moreover, there was no grade difference in interpersonal skills. The students from the schools situated in the center and near the town have better interpersonal skills than the students from the schools away from the town and are difficult in communications. It may also be that the students from the urban schools have to make relationships with many kinds of people and friends than the students from the rural schools.

In accordance with the obvious results, it can be said that students' parental jobs cannot affect the interpersonal skills of high school students in the present study. According to the results, it can be said that students whose parents with graduate education level possess the highest interpersonal skills than the postgraduate, high school, middle school and primary school. So, it can be interpreted that graduate parents can give their children much time to train to possess good interpersonal skills than the higher educated parents and lower educated parents.

In this research, it was found that some students are good at some subscales and bad at the others. Specifically, the female students are better than the male students at nonverbal communication, reinforcement, questioning, reflecting, opening and closing and listening but the male students are better at explanation, self-disclosure, influencing, assertiveness, group interaction, leadership. The teachers and parents, the important participants of the education process, should know very well these skills and train the students and children to possess good interpersonal skills in their lives.

Briefly, interpersonal skill is one of the essential skills needed to success in education and workplace, ultimately in the life long process. So, the parents and teachers should be careful the factors which can cause the students' interpersonal skills better or worse and should help them to improve the students' interpersonal skills. It is one the main aims of education process of every country.

Limitations of the Study and Suggestions for Future Research

This study has some limitations that should be acknowledged. First, the research was conducted within a limited geographical scope, which may restrict the generalizability of the findings to students in other cultural, social, or economic contexts. Second, as the design was cross-sectional, it does not capture the developmental changes of interpersonal skills over time. Third, much of the data relied on students' self-reports, which may be influenced by social desirability bias and may not accurately reflect their actual behaviors. Additionally, the study focused on a limited set of variables, such as gender, grade, parental education, and school location, while other potentially important factors like personality traits, peer influence, extracurricular participation, or technology use were not examined. Finally, the classification of schools as urban or rural may oversimplify the nuanced differences between communities, as

factors such as school resources, teacher training, and social environments may also contribute to students' interpersonal skill development.

Future research should seek to address these limitations in several ways. Longitudinal studies are needed to better understand how interpersonal skills develop throughout adolescence and into adulthood. Expanding the sample to include students from diverse regions, cultures, and socio-economic backgrounds would improve the generalizability of findings. Employing mixed-methods approaches, such as combining surveys with interviews, classroom observations, or teacher evaluations, could provide more comprehensive insights into students' interpersonal competencies. Researchers should also explore additional factors, including peer relationships, extracurricular activities, digital communication habits, and personality traits, to gain a fuller picture of what shapes interpersonal skill development. Moreover, intervention-based studies could test the effectiveness of training programs designed by teachers and parents to strengthen specific subskills. Comparative research across different types of schools and educational systems, both within and across countries, may also shed light on structural and contextual influences on interpersonal skills.

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RELATIONSHIP BETWEEN IDENTITY STYLES AND SELF-ESTEEM OF GRADE 10 STUDENTS

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Abstract

The present study was carried out to investigate the relationship between identity styles and self-esteem of Grade 10 students. A total of Grade 10 students (386 male and 529 female) from Yangon and Bago Regions were selected as participants in this study. Data were collected by the use of Identity Styles Inventory-5 (ISI-5) developed by Berzonsky (2013) and Coppersmith's Self-esteem Inventory (1987 and 2012). According to *t*-test results, female students were more likely to use normative identity style than male students in this study. It was found that male students had higher personal self-esteem than female students in this study. And female students had higher level of self-esteem derived from parents, peers, and self-esteem (Personal, School academic, Parents, Peers) than male students in this study. With the aid of Pierson's solitary test, the results showed that among identity styles, informational style and normative identity styles had positive relationship with self-esteem and diffuse avoidant style had negative relationship with self-esteem respectively.

Keywords: Identity Style, Informational Style, Normative Style, Diffuse Avoidant Style, Commitment Style and Self-Esteem

Introduction

For the formation of total structure of a life, whole of the lifespan is important, but some of them are more. For numerous people, especially in contemporary industrialized societies, the process of identity development may be influenced either by an individualistic approach or by a collectivist approach. Individual usually think about future events and set some goals for them, they try to reach their goals. According to this perspective, individuals must develop a coherent identity framework to effectively manage and navigate their lives. This framework supports a sense of continuity and serves as a reference for making decisions, solving problems, and interpreting experiences and information. Across an individual's life, self-esteem is shaped by interpersonal relationships in diverse settings. Both formal and personal interactions with partners, family members, and peers impact self-esteem. Notably, the parent-child relationship plays a crucial role in the development of self-esteem during adolescence. Adolescence is a time of significant transformation that frequently leads to declines in positive self-perceptions and self-esteem. Adolescent as one of the most critical period of life, accompanies various changes in different dimensions and the vulnerable age group in the society. Adolescence is a time when both positive and negative developmental trajectories begin to take shape, in which there are dramatic changes, and as a result of such changes an individual's perception of the world is altered. The study of adolescence has consistently been a compelling area of research, with identity emerging as a particularly crucial topic during this developmental stage. Adolescent students face unique and diverse challenges, both personally and developmentally, that impact their identity styles and self-esteem. The study of adolescent has always been an interesting subject to explore. Identity is a central and critical aspect of adolescent development. Identity is a construct of psychological and social development, with its foundations being established during the years preceding adolescence. The core elements of identity encompass the selection of

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values, beliefs, and life purpose. Additionally, social interactions, particularly recognition within peer groups, play a crucial role in fostering a healthy identity and self-esteem. Efforts to enhance students' identity styles and self-esteem have proven effective in diminishing mal-adaptive behaviors and improving academic performance. Examining the relationship between identity styles and self-esteem of adolescent students with gender might be useful to gain some empirical evidence that might be of interest to counselors, psychologists, educators, teachers and parents. Such evidence would provide guidelines for how educators should interact with students in the school environment and how parents should engage with their children at home to foster the development of identity styles and self-esteem, as well as to assist in addressing challenges encountered at home, in school, and within the broader society.

Objective of the Study

To investigate the relationship between identity styles and self-esteem of Grade 10 students.

Research Questions

- ❖ Is there any significant difference in identity styles among Grade 10 students by gender?
- ❖ Is there any significant difference in self-esteem among Grade 10 students by gender?
- ❖ Is there any significant relationship between identity styles and self-esteem among Grade 10 students?

Definitions of Key Terms

Identity style. An identity style refers to the strategy that an individual prefers to use in processing, structuring, utilizing, and revising self-relevant information (Berzonsky 2013).

Information style. An information style is typical of adolescents who actively construct a sense of identity by seeking out and evaluating self-relevant information before making decisions and forming commitments (Berzonsky 2013)

Normative style. A normative style is typical of adolescents who rely on the prescriptions and expectations held by significant others (such as parents and authority figures) when confronted with identity-relevant problems (Berzonsky 2013).

Diffuse avoidant style. Diffuse avoidant style refers to procrastination and attempting not to deal with important life decisions (Berzonsky, 2013).

Commitment style. Commitment was defined as the extent to which individuals adhere to and invest in identity-relevant choice (Marcia, 1996).

Self-esteem. Self-esteem refers to an overall evaluation of one's worth or value as a person (James 2002).

Related Literature Review

Adolescence

The World Health Organization (WHO, 2013) defines adolescence as the period of transition (referred to as a "bridge" by between childhood and adulthood, ranging from the ages of 10 to 19. Universally, adolescence is seen as the onset of biological factors such as puberty; however, the duration and defining characteristics of this period may vary across time, cultures, and socioeconomic situations (World Health Organization [WHO], 2013). Making a clear distinction between the starting and ending points of adolescence is quite a challenge (Jacobs, 2014).

Identity formation in adolescents

The adolescent phase of development is often marked by a growing awareness of identity issues. Some of the concerns that are relevant to adolescents include gender roles, relationships, marriage, religion, politics, an own value system, independence from parents, social responsibility, and work roles (Luyckx et al., 2013). In addition, Wild and Swartz (2012) have identified six factors that also affect identity formation in adolescence: cognitive skills, personality, relationships with parents and peers, and opportunities to explore cultural and economic context. Erikson believed that identity formation is central to the adolescent phase, and that it can be achieved in the form of a coherent sense of one's roles and occupational pathway, one's self in relation to others, and one's values and purpose in life, whereas failure resulted in confusion within these self-aspects (Jacobs, 2014).

The word context can be defined as the interconnected conditions in which something exists or occurs. A key factor is that the school context provides a sense of continuity between childhood and adolescence, and therefore how they adapt and experience the site of formal education is important. Continuity and change have implications for development, and therefore the school environment is critical to development (Nweman, 1986).

Erik Erikson's Theory (Identity Development)

Erik Erikson formulated a theory of human development consisting of eight distinct stages: (1) Basic Trust versus Mistrust (from birth to one year), (2) Autonomy versus Shame and Doubt (from one to three years), (3) Initiative versus Guilt (from three to six years), (4) Industry versus Inferiority (from six years to adolescence), (5) Identity versus Role Confusion (during adolescence), (6) Intimacy versus Isolation (in young adulthood), (7) Generativity versus Stagnation (in middle adulthood), and (8) Integrity versus Despair (in late adulthood). According to Erikson (1968), the process of identity formation can be tracked through all the stages of development (Jacobs, 2014).

Relationship Between Identity Styles and Self-Esteem of Adolescents

Erikson (1968) expressed self-esteem is a byproduct of identity development, which arises from effectively navigating the challenges associated with each developmental stage throughout life. Consequently, a person's sense of progress, personal growth, and successful engagement with life's tasks contributes to their overall feelings of self-worth. Self-esteem includes healthy identity formation because students with high self-esteem function effectively in a variety of situations, including school contexts (Meece, 2002).

Adolescents who use an information-oriented identity style have a strong need to engage in adaptive cognitive activities, a willingness to consider alternative ideas (Berzonsky & Sullivan, 1992), and they use a vigilant decisional strategy (Berzonsky & Ferrari, 1996). They tend to use problem-focused and seeking-social-support coping strategies, and do not rely on wishful thinking, emotional distancing, or anxious reactions (Berzonsky, 1992). Information-oriented adolescents possess the life-management skills needed to effectively structure their lives and manage their time to deal with academic demands in a responsible, self-regulated fashion (Berzonsky & Kuk, 2000). They use effective strategies such as expecting success, seeking social support, and do not engage in task-irrelevant behavior. As a result, these adolescents demonstrate academic independence, active engagement in their education, and elevated levels of

self-esteem. They also critically assess the extent to which specific religious content aligns with their individual self-concepts, resulting in the interpretation of religious material through a personal and symbolic lens. An information-oriented identity style exhibits a negative correlation with the need for closure, as well as with indicators of prejudice and conservatism. As a result, adolescents who adopt this identity style characterize themselves as tolerant and report having open, mature, and sincere relationships. Adolescents with an information-oriented identity style are less likely to exhibit conduct or hyperactivity disorders. Overall, an information-oriented style appears to be linked with adaptive developmental outcomes, both at the individual and interpersonal levels. Adolescents who adopt a normative identity style manage stressors through avoidance strategies, such as distancing themselves and engaging in wishful thinking. They show increased debilitating and decreased facilitative anxiety reactions (Berzonsky, 1992). This is consistent with their inflexible and narrowly focused approach to information processing. Such defensive attitudes may serve the role of protecting the individual from having to deal with dissonance-inducing experiences and information that might threaten or invalidate critical self-views (Berzonsky & Sullivan, 1992). Normative adolescents hold firm personal commitments, suggesting that they may foreclose their options and use relatively automatic means of resolving decisional tasks (Berzonsky & Ferrari, 1996). As a consequence, their sense of academic purpose is more externally based and inflexible (Berzonsky & Kuk, 2000). A normative style is characterized by a passive, submissive, and obedient orientation towards important authority and identification figures (McLean et al., 2012). Perhaps as a consequence of this strong endorsement of social norms and conventions, normative individuals are at low risk for problem behaviors (Adams et al., 2001). They have also been found to report high levels of self-esteem (Jenaabadi & Dehabasi, 2014). In summary, a normative identity style functions as a double-edged sword: while individuals with this style generally exhibit favorable personal adjustment outcomes, such as high levels of commitment and self-esteem, it also has a negative aspect concerning interpersonal attitudes and behaviors. Due to their rigid cognitive patterns and adherence to rules, individuals with a normative identity style exhibit intolerance and struggle to establish honest and mature relationships. Adolescents who employ a diffuse-avoidant identity style utilize emotion-focused coping strategies, including distancing, wishful thinking, and methods for reducing tension. They do not use a problem-focused approach (Berzonsky, 1999), but they have a more situation-specific approach to problem solving and decision making (Berzonsky, 1992). Diffuse-avoidant adolescents show pre-decisional panic, low cognitive confidence, procrastination, and maladaptive decisional strategies such as avoidance, excuse making, rationalization (Berzonsky, 1997), expecting to fail, limited social support seeking, and a high level of task-irrelevant behavior.

Adolescents with a diffuse-avoidant identity style encounter social difficulties, struggle to establish and sustain a supportive social network, and exhibit immature interpersonal relationships. They have low scores on academic autonomy or educational involvement (Berzonsky, 1989). These adolescents have an increased risk for a variety of difficulties, including low self-esteem, high levels of depression and neuroticism, early drug and alcohol use, and conduct and hyperactivity disorder behaviors. In summary, the diffuse-avoidant identity style is associated with a consistently maladaptive pattern of outcomes and related variables. Although

previous research on the relationship between identity and self-esteem has predominantly used cross-sectional designs, many scholars have interpreted these findings as supporting a primary pathway from identity to self-esteem, known as the identity main-effects model. Among others, stress that this reversed path also merits empirical attention because self-esteem could influence identity processes. High self-esteem could be a resource for making strong identity commitments and a sense of competence over time (Luyckx et al., 2013).

Method

Sample and Scope of the Study

The study of identity styles of Grade 10 students and its correlation with their self-esteem was conducted by descriptive survey method.. A total of 915 Grade 10 students (386 male and 529 female) were selected as a sample from 8 High Schools in Yangon and Bago Regions.

Research Instrumentation

The study was conducted with two instruments, Identity Style Inventory—Version 5 (ISI-5, 2013) and Coopersmith Self-esteem Inventory (1987 and 2012) were used in this study to explore Grade 10 students' identity styles and self-esteem. ISI-5 composed of 36 items, consisting 9-items Informational-style scale, 9-items Normative-style scale, 9-items Diffuse-avoidance style scale and 9-items Commitment style. Each item was assessed along a five-point Likert scale ranging from (1) strongly disagree: to (5) strongly agree. The internal consistency of Cronbach's alpha was 0.75. Coopersmith Self-esteem Inventory (1987 and 2012) contained 50 items to assess students' self-esteem. The response type for each item was Yes / No type questions and including personal self-esteem (27-items), self-esteem derived from school academic (7-items), self-esteem derived from parents (8-items) and self-esteem derived from peers (8-items). The internal consistency of Cronbach's alpha was 0.78.

Two instruments were modified into Myanmar version. After developing the instruments, expert review was conducted for face validity and content validity by five experienced teachers from Department of Educational Psychology in the last week of October, 2014. As an initial phase of this study, pilot study was conducted on the second week of the December, 2014 with a sample of 100 Grade 10 students from Shwe Pyi Thar, in order to explore whether the questionnaires were clear enough in Myanmar questionnaires, the researcher improved and modified the weak points, misunderstanding of wording and phrases of some items on which seemed to be vague. Before the test administration, students were provided necessary instructions and explanations on how to complete the questionnaire. Students answered the questionnaire within 45 minutes. The instruments were distributed during their class time and returned back. All participants completed two instruments (ISI and SEI) and demographic information.

Data Analysis and Research Findings

Table 1 Descriptive Statistics of Grade 10 Students' Identity Styles

Variables	Number	Minimum	Maximum	Mean	SD
Informational style	915	17	45	33.75	4.46
Normative style	915	18	45	32.92	4.88
Diffuse-avoidant style	915	11	43	26.15	6.29
Commitment style	915	14	45	31.55	5.35

From the descriptive analyses, it was revealed that the mean scores of Grade-10 students' identity styles were IS=33.75, NS=32.92, DS= 26.15 and CS=31.55 respectively.

IS=informational style, NS=Normative Style, DS=Diffuse avoidant Style, CS=Commitment Style

Table 2 ANOVA Results in Differences of Identity Styles of Grade 10 Students by Schools

Variables	Sum of Square	Mean Square	<i>F</i>	<i>p</i>
Informational style	Between Groups	301.28	16.988**	.000
	Within Groups	17.74		
Normative style	Between Groups	337.42	15.652**	.000
	Within Groups	21.56		
Diffuse-avoidant style	Between Groups	713.06	20.686**	.000
	Within Groups	34.47		
Commitment style	Between Groups	277.63	10.414**	.000
	Within Groups	26.66		

Note. ** $p < .001$ level

To obtain more detailed information of a particular school, Post-Hoc test was executed by Tukey-HSD method and it was found that identity styles among schools were significantly different at 0.05 level.

Table 3 Post-Hoc Analysis of Grade 10 Students' Identity Styles by Tukey Method

Variables	(I) School	(J) School	Mean Differences	<i>p</i>
Informational style	School-1 (Ygn)	School-3 (Ygn)	5.645*	.000
		School-4 (Ygn)	2.601*	.001
		School-6 (Bago)	1.928*	.01
		School-8 (Bago)	2.290*	.000
	School-2 (Ygn)	School-3 (Ygn)	4.012*	.000
Informational style	School-1 (Ygn)	School-3 (Ygn)	5.645*	.000
		School-4 (Ygn)	2.601*	.001
		School-6 (Bago)	1.928*	.01
		School-8 (Bago)	2.290*	.000
	School-2 (Ygn)	School-3 (Ygn)	4.012*	.000
		School-4 (Ygn)	-3.043*	.000
		School-5 (Bago)	-4.319*	.000
		School-6 (Bago)	-3.995*	.000
	School-3 (Ygn)	School-8 (Bago)	-3.354*	.000
		School-3 (Ygn)	2.518*	.000
		School-8 (Bago)	-2.089*	.009
	School-2 (Ygn)	School-4 (Ygn)	-2.914*	.000
		School-7 (Bago)	-3.390*	.000
		School-8 (Bago)	-4.415*	.000
	School-3 (Ygn)	School-4 (Ygn)	-3.105*	.000
		School-5 (Bago)	-3.105*	.000
		School-7 (Bago)	-3.582*	.000
		School-8 (Bago)	-4.607*	.000
	School-6 (Bago)	School-8 (Bago)	-2.744*	.000

Variables	(II) School	(K) School	Mean Differences	<i>p</i>
Diffuse-avoidant style	School-1 (Ygn)	School-4 (Ygn)	-2.880*	.001
		School-5 (Bago)	3.221*	.002
		School-6 (Bago)	3.732*	.000
		School-7 (Bago)	-2.831*	.020
	School-2 (Ygn)	School-3 (Ygn)	-2.447*	.003
		School-4 (Ygn)	-3.418*	.000
	School-3(Ygn)	School-5 (Bago)	5.130*	.000
		School-6 (Bago)	5.641*	.000
		School-8 (Bago)	2.970*	.001
	School-4 (Ygn)	School-5 (Bago)	6.101*	.000
		School-8 (Bago)	3.941*	.000
	School-5 (Bago)	School-7 (Bago)	-6.051*	.000
		School-8 (Bago)	-2.160*	.060
	School-6 (Bago)	School-7 (Bago)	-6.652*	.000
		School-8 (Bago)	-2.160*	.003
Commitment style	School-1 (Ygn)	School-3 (Ygn)	2.944*	.000
		School-6 (Bago)	4.322*	.000
		School-7 (Bago)	4.670*	.000
		School-8 (Bago)	4.151*	.000
	School-2 (Ygn)	School-6 (Bago)	2.435*	.006
		School-7 (Bago)	2.784*	.004
		School-8 (Bago)	2.264*	.010
	School-4 (Ygn)	School-6 (Bago)	2.205*	.038
		School-7 (Bago)	2.554*	.023
	School-5 (Bago)	School-6 (Bago)	2.375*	.009
		School-7 (Bago)	2.724*	.006
		School-8 (Bago)	2.204*	.016

Note.* $p < 0.05$, ** $p < .001$

According to Table 3, there were significance differences in Identity styles of Grade 10 students among schools.

Table 4 Comparison of Identity Styles of Grade-10 students' by Gender

Variables	Gender	N	M	<i>t</i>	<i>df</i>	<i>p</i>
IS	male	386	33.83	.472	913	.637
	female	529	33.69			
NS	male	386	31.48	-7.797	913	.000
	female	529	33.96			
DS	male	386	26.37	-0.919	913	.358
	female	529	25.98			
CS	male	386	31.35	-0.982	913	.326
	female	529	31.70			

Note. *** $p < .001$

Table 4 revealed that there were significant differences in normative identity style of Grade 10 students by gender at .001 level. It was observed that female students' normative style were higher than male students. So it can be interpreted that female students in this study tend to use normative identity style than male students. But there were not statistically significant differences in informational style, diffuse avoidant style and commitment style by gender.

Table 5 Descriptive Statistics of Grade 10 Students' Self-Esteem

Variables	N	Minimum %	Maximum %	Mean %	SD
Personal	915	0	100	64.23	14.62
School academic	915	0	100	73.71	19.04
Parents	915	0	100	69.99	18.67
Peers	915	0	100	75.94	16.02
Self-esteem (total)	915	29.25	95.37	71.00	10.18

From the descriptive analyses, it was revealed that the mean percentage of total self-esteem was 71% and thus, self-esteem of Grade 10 students seemed to be satisfactory.

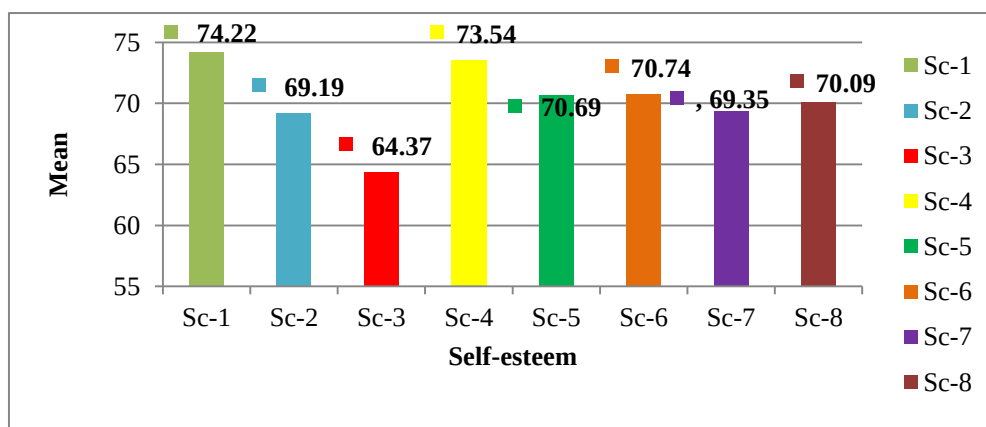


Figure 4.1 Mean Comparison of Grade 10 Students' Self-Esteem

Self-esteem (total)= personal self-esteem, school self-esteem, parental and peer self-esteem.

One way ANOVA was conducted to find out the differences among selected schools with regard to Grade 10 students' self-esteem.

Table 6 ANOVA Results in Differences of Students' Self-esteem of Grade 10 Students by Schools

Variables	Sum of Square	Mean Square	<i>F</i>	<i>p</i>
Personal	Between Groups	25960.466	20.34**	.000
	Within Groups	165352.343		
School academic	Between Groups	10818.258	4.38**	.000
	Within Groups	320345.788		
Parents	Between Groups	30109.435	13.74**	.000
	Within Groups	284042.546		
Peers	Between Groups	4508.798	2.54	.14
	Within Groups	230146.939		
Self-esteem (total)	Within Groups	8151.950	12.2**	.000
	Between Groups	86576.047		

Note. * $p < 0.05$

To obtain more detailed information of a particular school, Post-host Test was also conducted using Tukey-HSD method.

Table 7 Post-Hoc Analysis of Grade 10 Students' Self-Esteem (total) Tukey HSD Method

Variable	(I)School	(J)School	Mean Differences	<i>p</i>
Self-esteem (total)	Sc-1 (Ygn)	Sc-2 (Ygn)	5.0245*	.004
		Sc-3 (Ygn)	9.8488**	.000
		Sc-4 (Ygn)	8.534*	.02
	Sc-2 (Ygn)	Sc-3(Ygn)	4.824*	.005
		Sc-4 (Ygn)	-4.34*	.042
		Sc-8 (Bago)	-3.76**	.000
	Sc-3 (Ygn)	Sc-4 (Ygn)	-9.164**	.000
		Sc-5 (Bago)	-7.814**	.000
		Sc-6 (Bago)	-6.196**	.000
		Sc-7 (Bago)	-7.394**	.000
		Sc-8 (Bago)	-8.584**	.000

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 7 described the significance differences of self-esteem of Grade-10 students among schools.

Table 8 Comparison of Grade 10 Students' Self-Esteem by Gender

Variables	Gender	N	Mean %	SD	<i>t</i>	<i>df</i>	<i>p</i>
Personal	male	386	67.69	13.13	6.193***	913	.000
	female	529	61.82	14.89			
School academic	male	386	73.83	18.85	.171	913	.864
	female	529	73.62	19.19			
Parents	male	386	64.70	17.33	-7.715***	913	.000
	female	529	73.99	18.43			
Peers	male	386	74.58	16.29	-2.204*	913	.028
	female	529	76.94	15.76			
Self-esteem (total)	male	386	70.20	9.89	-2.037*	913	.042
	female	529	71.59	10.36			

*** $p < 0.001$

According to Table 8, it can be interpreted that female students have higher self-esteem derived from parents, peers and self-esteem (total) than male students. And also can be interpreted that male students' personal self-esteem was higher than female.

The major objective of this study is to explore the relationship between identity styles and self-esteem of Grade 10 students. To investigate whether there was a statistically significant relationship between the identity styles and self-esteem of Grade 10 students, the Bivariate correlation was computed.

Table 9 Correlation Between Identity Styles and Self-Esteem of Grade 10 Students

	Personal self-esteem	School	Parents	Peers	Self-esteem (total)
IS	.176**	.089**	.283**	.121**	.258**
NS	.083**	.127**	.722**	.103**	.458**
DS	-.157**	-.135**	-.027	-.050	-.150**
CS	.135**	.180**	.182**	.117**	.262**

Note. ** $p < .01$

IS=informational style, NS=Normative Style, DS=Diffuse avoidant Style, CS=Commitment Style

Self-esteem (total) = personal self-esteem, self-esteem derived from school academic, parental self-esteem and self-esteem derived peers.

According to Table 9, both of the students' informational style, normative style are positively correlated with their self-esteem (total=personal, school, parents, peers), personal self-esteem, self-esteem derived from school academic, self-esteem derived from parents and peers. However, among these two identity styles, normative style is more positively correlated with total self-esteem and Parental self-esteem. Diffuse-avoidant style is negative significant relationship with self-esteem (total=personal, school academic, parents, peers), personal self-esteem, self-esteem derived from school academic, self-esteem derived from parents and peers.

Conclusion

The primary focus of this study was to find out the identity styles and self-esteem of Grade 10 students who were studying at Grade 10 and then to investigate the relationship between identity styles and self-esteem of Grade 10 students. In this study, an investigation was conducted by using the quantitative method and a total of 915 Grade 10 students from Yangon and Bago Regions participated as the sample. To investigate students' identity styles, the researcher used identity style inventory (ISI-5), 2013. This questionnaire consists 36 items composing four subscales; informational style (9 items), normative style (9 items), diffuse-avoidant style (9 items) and commitment style (9 items). Also, Grade 10 students' self-esteem was explored by mixing and developing Self-Esteem Inventory-Long Form (SEI), 1987 and the school short-form Coopersmith's Self-esteem Inventory designed by Hills, P, R., & Francis, 2013). This instrument includes four subscales; personal self-esteem, self-esteem derived from school academic, parents, peer. These two instruments were modified into Myanmar version. After developing the instruments, expert review was conducted for face validity and content validity by five experienced teachers from Department of Educational Psychology in the last week of October, 2014. Then during the third week of November 2014, a pilot testing was conducted on 100 Grade 10 students from Shwe Pyi Thar, Yangon.

The main objective of this study was to investigate the relationship among identity styles and self-esteem of Grade 10 students. The findings pointed out that students' identity style is strongly correlated with their self-esteem at .05 level and .01 level. So it can be concluded that students who have higher levels of self-esteem tend to possess informational style and also

possess normative style. Students who possess lower level of self-esteem tend to possess diffuse-avoidant style.

The second objective of this study was to find out the gender differences in identity styles of Grade 10 students. In order to observe gender differences on students' identity style, *t*-test was employed. *t*-test result revealed that the significant difference was not found in the informational style, diffuse-avoidant style and commitment style. It also revealed that the significant differences were found in the normative style by gender. According to the finding of the study, female students were more likely to use normative style than male students in this study. This finding was consistent with Myanmar culture. In order to observe gender differences on students' self-esteem, *t*-test was employed. *t*-test result revealed that the significant differences were found in the self-esteem (personal esteem, self-esteem derived from school academic, parents and peers) by gender. Therefore, it can be concluded that male students in this study have higher self-esteem than female students and male students' personal self-esteem, self-esteem derived from parents, peers are higher than female students.

Moreover, the primary objective of this study was to investigate the relationship between identity styles and self-esteem of Grade 10 students. The Bivariate correlation was conducted. As a result, both of the informational style and normative style were positively correlated with the self-esteem and its components (personal, self-esteem derived from school academic, parents and peers). This finding was consistent with the findings of Natasi et al., (2005) which stated that there was a significant relationship between self-esteem components (personal self-esteem, self-esteem derived from school academic, parents and peers) and identity styles. Informational and normative identity styles have positive significant relationship with self-esteem, on the other hand, there was a negative relationship between self-esteem and diffuse-avoidant identity style. And they showed that people with informational style have higher self-esteem than people with normative style. Furthermore, the findings in this study are consistent with the results of Luyckx et al., (2011) which stated that there was a positive significant relationship between self-esteem and normative and informational identity styles, and a negative significant relationship between diffuse avoidant style.

Other researchers have confirmed that informational and normative identity styles can positively influence self-esteem, while the diffuse-avoidant identity style has been found to predict self-esteem negatively. Furthermore, the findings of Erigit and Kerpelman (2009) stated that people with informational and normative identity styles had a positive understanding of themselves, while people with diffuse-avoidant style have negative understanding. Self-esteem includes healthy identity formation because students with high self-esteem function effectively in a variety of situations, including school contexts (Ervin & Stryke, 2001).

Discussion and Recommendations

Identity development is the primary task of adolescent. Erikson believed that identity formation is central to the adolescent phase, and that it can be achieved in the form of a coherent sense of one's roles and occupational pathway, one's self in relation to others, and one's values and purpose in life, whereas failure resulted in confusion within these self aspect (Jacobs, 2014). Establishing a coherent identity framework provides lifelong stability and allows individuals to derive meaning from their life experiences. Educators can support healthy identity development

by fostering safe learning environments that enable students to explore their identities without undue pressure. In a secure learning environment, educators should accommodate variations in adolescent behavior and refrain from labeling students based on their conduct. By establishing secure learning environments in which students feel free to explore their identities, educators can assist students in broadening their perspectives on their potential future selves. Instructional methods that promote exploration of personal identity are likely to facilitate adolescents in developing an informational identity style. This style is characterized by active questioning, elevated self-esteem, and overall psychological well-being. Experiencing success is a crucial factor. Self-esteem involves a balanced perspective, navigating between excessive defensiveness and undue egotism, as well as between overly negative and excessively positive self-assessments. Adolescence is a period characterized by fluctuations in self-esteem.

The development and formation of identity and self-esteem are crucial factors that significantly influence an individual's life trajectory, particularly during adolescence. These two factors are intricately connected and are regarded as fundamental issues in the processes of development and personality formation. It can be concluded that adolescence encompasses rapid changes across physical, cognitive, psychological, and behavioral domains. This developmental stage is particularly significant as it influences how teenagers process and reflect on both past experiences and future aspirations. Majority of educational problems are rooted in confused, and diffuse-avoidant style, because teenagers who does not know himself/herself, cannot find a way. The study's findings may establish a foundation for implementing specific preventive or corrective measures.

Limitations of the Study

Practical and methodological issues were sources of limitations in this study. In the case of a study of relationship between identity styles and self-esteem of Grade 10 students, longitudinal study was more desirable. Due to the scarcity of time and resources, such design was impossible for this study. Short time period could be taken as another limitation for this thesis. The research area was restricted to Yangon Region and Bago Region. So, the recruited scope of this study was the limitation of this study.

The results could have been influenced by the atmosphere while responding to this questionnaire. It would be better if follow-up studies could be conducted for strong evidence. Despite these limitations, results of this study might provide a base for certain preventive or corrective measures to be carried out. Therefore, school consultants should aid teenagers in recognizing good identity styles and self-esteem. Examining students' identity styles and self-esteem facilitates addressing the diverse needs and issues faced by adolescents. This investigation aids in identifying strategies to meet their needs and develop solutions to their problems.

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PEER VICTIMIZATION AND SCHOOL CONNECTEDNESS OF ADOLESCENTS

Shwe Sin Tun¹, Su Mon Oo²

Abstract

Victimization is commonly recognized as a hostile behavior characterized by a power imbalance and frequent occurrences. In this instance, the victim is the object of persistent targeting; the action is repetitive. The main purpose of this study was to investigate peer victimization and school connectedness of adolescents. Firstly, this study was to validate the Multidimensional Peer Victimization Scale (MPVS) in a sample of adolescents from Basic Education in Myanmar. Furthermore, this study aimed to investigate the difference in peer victimization and school connectedness of adolescents by gender and age. The quantitative study was conducted to explore the peer victimization and school connectedness of adolescents. The sample for this study was chosen from four Basic Education High Schools Located in Kayin State and Yangon Region. A total of 600 adolescents were selected from schools. Multidimension Peer Victimization Scale (MPVS-24) was by Fontaine et al. (2018) and Measurement of School Connectedness (MOSC) was by Sugar (2012) were used. The results of the confirmatory factor analysis indicated that the model fits with two-factor structure model (Chi-Square = 642.131, RMSEA = 0.055, TLI = 0.901, CFI = 0.905, $p < 0.001$). Moreover, this study confirmed the convergent and discriminant validity of the scale. The internal consistency of scale and subscales were satisfactory results. The results of independent samples *t*-test revealed that significant differences were found on peer victimization and school connectedness by gender. ANOVA results revealed that significant differences were found on peer victimization and school connectedness by age. The findings revealed that there was a negatively moderate correlation between peer victimization and school connectedness of adolescents. In addition, regression analysis showed that peer victimization is a significant predictor of school connectedness.

Keywords: Adolescent, Peer Victimization, School Connectedness

Introduction

As children enter puberty, their peer group begins to take on greater significance in their lives. Adolescence, according to Smith, Cowie, and Blades (2003), is a period of transition when a person moves from childhood to adulthood. Peers multiply significantly when an individual matures from childhood to adolescence. Peers can inspire teenagers to excel academically and to participate in extracurricular activities. However, a child encounter with rejection from peers can also have negative effects, since it may lead to victimization or bullying.

Harassment and bullying are terms frequently used to describe peer victimization. Major social issues that impact adolescents and children everywhere in the world include peer victimization and school bullying. The majority of students in schools frequently experience peer victimization, also known as bullying, which is an intentional hostile action meant to frighten and injure others by threatening them with more aggression. As to Adomeh, Ojeli, and Omi-Ujuanbi (2020), peer victimization occurs when a victim who is perceived as comparatively weak is intentionally targeted by a group of peers or a peer acting from a position of strength or power. In their opinion, the perpetrator objective is also to damage the victim's reputation and/or social connections. Another way to conceptualize peer victimization is as an active label for when

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someone else violates someone else rights. It affects all societal segments and is especially prevalent in school-age adolescents, extending across generations.

Children need to feel comfortable, protected, and secure in their surroundings in order to succeed in school. School connectedness is referred to as students actively participating in the social and academic programs offered by their school because they believe that teachers and other adults are important to both their personal growth and education. It represents students' perceptions that adults and peers at the school value, care about, and encourage both their academic success and personal well-being.

If school is the place of peer victimization, as a result, the victims face difficulty adjusting, loneliness, and a desire to avoid school since they perceive it as an unsafe environment (Olweus, 1993). This study looked at adolescent peer victimization and school connectedness in Myanmar. This research was crucial since the results may help identify the ways in which peer victimization impacts these individuals. This understanding could be useful to educators, parents, and researchers when designing interventions to protect the wellbeing of adolescents who are victimized by their peers.

Purposes of the Study

The main purpose of this study was

- to examine peer victimization and school connectedness of adolescents.

The specific objectives were

- to validate Multidimensional Peer-Victimization Scale of adolescents across Basic Education in Myanmar
- to study peer victimization of adolescents by gender and age
- to examine school connectedness of adolescents by gender, and age
- to investigate the relationship between peer victimization and school connectedness of adolescents
- to predict school connectedness of adolescents by peer victimization

Definitions of Key Terms

Adolescent. Adolescent is the developmental period between childhood and adulthood and is characterized by substantial physical, cognitive, social and affective changes (Lerner & Steinberg, 2004).

Peer Victimization. Peer Victimization as experience of being a target of a peer's hurtful teasing and aggressive behaviors (Hawker & Boulton, 2000).

School Connectedness. School connectedness is defined as the extent to which students feel personally accepted, respected, included and supported by others in the school social environment (Goodenow, 1993).

Related Literature Review

Peer Victimization

Peer victimization is a significant component of school violence, which contributes to children fear of learning and impeding their ability to study. Children at school face this severe problem, for which they receive limited adult support. According to Smith (2000), it was said that the behavior was an unprovoked assault that injured someone physically, socially, or

psychologically. Peer victimization, according to Olweus (1994), is a problem that arises when a student is subjected to unfavorable acts by one or more other students on frequently.

Types of Peer Victimization

Physical victimization. The frequency with which the child has experienced physical abuse, such as being kicked or punched, is referred to as physical victimization. It encompasses all forms of physical aggression and attack, as well as possibly sexual abuse (Panwar, 2021). Physical victimization can take several forms, including actions such as pinching, kicking, shoving, striking, destroying, or stealing someone else property. Physical victimization can be defined as an attack on one physical integrity (Hawker and Bulton, 2002).

Verbal victimization. Using force to criticize, insult, or disapprove of someone else is known as verbal victimization. It is a destructive kind of communication that aims to undermine the other person self-esteem and provoke negative emotions in them, characterized by underlying anger and hostility (Panwar, 2021). To others, it represents a deliberate pattern of action intended to control, manipulate, or take revenge.

Attacks on property. Attacks on property include activities like stealing or causing harm to personal belongings, either with or without the victim's awareness (Panwar, 2021). Stealing and inflicting damage to other people property are a few of examples.

Social Rebuff. The act of socially rebuffing someone by remaining silent and aloof while expressing displeasure or disapproval is known as rebuff (Panwar, 2021). Examples include of ignorance, refuse to talk, etc.

Social manipulation. Bullies that manipulate situations and social groups to their advantage and harm the people they target. By manipulating social networks, a bully would spread false information about the people they harm. These could be made up, or they could be false with a hint of truth mixed together with exaggerated or created facts (Panwar, 2021).

Electronic victimization. It is willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices (Ashley Abramson, 2022).

School Connectedness

According to this study, a student's relationship to school is referred to as school connectedness, which is described as a component of a school environment that fosters a sense of belonging and acceptance (Blum, 2005). It covers the feelings of closeness that student have to the personnel and environment at school as well as their experiences of care at school (Smith, 2004). It has dealt with the students comfort level at school and comes from the feeling of adult care for them. Positive attitudes toward learning, a sense of belonging within the school, and positive relationships with teachers and other students are all components of school connectedness. It comprises the student experiences of attending class and feeling connected to the school environment, and it reflects of how attached is the student to his or her school (Liu & Wang, 2005).

Students cognitive, emotional, and behavioral outcomes in school are related with their sense of school connectedness. According to Brookmeyer et al. (2006), adolescents who

experience a sense of belonging to their school are less likely to engage in violent or delinquent behavior, drink alcohol, or use drugs. According to Goodenow and Grady (1993), students who feel linked to school have low levels of physical and mental suffering during adolescence, high levels of academic motivation, and low levels of misbehavior in the classroom. Students' cognitive, emotional, and behavioral outcomes in school are related with their sense of school connectedness. According to Brookmeyer et al. (2006), adolescents who experience a sense of belonging to their school are less likely to engage in violent or delinquent behavior, drink alcohol, or use drugs.

Method

Research Method

Questionnaire survey method and quantitative research design were used in this study.

Sampling

Simple random sampling technique was used in this study. The participants of this study were grade six, grade nine and grade eleven adolescents who study in No. (3), Basic Education High School and No. (4), Basic Education High School in Hpa-an from Kayin State; and No. (1) Basic Education High School in Hlegu; and No. (1), Basic Education High School in North Okkalapa from Yangon Region during 2023-2024 AY. A total of 600 adolescents participated in this study. Among adolescents, 300 are males and the rest are females.

Research Instrumentation

Multidimensional Peer-Victimization Scale (MPVS-24) questionnaire was used to explore adolescents' peer victimization. This instrument was developed by Fontaine et al. (2018). This instrument is with a total of 24 items questionnaire. Item numbers (1, 5, 9, 13) stand for physical victimization subscale, item numbers (3, 7, 11, 15) stand for verbal victimization subscale, item numbers (2, 6, 10, 14) stand for social manipulation subscale, item numbers (4, 8, 12, 16) stand for attacks on property subscale, item numbers (17, 19, 21, 23) stand for electronic victimization subscale and item numbers (18, 20, 22, 24) stand for social rebuff subscale. Three-point Likert scale was used (1= Not at all, 2= Once, 3= More than once).

Measurement of School Connectedness (MOSC) questionnaire was used to explore adolescents' school connectedness. This instrument was developed by Sugar (2012). This instrument with a total of 24 items questionnaire. Item number 1 to 9 stands for being connected and liked by students, item number 10 to 16 stands for belonging, item number 17 to 20 stands for communication and item numbers 21 to 24 stands for being liked by teachers. Four-point Likert Scale was used (1= strongly disagree, 2= disagree, 3= agree, 4= strongly agree).

Data Collection Procedure

After preparing the measurement scale, expert review was conducted for content validity by 8 experts from Yangon University of Education who have special knowledge and close relationship with the field of Educational Psychology. As an initial phase of this study, the pilot testing was carried out at the second of August 2023. Pilot testing was conducted with 60 adolescents from No. (3) Basic Education High School Bahan from Yangon Region and in the light of their responses, some items are revised. Based on the result of the pilot study, the researcher improved the wording or the items and changed kinds of questions which are

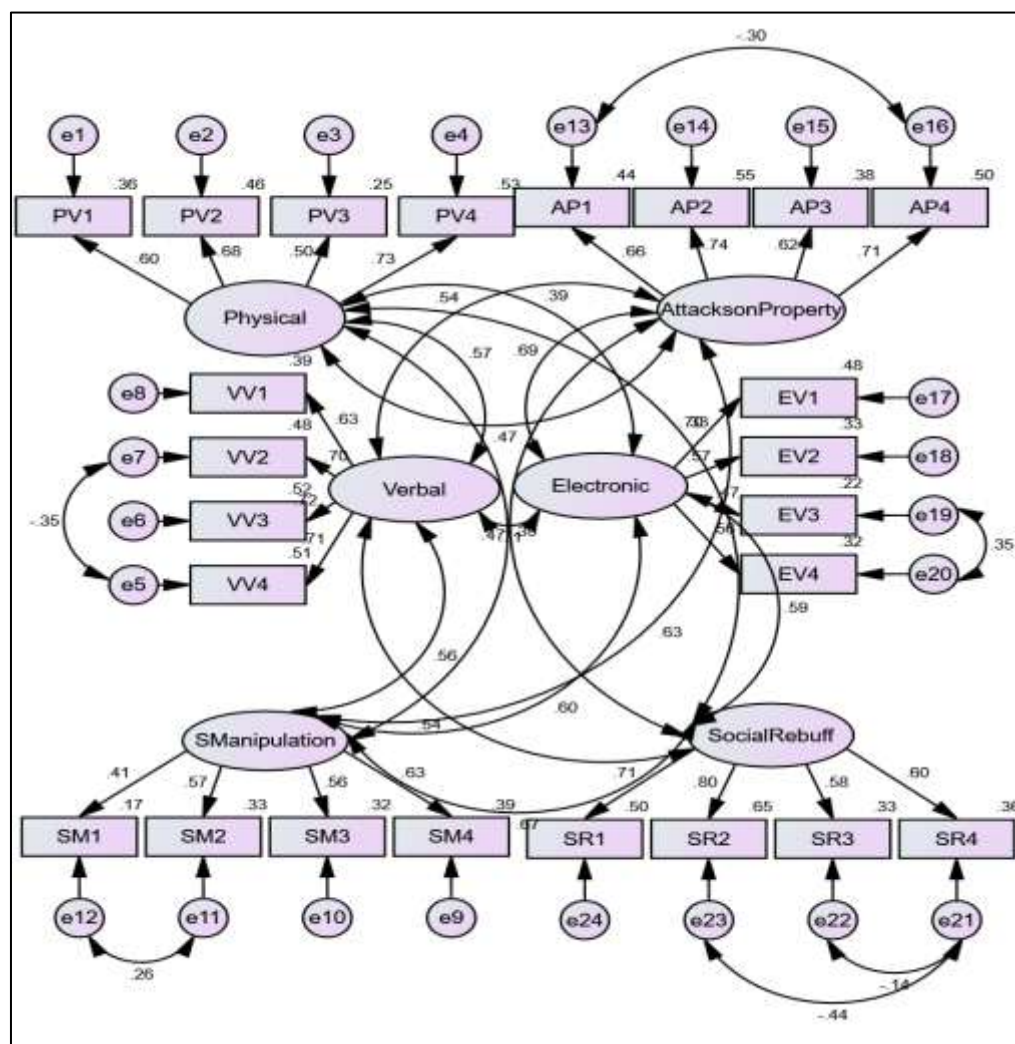
inappropriate and could get incomplete responses. The reliability coefficients Cronbach's alpha was 0.851 for peer victimization and 0.850 for school connectedness.

With the permission of Headmaster of basic education schools, the questionnaire was administered to adolescents from No. (1) Basic Education High School in Hlegu and No. (1), Basic Education High School in North Okkalapa from Yangon Region; and No. (3), Basic Education High School and No. (4), Basic Education High School in Hpa-an from Kayin State during 2023-2024 AY. This study explored adolescents' peer victimization and school connectedness. Finally, by using the self-reported survey questionnaire, the required data were collected during September and October, 2023. The process of collecting data took almost two months in order to get the maximum response rate and to get complete filled in questionnaires back from the selected schools. It was done to eliminate response attribution, i.e., incomplete, missing copies, over-writing or vaguely filled in questionnaires which might be received during this process. The data were analyzed by SPSS version 22 for quantitative data. Then, descriptive statistics and inferential statistics were applied to the data set in order to interpret and report the results. The detailed description of data analysis, findings and interpretation would be presented following.

Data Analysis and Research Findings

Confirmatory Factor Analysis of Multidimensional Peer-Victimization Scale (MPVS)

CFA analysis was performed for MPVS to validate the instruments involved in all constructs and dimensions. In the analysis for this model, a total of 24 items, four items for physical victimization, four items for verbal victimization, four items for social manipulation, four items for attacks on property, four items for electronic victimization and four items for social rebuff. However, this model should be modified in order to improve the fit to this model represents the sample data or real data better.



Chi-Square = 642.131, RMSEA = 0.055, TLI = 0.901, CFI = 0.905

Figure 1 Confirmatory Factor Analysis Model of Multidimensional Peer-Victimization Scale

Convergent Validity of MPVS

To ensure that the measurement model achieves validity, convergent validity analysis was performed. The analysis shows that the AVE values for six factors models ranged from 0.54 to 0.70. The AVE value recorded for this model was $0.5 \geq$ which exceeds the minimum value required to determine the validity of a measurement model as in Table 1.

Table 1 Composite Reliability (CR) Average Variance Extracted (AVE) of MPVS

Factors	No of Items	CR	AVE
Physical Victimization	4	0.71	0.63
Verbal Victimization	4	0.73	0.69
Social Manipulation	4	0.70	0.54
Attacks on Property	4	0.80	0.68
Electronic Victimization	4	0.70	0.58
Social Rebuff	4	0.73	0.67

The value of Composite Reliability (CR) was taken into account in determining the extent to which the researcher can measure the latent construct and to achieve reliability for the

construction of this model. The CR values shown can prove the reliability of the item and assess the internal consistency. The CR values for six factors that met the minimum requirement of $CR \geq 0.6$. The CR values for six factors ranged from 0.70 to 0.80. as summarized in Table 1. These findings prove that, the items in this study had a high reliability value.

Discriminant Validity

Discriminant validity was used to show that the construct is actually differing from one another empirically. Discriminant validity was evaluated with square root of AVE with correlations of latent constructs. The results were shown in Table 2.

Table 2 Square Root of AVE with Correlations of Latent Factors of MPVS

Factors	PV	VV	SM	AP	EV	SR
PV	0.79					
VV	0.56	0.83				
SM	0.38	0.57	0.74			
AP	0.46	0.53	0.63	0.83		
EV	0.39	0.67	0.61	0.68	0.76	
SR	0.33	0.54	0.68	0.44	0.59	0.82

According to Table 2, all the square root of AVE values was greater than 0.5 and these values were greater than all the inter latent correlations for all factors in the relevant rows and columns. According to Fornell and Larcker (2011), the square root of AVE values should be above 0.5. Hair et al. (2009) argued that the square root of AVE values was greater than the inter latent factor correlations. Thus, the result of discriminant validity of MPVS were congruent with Fornell and Larcker (2011) and Hair et al. (2011) according to Table 2. Overall, discriminant validity can be accepted for the measurement model and discriminant validity between constructs.

Reliability of MPVS

Reliability coefficients of each subscale ranged from 0.70 to 0.76 and the reliability coefficients of MPVS was 0.89. Thus, MPVS was reliable to measure peer victimization of adolescents in the context of Myanmar.

Comparison of Adolescents' Peer Victimization by Gender

In order to conform the gender difference of adolescents' peer victimization, independent samples *t*-test was applied. The mean scores and standard deviations of both male and female adolescents across six subscales as well as total score were reported in Table 1.

Table 1 Means, Standard Deviations and Results of Independent Samples *t*-test for Adolescents' Peer Victimization by Gender

Variables	Gender	N	M	SD	t	df	p
Physical Victimization	Male	300	5.19	1.910	4.3398** *	598	0.000
	Female	300	4.60	1.378			
Verbal Victimization	Male	300	7.09	2.548	3.437**	598	0.001
	Female	300	6.39	2.451			

Variables	Gender	N	M	SD	t	df	p
Social Manipulation	Male	300	4.84	1.427	-0.444	598	0.657
	Female	300	4.89	1.514			
Attacks on Property	Male	300	6.09	2.204	6.163****	598	0.000
	Female	300	5.11	1.651			
Electronic Victimization	Male	300	5.45	1.910	3.415**	598	0.001
	Female	300	4.95	1.643			
Social Rebuff	Male	300	5.74	1.845	-1.759	598	0.079
	Female	300	6.01	2.003			
Peer Victimization	Male	300	34.39	8.624	3.657****	598	0.000
	Female	300	31.96	7.647			

** $p < .01$, *** $p < .001$

Regarding the gender, male's score was found to be significantly higher than female on physical victimization, verbal victimization, attacks on property and electronic victimization. Gender related significant difference was not found to be on social manipulation and social rebuff. It can be concluded that male had higher peer victimization than female on overall peer victimization. This finding was consistent with previous investigations done by Tippanagoudra, Patil and Hunshal (2020) and May Cho Min (2012). They found that boys reported more experience peer victimization than girls.

Comparison of Adolescents' Peer Victimization by Age

To make the confirmation of the significant differences of adolescents' peer victimization by age, ANOVA was calculated.

Table 2 Means, Standard Deviations and ANOVA Results of Adolescents' Peer Victimization by Age

Variables	Age	N	M	SD	F	p
Physical Victimization	12≤X<14 years	259	5.03	1.806	5.231**	.006
	14≤X<16 years	225	4.98	1.733		
	16≤X<18 years	116	4.45	1.204		
Verbal Victimization	12≤X<14 years	259	6.56	2.319	3.243*	.040
	14≤X<16 years	225	7.07	2.747		
	16≤X<18 years	116	6.48	2.357		
Social Manipulation	12≤X<14 years	259	4.88	1.312	2.752	.065
	14≤X<16 years	225	4.99	1.699		
	16≤X<18 years	116	4.59	1.292		
Attacks on Property	12≤X<14 years	259	5.56	2.002	1.988	.138
	14≤X<16 years	225	5.78	2.036		
	16≤X<18 years	116	5.34	1.942		
Electronic Victimization	12≤X<14 years	259	4.93	1.462	8.565****	.000
	14≤X<16 years	225	5.58	2.101		
	16≤X<18 years	116	5.08	1.720		

Variables	Age	N	M	SD	F	p
Social Rebuff	12≤X<14 years	259	5.92	1.907	2.643	.072
	14≤X<16 years	225	6.01	1.990		
	16≤X<18 years	116	5.52	1.830		
Peer Victimization	12≤X<14 years	259	32.87	7.778	5.320**	.005
	14≤X<16 years	225	34.41	9.004		
	16≤X<18 years	116	31.46	7.304		

* $p < .05$, ** $p < .01$, *** $p < .001$

As a results, there was significant difference on physical victimization, verbal victimization, electronic victimization and overall peer victimization by age (see Table 2). After making mean comparison by age, to obtain more detailed information in which age group had differences, the Post-Hoc Test was carried out by Tukey HSD method (see Table 3).

Table 3 Results of Tukey HSD Multiple Comparison for Adolescents' Peer Victimization by Age

Variables	(I)Age	(J)Age	Mean Differences (I-J)	Std.Error	p
Physical Victimization	12≤X<14 years	16≤X<18 years	.583*	.187	.006
	14≤X<16 years	16≤X<18 years	.530*	.192	.016

Table 3 (Continued)

Variables	(I)Age	(J)Age	Mean Differences (I-J)	Std.Error	p
Electronic Victimization	14≤X<16 years	12≤X<14 years	.656***	.162	.000
	14≤X<16 years	16≤X<18 years	.505*	.203	.035
Peer Victimization	14≤X<16 years	16≤X<18 years	2.956**	.934	.005

* $p < .05$, ** $p < .01$, *** $p < .001$.

Regarding physical victimization, the mean score of 12≤X<14 years old adolescents was significantly higher than that of 16≤X<18 years old adolescent at .05 level and 14≤X<16 years old adolescents was significantly higher than that of 16≤X<18 years old adolescents at .05 level. With regard to electronic victimization, the mean score of 14≤X<16 years old adolescents was significantly higher than that of 12≤X<14 years old adolescents at .001 level and 16≤X<18 years old adolescents at .05 level. In addition to peer victimization, the mean score of 14≤X<16 years old adolescents was significantly higher than that of 16≤X<18 years old adolescents at .01 level.

Comparison of Adolescents' School Connectedness by Gender

Concerning the adolescents' school connectedness, the gender difference was worthwhile to explore. In order to conform the gender difference of adolescents' school connectedness, independent samples *t*-test was applied. The mean scores and standard deviations of both male and female adolescents across four subscales as well as total score were reported in Table 4.

Table 4 Means, Standard Deviations and Results of Independent Sample *t*-test for Adolescents' School Connectedness by Gender

Variables	Gender	N	M	SD	<i>t</i>	<i>df</i>	<i>p</i>
Being Connected and Liked by students	Female	300	27.08	4.30	2.019*	598	.044
	Male	300	26.40	3.94			
Belonging	Female	300	23.07	3.65	3.277**	598	.001
	Male	300	22.13	3.37			
Communication	Female	300	12.25	2.25	2.295*	598	.022
	Male	300	11.83	2.20			
Being Liked by Teachers	Female	300	12.41	2.41	1.735	598	.083
	Male	300	12.08	2.25			
School Connectedness	Female	300	74.81	10.42	2.834**	598	.005
	Male	300	72.44	10.03			

* $p < .05$, ** $p < .01$

Regarding the gender, female's score was found to be significantly higher than male on being connected and liked by students, belonging, communication and school connectedness. Gender related significant difference was not found to be on being liked by teachers. According to result, female adolescents reported more relatedness and belonging with school than that of the males. This finding was consistent with previous investigations done by Loukas, Cance and Batanova (2016). They found that girls reported greater relatedness and belonging than girls. It was also consistent with the previous study of Soe Soe Lin (2019) and Win Win Thandar (2016) who found that the mean score of females were significantly higher than that of males in school connectedness.

Comparison of Adolescents' School Connectedness by Age

To find out the differences between school connectedness by age, descriptive statistics was conducted.

Table 5 Means, Standard Deviations and ANOVA Results of Adolescents' School Connectedness by Age

Variables	Age	N	M	SD	<i>F</i>	<i>p</i>
Being Connected and Liked by Students	12≤X<14 years	259	27.37	3.836	8.597***	.000
	14≤X<16 years	225	26.65	4.182		
	16≤X<18 years	116	25.49	4.418		
Belonging	12≤X<14 years	259	23.81	2.811	31.425***	.000
	14≤X<16 years	225	21.93	3.598		
	16≤X<18 years	116	21.18	4.021		
Communication	12≤X<14 years	259	12.56	2.085	15.680***	.000
	14≤X<16 years	225	11.86	2.269		
	16≤X<18 years	116	11.25	2.202		

Variables	Age	N	M	SD	F	p
Being liked by Teachers	12≤X<14 years	259	12.86	2.222	18.266***	.000
	14≤X<16 years	225	11.94	2.372		
	16≤X<18 years	116	11.47	2.169		
School Connectedness	12≤X<14 years	259	76.60	9.241	24.033***	.000
	14≤X<16 years	225	72.39	10.276		
	16≤X<18 years	116	69.39	10.625		

** $p < .01$, *** $p < .001$

As a results, there was significant difference on all subscales and overall scale by age. After making mean comparison by age, to obtain more detailed information in which age group had differences, the Post-Hoc Test was carried out by Tukey HSD method (see Table 6).

Table 6 Results of Tukey HSD Multiple Comparison for Adolescents' School Connectedness by Age

Variables	(I)Age	(J)Age	Mean Differences (I-J)	Std.Error	p
Being Connectedness and Liked by Students	12≤X<14 years	16≤X<18 years	1.883***	.456	.000
	14≤X<16 years	16≤X<18 years	1.162*	.467	.035
Belonging	12≤X<14 years	14≤X<16 years	1.881***	.456	.000
		16≤X<18 years	2.634***	.377	.000
Communication	12≤X<14 years	14≤X<16 years	.698**	.199	.001
		16≤X<18 years	2.634***	.3777	.000
Being Liked by Teachers	12≤X<14 years	14≤X<16 years	.915***	.207	.000
		16≤X<18 years	1.392***	.254	.000
School Connectedness	12≤X<14 years	14≤X<16 years	4.216***	.903	.000
		16≤X<18 years	7.214***	1.108	.000
	14≤X<16 years	16≤X<18 years	2.999*	1.133	.023

** $p < .01$, *** $p < .001$.

Regarding being connectedness and liked by students, the mean score of adolescents with 12≤X<14 years and 14≤X<16 years was significantly higher than that of adolescents with 16≤X<18 years at .05 level and at .001 level.

With regard to belonging, the mean score of 12≤X<14 years old adolescents was significantly higher than that of 14≤X<16 years old adolescents at .001 level and 16≤X<18 years old adolescents at .001 level.

With regard to communication, the mean score of adolescents from 12≤X<14 years was significantly higher than that of 14≤X<16 years old adolescents and 16≤X<18 years at .01 level and at .001 level.

With regard to being liked by teachers, the mean score of 12≤X<14 years old adolescents was significantly higher than that of 14≤X<16 years and 16≤X<18 years old adolescents at .001 level.

In addition to school connectedness, the mean score of adolescents from $12 \leq X < 14$ years was significantly higher than that of $14 \leq X \leq 16$ years and $16 \leq X < 18$ years old adolescents at .001 level. The mean score of $14 \leq X \leq 16$ years old adolescents was significantly higher than that of $16 \leq X < 18$ years at .05 level. It can reasonably be concluded that $12 \leq X < 14$ years old adolescents were more connected to school than other ages.

Relationship Between Peer Victimization and School Connectedness of Adolescents

The relationship between peer victimization and school connectedness of adolescents. The Pearson product-moment correlation was used to examine the relationship among the variables.

Table 7 Correlation for Peer victimization and School Connectedness of Adolescents

	Peer Victimization	School Connectedness
Peer Victimization	1	-.301***
School Connectedness		1

*** $p < .001$ (2-tailed)

Result revealed that peer victimization and school connectedness were negatively significantly correlated at $r = -.301$. There was a negative correlation between peer victimization and school connectedness of adolescents. It meant that the higher the peer victimization of adolescents, the lower the school connectedness.

Inter-correlation for Peer Victimization and School Connectedness of Adolescents

Further analysis was conducted to explore the relation between peer victimization (six subscales of physical victimization, verbal victimization, social manipulation, attacks on property, electronic victimization and social rebuff) and school connectedness of adolescents.

Table 8 Inter-correlation between Subscales of Peer Victimization and School Connectedness of Adolescents

	PV	VV	SM	AT	EV	SR	SC
PV	1	.450***	.303***	.388***	.269***	.296***	-.174***
VV		1	.414***	.459***	.492***	.455***	-.264***
SM			1	.459***	.422***	.475**	-.164***
AT				1	.502***	.400***	-.208***
EV					1	.458***	-2.46***
SR						1	-.220***
SC							1

Note. PV= Physical Victimization, VV= Verbal Victimization, SM= Social Manipulation, AT= Attacks on Property, EV= Electronic Victimization, SR= Social Rebuff and SC= School connectedness

*** $p < .001$

The result in Table 8 showed that physical victimization, verbal victimization, social manipulation, attacks on property, electronic victimization and social rebuff were negatively correlated with school connectedness. This indicated that adolescents in this study reporting the higher peer victimization, the lower the school connectedness. It can be due to the fact that

negative experiences from peer or group of peers which make adolescents to be fearful of school and inhibit their learning potentials.

Regression Analysis for the Prediction of Adolescents' School Connectedness

In order to determine the best predicting of peer victimization to school connectedness, regression analysis was conducted. The result was shown in Table 9.

Table 9 Linear Regression between Peer Victimization and School Connectedness of Adolescents

Variables	B	β	t	p	R	R ²	Adj R ²
Constant	86.121		51.721***	.000	.301	.091	.089
Peer Victimization	-.377	-.301	-7.731***	.000			

*** $p < 0.001$

According to the result table, the adjusted R square value was .089. So, the regression model predicts 8.9% of the variance of scores in peer victimization of adolescents, $\beta = -.301$ revealed that it is medium effect according to Cohen (1988). Peer victimization will predict school connectedness at the .001 level. However, the correlation coefficient between peer victimization and school connectedness was moderate. Consequently, the regression equation might explain only 8.9% of the variance in occurring school connectedness could be explained from adolescents' peer victimization. Although, it has a significant effect on peer victimization, it may be weak to predict the dependent variable by its model. According to the above results, the model equation to predict adolescents' school connectedness from peer victimization was as follows:

$$SC = 86.121 - 0.377 PV$$

Note. SC= School Connectedness,
PV= Peer Victimization

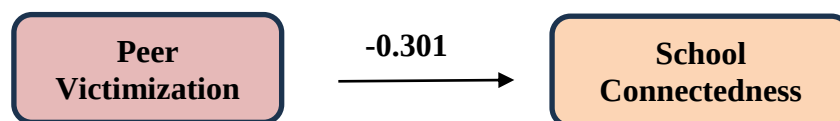


Figure 4.16 Predictive Power of Peer Victimization on School Connectedness of Adolescents

Discussion

This study was to validate the Multidimensional Peer-Victimization Scale (MPVS) in a sample of adolescents from Basic Education High Schools in Myanmar. Overall, the instrument had excellent reliability with a Cronbach's Alpha value of 0.89, proving that the MPVS was a reliable instrument of measuring the peer victimization among the sample of the study. The results of the confirmatory factor analysis indicated that the model fits with the two-factor structure model (RMSEA = 0.055, TLI = 0.901, CFI = 0.905, Chi-sq = 0.000). Moreover, this study confirmed the convergent and discriminant validity of the scale. Furthermore, the internal consistency of scale and subscales were satisfactory results. Therefore, the Multidimensional Peer-Victimization Scale (MPVS) was found to be valid and reliable to measure peer victimization of adolescents across Basic Education in Myanmar.

An independent samples *t*-test result by gender indicated that there was statistically significant difference between male and female adolescents in peer victimization. Male adolescents felt more victimized in physical victimization, verbal victimization, attacks on property and electronic victimization. As a result of overall mean score, males had more victimized than female adolescents because males were more aggressive in nature than females (Coie & Dodge, 1998). Thus, males more behaved aggressively than females and had been the target of more aggression other males.

Regarding the age differences, significant difference was found on overall scales as well as two subscales such as physical victimization and electronic victimization. It was observed that the mean score of $12 \leq X < 14$ years old adolescents was significantly higher than that of $16 \leq X < 18$ years old adolescents and the mean score of $14 \leq X < 16$ years old adolescents was significantly higher than that of $16 \leq X < 18$ years old adolescents in physical victimization. The mean score of $14 \leq X < 16$ years was significantly higher than that of $12 \leq X < 14$ years and $16 \leq X < 18$ years in electronic victimization. In addition, overall peer victimization, the mean score of $14 \leq X < 16$ years old adolescents was significantly higher than that of $16 \leq X < 18$ years. According to Olweus (1993), the percentage of students being victims of bullying decrease with age and 9-12 years and 12-14 years experiencing high level of victimization than adolescents of above 15 years experiencing low level of victimization.

An independent samples *t*-test result by gender indicated that there was statistically significant difference between male and female adolescents in school connectedness. Female's score was found to be significantly higher than male on being connected and liked by students, belonging, communication and overall school connectedness. Gender related significant difference was not found to be only on being liked by teachers. It can be concluded that female had higher school connectedness than male on overall scale. This may be due to the fact that female adolescents felt more relatedness and belonging with school and peers than that of the male adolescents. This present result consistent with the pervious study of Loukas, Cance and Batanova (2016) who found that female having higher levels of connected to school. This result also consistent with the previous local study of Soe Soe Linn (2019) and Win Win Thandar (2016) who found that there were female more connected to school as compared to male. This may be the fact that female adolescents were more likely to possess sense of school belonging, felt more relatedness and belonging with school and strong connection with their peers than that of male adolescents.

In addition, significant age differences were found on the overall scale as well as all subscales. The mean score of $12 \leq X < 14$ years and $14 \leq X < 16$ years old adolescents was significantly higher than that of $16 \leq X < 18$ years in being connectedness and liked by students. The mean score of $12 \leq X < 14$ years old adolescents was significantly higher than that of $14 \leq X < 16$ years and $16 \leq X < 18$ years old adolescents in belonging. The mean score of $12 \leq X < 14$ years old adolescents was significantly higher than that of $14 \leq X < 16$ years and $16 \leq X < 18$ years in communication. The mean score of $12 \leq X < 14$ years old adolescents was significantly higher than that of $14 \leq X < 16$ years and $16 \leq X < 18$ years in being liked by teachers. In addition, overall school connectedness, the mean score of $12 \leq X < 14$ years old adolescents was significantly higher than that of $14 \leq X < 16$ years and $16 \leq X < 18$ years. The mean score of $14 \leq X < 16$ years old adolescents

was significantly higher than that of $16 \leq X < 18$ years. It can reasonably be concluded that adolescents with the age of between 12 and 14 years were more connected to school than other ages. It can be said that they were more obedient and believing that school is important to their future and there was less academic stress during this age.

The results of correlation analysis showed that peer victimization was negatively significant correlated with total school connectedness at $r = -.301$. There was a negative correlation between peer victimization and school connectedness of adolescents. It meant that the higher peer victimization, the lower the school connectedness. This result was consistent with the previous study of Sadaf Arif et al. (2020) who found that peer victimization was negatively related to school connectedness of adolescents.

The result of regression analysis showed that peer victimization was a significant negative predictor of school connectedness. This meant that the higher peer victimization of adolescents, the lower school connectedness they experience. Consequently, the regression equation might explain only 8.9% of the variance in occurring school connectedness could be explained from peer victimization. Although, it had a significant on school connectedness, it may be weak to predict the dependent variable by its model. However, the correlation coefficient between peer victimization and school connectedness was moderate.

Suggestions

Peer victimization at school is one of the negative experiences that lead individuals to fear and refuse to go to school. Safety and security issues also impair individuals' basic desires for a sense of relatedness and belonging. Experiencing maltreatment at home or school increases the likelihood of developing behavioral problems. Lower achievement in core subjects at the elementary, middle, and high school levels has been associated to peer victimization. Victimization by peers should not become normal.

- Teachers and schools need to be aware of what is going on in the classroom, and if something is reported, action needs to be done right away.
- Active participation from parents, educators, and educational institutions is necessary to reduce the prevalence of victimization. Thus, it is imperative to implement rigorous policy enforcement together with school-based educational programs and public awareness campaigns that utilize print, electronic, and social media platforms, with a focus on rural and urban areas, in order to provide a secure learning environment.
- Educators and administrators need to be aware of their school's organizational structure. It also means that they ought to be aware of how big their school is and whether the number of the classes is suitable. Students' sense of community can be enhanced by an enjoyable and pleasant school setting as well as a clean and warm classroom environment.
- Educators and administrators have a responsibility to establish the functioning elements of schools, like equitable and clear demands for behavior and heightened parental involvement. Students feel more safe and are also encouraged to take accountability for their actions when they have fair and clear rules in action.
- Children's sense of belonging can also be influenced by the condition of the school environment. Enough facilities that are kept up might encourage students to take part in school activities.

Conclusion

The primary purpose of this study was to explore peer victimization and school connectedness of adolescents. This study was adopted in Yangon Region and Kayin State in the 2023-2024 academic year. There were 600 adolescents in the study. The peer victimization questionnaire with 24 items and school connectedness questionnaire with 24 items were used as the instruments. Each instrument had an internal consistency of .089 and .85 respectively. The pilot testing was carried out at the second week of August 2023 and the main in September and October. The result indicated that there were significant differences in peer victimization and school connectedness by gender and ages.

To conclude, there was a negative moderate correlation between peer victimization and school connectedness of adolescents. If the higher the peer victimization, the lower the school connectedness of adolescents. In addition, peer victimization was a significant negative predictor of school connectedness.

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THE RELATIONSHIP BETWEEN TEACHER IMMEDIACY AND ACADEMIC ENGAGEMENT OF STUDENT TEACHERS

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Abstract

The primary purpose of this study is to investigate the relationship between teacher immediacy and academic engagement of student teachers. The quantitative research design and cross-sectional survey method were used in this study. Data were collected by using simple random sampling method. A total of 412 student teachers from Yangon University of Education participated in this study. The Chinese Teacher Immediacy Scale (Zhang & Oetzel, 2006) and the Utrecht Work Engagement Scale for Students (Schaufeli et al., 2006) were used as research instruments in this study. The results stated that student teachers could be classified into three groups of teacher immediacy: high group, moderate group and low group. The results revealed that there was no significant gender difference in teacher immediacy and its subscales. However, the findings indicated that there were significant differences in teacher immediacy and its subscales by education level and age. Regarding academic engagement, the findings indicated that student teachers could be classified into three groups: high group, moderate group and low group. The results revealed that the mean scores of male student teachers were higher than those of female student teachers in vigor, absorption and academic engagement. In addition, there were significant differences of academic engagement and its subscales by education level and age. Moreover, teacher immediacy was positively correlated with student teachers' academic engagement. Furthermore, teacher immediacy can predict student teachers' academic engagement.

Keywords: Immediacy, Teacher Immediacy, Academic Engagement

Introduction

The connection between students and their teachers holds immense significance. This bond not only influences academic performance but also shapes the overall learning experience. Teacher immediacy refers to the behaviors and communication strategies employed by educators to create a warm and supportive classroom environment. These actions can range from non-verbal cues to verbal affirmations, all aimed at fostering a sense of connection and rapport with students. Teacher immediacy has been positively associated with increased cognitive learning (Gorham, 1988; Allen et al., 2006) and positive student evaluations of immediate teachers (Witt et al., 2004; Frymier et al., 2008).

Teacher immediacy behaviours (e.g., close proxemics, direct body orientation, smiling and vocal varieties) are all found to be highly effective teaching behaviors (Pogue & Ahyun, 2006; York, 2013). Verbal immediacy is manifested, for example, by addressing the pupil by their name, using the collective pronouns ("our", "we"), verbal empathy. talking to pupils about topics selected by the pupils or sharing the teacher's personal experience (Gorham, 1988). Traditionally, teacher immediacy is transmitted non-verbally through smile, relaxed posture inclined towards the pupils, seeking eye contact, or variations in voice (Gorham, 1988). Conversely, if the teacher neglects eye contact, uses monotonous voice, does not smile, leans away from students, and does not show enough warmth in general, the development of a positive relationship between the teacher and a pupil is probably impossible.

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Teacher immediacy refers to the behaviors, both verbal and non-verbal, that seek to reduce the physical and psychological gaps between teachers and students. When teachers demonstrate warmth, friendliness, and accessibility, students are more likely to feel comfortable approaching them for their help and guidance. Teacher immediacy behaviours can enhance communication between teachers and students by using both verbal and non-verbal cues, such as maintaining eye contact, using gestures, and providing timely feedback, teachers can facilitate effective communication and understanding. Teacher immediacy behaviours have been found to positively impact on student motivation.

Previous studies indicated that a higher level of immediacy affects both the affective aspects of learning and cognitive learning (Richmond et al., 1987; Gorham, 1988; Zhang & Oetzel, 2006). According to York (2013), these rewarding behaviors can encourage students to become more attentive during the whole class. As such, how student teachers perceive their teachers' non-verbal behaviours is worthy of academic engagement. In educational contexts, teacher non-verbal immediacy is explained in terms of a set of behaviors, creating a sense of physical or psychological intimacy between teachers and learners (Allen et al., 2006). Their studies delve into the various dimensions of teacher immediacy, exploring its role in enhancing student motivation, participation, and overall academic success.

Today, educational institutions are facing many changes and developments. Universities try to provide their education according to the needs of students and society (Lee, 2020). Motivating students is one of the important challenges in improving the quality of education (Teo et al., 2022). As a strong predictor of students' performance and progress in school, academic engagement has attracted the attention of teachers and researchers in recent years (Derakhshan et al., 2022; Derakhshan & Fathi, 2023; Roxå & Marquis, 2019; Stoeber et al., 2011; Zeinstra et al., 2023). Academic engagement relates to the quality of how students connect or involve themselves in educational activities (Skinner et al., 2009). It is a kind of psychological investment that might influence learners' direct effort to learn, understand, and master the required knowledge and skills (Bradley-Dorsey et al., 2022).

Theoretical reflections in the review of existing literature indicate that positive and warm relationships between teachers and students are effective on various dimensions of academic engagement and also the sense of belonging to the school (Rojas & Abenavoli, 2023). It seems that the process that shows the effect of the teacher-student relationship on the academic engagement goes through the feeling of belonging to the school, and that the students' daily experiences in relation to their teachers in the academic environment have an effect on their sense of attachment to the school and further on their participation affects the academic activities (Breukelman et al., 2023). Very few studies are conducted to examine teacher immediacy and academic engagement of student teachers in Myanmar. Therefore, this study aimed at investigating teacher immediacy and academic engagement of student teachers.

Purpose of the Study

The primary purpose of the study is to investigate the relationship between teacher immediacy and academic engagement of student teachers. The specific objectives of this study are as follows.

- To examine the levels of teacher immediacy
- To examine teacher immediacy by gender, education level and age
- To examine the levels of student teachers' academic engagement
- To explore student teachers' academic engagement by gender, education level and age
- To investigate the relationship between teacher immediacy and academic engagement of student teachers
- To investigate the effect of teacher immediacy on student teachers' academic engagement

Definitions of Key Terms

Teacher immediacy. Teacher immediacy can be defined as behavior including verbal and non-verbal communication stimuli which provide a sense of proximity and reduce the perception of the psychological distance between the teacher and students or pupils (Zhang & Witt, 2016).

Engagement. Engagement is defined as a fulfilling and positive study-related state of mind that is characterized by three dimensions: absorption, vigor, and dedication (Schaufeli et al., 2002).

Academic engagement. Academic engagement is defined as a student's psychological and behavioral efforts and investment in learning, understanding or mastering skills, and knowledge in academic work (Fredricks et al., 2004).

Review of Related Literature

Teacher Immediacy

Andersen (1979) and Gorham (1988) found that teacher's immediacy positively influences student's motivation via its approach avoidance tendency. This theory posits that, "people approach what they like and avoid what they don't like" (Mehrabian, 1981, p.22). Mehrabian (1971, 1981) argues that individuals tend to be attracted (prefer, evaluate highly, and like) toward things and people they perceive positively; and tend to avoid (evaluate negatively, dislike, or do not prefer) people and things that they perceive negatively.

Mehrabian (1981) indicated that immediate communicators, through their behaviors, usually convey a message as if they like the person they are interacting with and that there is a positive relationship between them. Thus, Richmond et al. (1987) described immediacy as behaviors which not only increase physical and/or psychological proximity, but also add to the perceptual stimulation during interpersonal interaction. Approach avoidance, an element of the behavioural reinforcement/drive theory, describes immediacy as something a student either seeks out or feels comfortable while interacting with an instructor, or avoids and is apprehensive of the teacher (Weiner, 1992; Richmond et al., 1987). Where students are familiar, comfortable, and secure in a classroom environment, their avoidance tendency will be diminished (Christophel, 1990).

Previous research conducted by Martin et al. (1999) found that learners tend to avoid interaction with those teachers who are perceived by them as uncaring or uninterested. Imada and Hakel (1997) stated that greater liking attributes to greater immediacy. Immediacy behaviours enhance liking in a teacher-learner relationship in a classroom (Saechou, 2005). Previous studies indicated that teachers who display immediate behaviour are liked and viewed as more competent and motivated by students (Buhr et al., 1994). According to Mehrabian (1981), an individual contributes to the feelings of like/dislike via range of immediate behaviors, thereby

making the interactional/conversational partner either feel bad or good, negative, or positive regarding self.

Academic Engagement

According to Schaufeli et al. (2002), engagement can be characterized as “a fulfilling and positive study-related state of mind that is conceptualized by three dimensions, namely “absorption”, “vigor”, and “dedication”. Vigor relates to students’ sense of the high degree of mental resilience and energy while studying, their desire to exert and invest effort into their academic-related practices, their persistence in the face of learning barriers, and their positive approach to learning” (Alrashidi et al., 2016). The second dimension, dedication, is defined by students’ sense of “enthusiasm, significance, inspiration, challenge, and pride for engaging in their studies”, as well as their positive attitudes towards classroom activities (Ouweneel et al., 2014). Absorption, as the third dimension, is described as students feeling of being profoundly immersed and completely focused on their studies (Salmela-Aro & Upadaya, 2014).

Research Method

A quantitative research design and cross-sectional survey method were used in this study.

Participants of the Study

A total of 412 student teachers from Yangon University of Education was selected by using simple random sampling technique. All participants were selected from Yangon University of Education by the researcher, given a thorough explanation about the study asked if they wished to participate in the questionnaire response voluntarily with informed consent. The characteristics of the chosen number of participants are presented in Table 1.

Table 1 Characteristics of Participants for the Study

Education Level	Male	Female	Total
B.Ed. (First Year)	40	40	80
B.Ed. (Second Year)	40	40	80
B.Ed. (Third Year)	40	40	80
B.Ed. (Fourth Year)	40	42	82
B.Ed. (Fifth Year)	36	54	90
Total	196	216	412

Instruments

Teacher immediacy. Teacher immediacy was measured by the Chinese Teacher Immediacy Scale (CTIS: Zhang & Oetzel, 2006). This scale consists of 15 items which include three subscales; instructional immediacy (5 items), relational immediacy (6 items) and personal immediacy (4 items). All items are scored on a 5-point Likert scale (1= strongly disagree to 5 = strongly agree). The Cronbach’s alpha of the scale in this study was .760 that had adequate reliability to examine teacher immediacy.

Academic engagement. Academic engagement was measured with the Utrecht Work Engagement Scale for Students (UWES-9S) developed by Schaufeli et al. (2006). The scale comprises of 9 items which consist of three subscales; vigor (3 items), dedication (3 items) and absorption (3 items). All items are scored on a 7-point Likert scale (1 = Strongly Disagree to 7 = Strongly Agree). The Cronbach’s alpha of the scale was .906 that had high reliability.

Instrumentation

All the measures used in this study were adapted to Myanmar language version. Then, expert review was conducted for face validity and content validity of the instruments. Next, the questionnaire was modified according to their suggestions and recommendations. And then, pilot study was conducted to test whether the wording of items, statements and instructions had their clarity in Myanmar language version and were appropriate to student teachers.

Research Findings

Levels of Teacher Immediacy

The mean and standard deviation of teacher immediacy was 61.04 and 6.59. Based on descriptive statistics of teacher immediacy, student teachers in this study were identified into three groups; 15.80% of student teachers with scores above one standard deviation from the sample mean were considered as high group; 74% of student teachers with scores between (+1) and (-1) standard deviation from the sample mean were grouped into moderate group; and the remaining student teachers of 10.20% who scored below one standard deviation from the sample mean were identified as low group (see Figure 1).

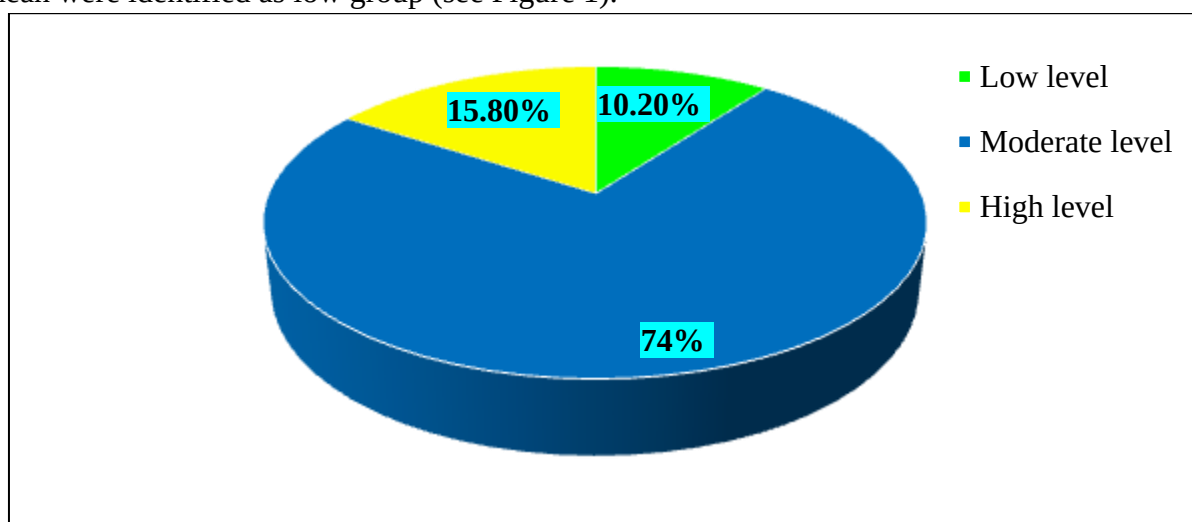


Figure 1 Three Different Groups of Teacher Immediacy

Comparison of Teacher Immediacy by Gender

To find out whether there were gender differences in teacher immediacy of student teachers, descriptive statistics and independent samples *t*-test was conducted (see Table 2). The result of independent samples *t*-test stated that there was no significant gender difference for teacher immediacy (total) and its all subscales.

Table 2 Means, Standard Deviations and Results of Independent Samples *t*-test of Teacher Immediacy by Gender

Variable	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Instructional Immediacy	Male	196	20.51	2.94	-1.461	410	.079
	Female	216	20.89	2.30			
Relational Immediacy	Male	196	23.80	2.86	2.175	410	.900
	Female	216	23.19	2.79			
Personal Immediacy	Male	196	17.03	2.05	1.666	410	.249
	Female	216	16.70	1.92			
Total Teacher Immediacy	Male	196	61.34	6.92	.851	410	.380
	Female	216	60.78	6.29			

Comparison of Teacher Immediacy by Student Teachers' Education Level

To make more detailed information on the difference of teacher immediacy by student teachers' education level, one-way Analysis of Variance (ANOVA) was conducted (see Table 3). ANOVA results indicated that there were significant differences of instructional immediacy, $F(4, 407) = 4.761$, $p = .001$, relational immediacy, $F(4, 407) = 5.135$, $p < .001$, personal immediacy, $F(4, 407) = 4.741$, $p = .001$ and teacher immediacy (total), $F(4, 407) = 5.921$, $p < .001$, with respect to student teachers' education level (see Table 3).

To obtain more detailed information for student teacher education level, post hoc test was carried out by Tukey HSD multiple comparison procedure for first year, second year, third year, fourth year and fifth year (see Table 4).

Table 3 Means, Standard Deviations, and ANOVA Results for Teacher Immediacy by Student Teachers' Education Level

Variable	Education Level	N	M	SD	F	p
Instructional Immediacy	First year	80	21.53	2.71	4.761**	.001
	Second year	80	21.10	2.33		
	Third year	80	20.64	2.69		
	Fourth year	82	19.89	2.75		
	Fifth year	90	20.44	2.44		
Relational Immediacy	First year	80	24.68	3.15	5.135***	.000
	Second year	80	23.55	2.39		
	Third year	80	23.29	2.99		
	Fourth year	82	22.96	2.77		
	Fifth year	90	23.01	2.58		
Personal Immediacy	First year	80	17.53	2.19	4.741**	.001
	Second year	80	16.93	1.68		
	Third year	80	17.05	2.29		
	Fourth year	82	16.37	1.82		
	Fifth year	90	16.47	1.73		
Teacher Immediacy (Total)	First year	80	63.73	7.42	5.921***	.000
	Second year	80	61.58	5.68		
	Third year	80	60.98	6.66		
	Fourth year	82	59.22	6.53		
	Fifth year	90	59.92	5.86		

** $p < .01$, *** $p < .001$.

Table 4 Results of Tukey HSD Multiple Comparison for Teacher Immediacy by Student Teachers' Education Level

Categories	(I) Education Level	(J) Education Level	Mean Difference (I-J)	p
Instructional Immediacy	First Year	Fourth Year	1.635**	.001
	Second Year		1.210*	.025
Relational Immediacy	First Year	Third Year	1.387*	.015
		Fourth Year	1.712**	.001
		Fifth Year	1.664**	.001
Personal Immediacy	First Year	Fourth Year	1.159**	.002
		Fifth Year	1.058**	.004
Teacher Immediacy(Total)	First Year	Fourth Year	4.505***	.000
		Fifth Year	3.803**	.001

* $p < .05$, ** $p < .01$, *** $p < .001$.

Tukey HSD test found that first year and second year student teachers had significantly higher than fourth year student teachers in instructional immediacy at the .05 and .01 levels. First year student teachers had significantly higher in relational immediacy than third year, fourth year and fifth year at the .05 and .01 levels. First year student teachers had higher in personal immediacy and teacher immediacy (total) than fourth year and fifth year at the .01 and .001 levels.

Comparison of Teacher Immediacy by Age

After examining the model fit of the obtained data to Analysis of Variance (ANOVA), to obtain more detailed information on the difference of teacher immediacy by age, one-way Analysis of Variance (ANOVA) was conducted (see Table 5).

ANOVA results indicated that there were significant differences of instructional immediacy, $F(2, 409) = 5.800, p = .01$, relational immediacy, $F(2, 409) = 3.415, p = .034$, personal immediacy, $F(2, 409) = 4.288, p = .014$ and total teacher immediacy, $F(2, 409) = 5.573, p = .004$, with regard to student teachers' age (see Table 5).

Table 5 Means, Standard Deviations, and ANOVA Results for Teacher Immediacy by Age

Variable	Age (Years)	N	M	SD	F	p
Instructional Immediacy	Below 20	146	21.19	2.53	5.800**	.003
	20-21	130	20.76	2.56		
	Above 21	136	20.14	2.71		
Relational Immediacy	Below 20	146	23.95	2.79	3.415*	.034
	20-21	130	23.38	3.02		
	Above 21	136	23.08	2.66		
Personal Immediacy	Below 20	146	17.15	1.97	4.288*	.014
	20-21	130	16.92	2.27		
	Above 21	136	16.47	1.65		
Teacher Immediacy (Total)	Below 20	146	62.29	6.61	5.573**	.004
	20-21	130	61.07	6.90		
	Above 21	136	59.69	6.06		

* $p < .05$, ** $p < .01$.

To obtain more detailed information for age, post hoc test was carried out by Tukey HSD multiple comparison procedure for below 20, between 20 and 21 and above 21 (see Table 6).

Table 6 Results of Tukey HSD Multiple Comparison for Teacher Immediacy by Age

Categories	(I) Age (Years)	(J) Age (Years)	Mean Difference (I-J)	p
Instructional Immediacy	Below 20	Above 21	1.052**	.002
Relational Immediacy	Below 20	Above 21	.864*	.028
Personal Immediacy	Below 20	Above 21	.680*	.011
Teacher Immediacy (Total)	Below 20	Above 21	2.596**	.003

* $p < .05$, ** $p < .01$.

Tukey HSD test found that below 20-year-old student teachers had significantly higher than above 21-year-old student teachers in teacher immediacy (total) and its subscales at the .01 and .05 levels.

Levels of Student Teachers' Academic Engagement

The mean and standard deviation of student teachers' academic engagement was 42.23 and 8.90. Based on descriptive statistics of academic engagement, student teachers in this study were identified into three groups; 12.8% of student teachers with scores above one standard deviation from the sample mean were considered as high group; 72.6% of student teachers with scores between (+1) and (-1) standard deviation from the sample mean were grouped into moderate group; and the remaining student teachers of 14.6% who scored below one standard deviation from the sample mean were identified as low group (see Figure 2).

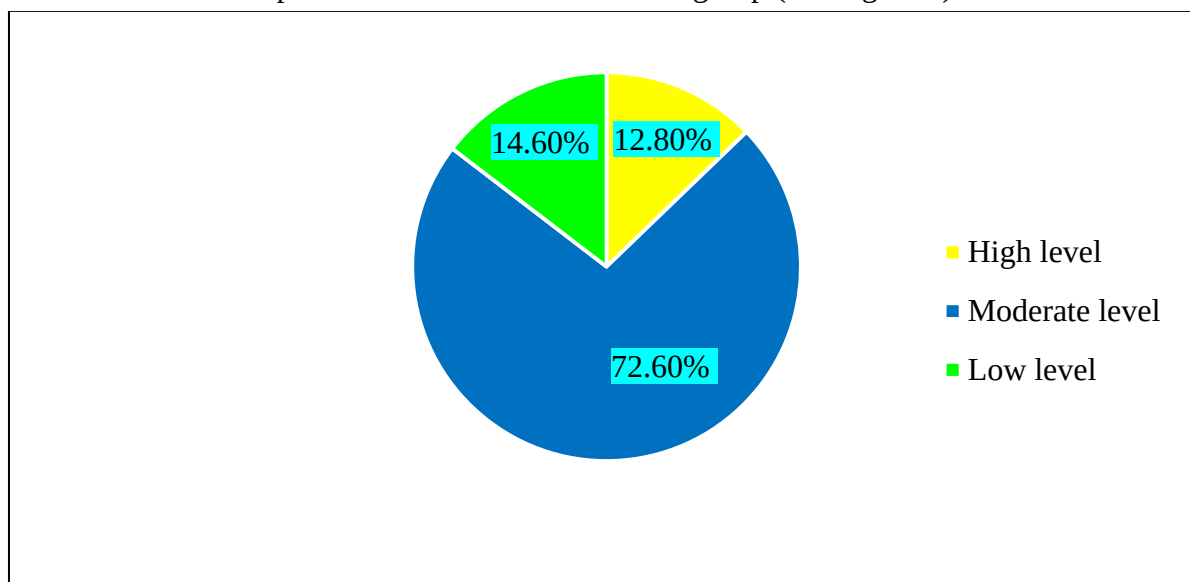


Figure 2 Three Different Groups of Student Teachers' Academic Engagement

Comparison of Student Teachers' Academic Engagement by Gender

To make more detailed investigation on the gender difference of student teachers' academic engagement, independent samples *t*-test was conducted (see Table 7).

Table 7 Means, Standard Deviations, and Result of Independent Samples *t*-test of Student Teachers' Academic Engagement by Gender

Variable	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Vigor	Male	196	14.32	3.34	3.115**	410	.002
	Female	216	13.24	3.70			
Dedication	Male	196	16.22	2.90	1.453	410	.147
	Female	216	15.80	3.01			
Absorption	Male	196	13.08	3.65	3.187**	410	.002
	Female	216	11.92	3.73			
Academic Engagement (Total)	Male	196	43.62	8.66	3.068**	410	.002
	Female	216	40.96	8.93			

** $p < .01$.

The result of independent samples *t*-test stated that there was significant gender difference for student teachers' academic engagement, ($t(410) = 3.068$, $p = .002$) in total academic engagement. There were significant gender differences in student teachers' vigor ($t(410) = 3.115$, $p = .002$) and absorption ($t(410) = 3.187$, $p = .002$). To be exact, inspection of the two

groups means indicated that the mean score of total academic engagement for male student teachers ($M = 43.62$) was significantly higher than that of female student teachers ($M = 40.96$). Similarly, the mean score of vigor for male student teachers ($M = 14.32$) was significantly higher than that of female student teachers ($M = 13.24$). In addition, the mean score of absorption for male student teachers ($M = 13.08$) was significantly higher than that of female student teachers ($M = 11.92$).

Comparison of Student Teachers' Academic Engagement by Education Level

To obtain more detailed information on the difference of student teachers' academic engagement by student teachers' education level, one-way Analysis of Variance (ANOVA) was conducted. ANOVA results indicated that there were significant differences of vigor, $F(4, 407) = 10.503$, $p < .001$, dedication, $F(4, 407) = 10.735$, $p < .001$, absorption, $F(4, 407) = 5.690$, $p < .001$ and total academic engagement, $F(4, 407) = 11.321$, $p < .001$, with regard to student teachers' education level (see Table 9).

Table 9 Means, Standard Deviations, and ANOVA Result of Student Teachers' Academic Engagement by Education Level

Variables	Education Level	N	M	SD	F	p
Vigor	First year	80	15.36	3.36	10.503***	.000
	Second year	80	14.54	2.86		
	Third year	80	12.24	3.93		
	Fourth year	82	13.70	3.40		
	Fifth year	90	13.01	3.44		
Dedication	First year	80	17.18	2.54	10.735***	.000
	Second year	80	16.61	2.47		
	Third year	80	14.45	3.32		
	Fourth year	82	16.13	2.72		
	Fifth year	90	15.68	2.99		
Absorption	First year	80	14.04	3.90	5.690***	.000
	Second year	80	12.68	3.31		
	Third year	80	11.48	3.71		
	Fourth year	82	12.24	3.61		
	Fifth year	90	12.00	3.69		
Academic Engagement (Total)	First year	80	46.58	8.27	11.321***	.000
	Second year	80	43.83	7.25		
	Third year	80	38.16	9.75		
	Fourth year	82	42.07	8.26		
	Fifth year	90	40.69	8.64		

*** $p < .01$.

Table 10 Results of Tukey HSD Multiple Comparison for Student Teachers' Academic Engagement by Education Level

Categories	(I) Education Level	(J) Education Level	Mean Difference(I-J)	<i>p</i>
Vigor	First Year	Third Year	3.125***	.000
		Fourth Year	1.667*	.017
		Fifth Year	2.351***	.000
	Second Year	Third Year	2.300***	.000
		Fifth Year	1.526*	.031
Dedication	First Year	Third Year	2.725***	.000
		Fifth Year	1.497**	.006
	Second Year	Third Year	2.163***	.000
	Fourth Year		1.684**	.002
	Fifth Year		1.228*	.040
Absorption	First Year	Third Year	2.563***	.000
		Fourth Year	1.794*	.016
		Fifth Year	2.037**	.003
Academic Engagement (Total)	First Year	Third Year	8.413***	.000
		Fourth Year	4.502**	.007
		Fifth Year	5.886***	.000
	Second Year	Third Year	5.663***	.000
	Fourth Year		3.911*	.029

* $p < .05$, ** $p < .01$, *** $p < .001$.

To obtain more detailed information for student teachers' academic engagement by education level, post hoc test was carried out by Tukey HSD multiple comparison procedure for first year, second year, third year, fourth year and fifth year (see Table 10).

Tukey HSD test found that first year student teachers had significantly higher than third year, fourth year and fifth year student teachers in vigor at the .05 and .001 levels, whereas second year student teachers had significantly higher than third year and fifth year student teachers in vigor at the .05 and .001 levels. In dedication, first year student teachers had significantly higher than third year and fifth year student teachers at the .05 and .01 levels and second year, fourth year and fifth year student teachers had significantly higher than third year at the .05, .01 and .001 levels. In absorption, first year student teachers had significantly higher than third year, fourth year and fifth year at the .05, .01 and .001 levels. In academic engagement (total), first year student teachers had significantly higher in than third year, fourth year and fifth year student teachers at the .01 and .001 levels, while second year and fourth year student teachers had higher than in academic engagement (total) than third year student teachers at the .05 and .001 levels.

Comparison of Academic Engagement by Age

After examining the model fit of the obtained data to Analysis of Variance (ANOVA), to obtain more detailed information on the difference of academic engagement by age, one-way Analysis of Variance (ANOVA) was conducted (see Table 11).

Table 11 Means, Standard Deviations, and ANOVA Results for Academic Engagement by Age

Variables	Age (Years)	N	M	SD	F	p
Vigor	Below 20	146	14.84	3.09	11.112***	.000
	20-21	130	13.04	3.88		
	Above 21	136	13.26	3.49		
Dedication	Below 20	146	16.78	2.51	8.295***	.000
	20-21	130	15.46	3.24		
	Above 21	136	15.68	2.97		
Absorption	Below 20	146	13.15	3.65	3.818*	.023
	20-21	130	12.17	3.81		
	Above 21	136	12.04	3.68		
Academic Engagement (Total)	Below 20	146	44.77	7.79	9.671***	.000
	20-21	130	40.67	9.78		
	Above 21	136	40.99	8.56		

* $p < .05$, *** $p < .001$.

ANOVA results indicated that there were significant differences of vigor, $F(2, 409) = 11.112$, $p < .001$, dedication, $F(2, 409) = 8.295$, $p < .001$, absorption, $F(2, 409) = 3.818$, $p = .023$ and academic engagement (total), $F(2, 409) = 9.671$, $p < .001$, with regard to student teachers' age (see Table 11).

To obtain more detailed information for age, post hoc test was carried out by Tukey HSD multiple comparison procedure for below 20, between 20 and 21 and above 21 (see Table 12).

Tukey HSD test found that below 20-year-old student teachers had significantly higher than 20-21 and above 21 student teachers in vigor, dedication and academic engagement (total) at the .01 and .001 levels. The findings indicated that below 20-year-old student teachers had significantly higher than above 21 student teachers in absorption at the .05 level.

Table 12 Results of Tukey HSD Multiple Comparison for Academic Engagement by Age

Categories	(I) Age (Years)	(J) Age (Years)	Mean Difference(I-J)	p
Vigor	Below 20	20-21	1.797***	.000
		Above 21	1.571**	.001
Dedication	Below 20	20-21	1.319**	.001
		Above 21	1.097**	.005
Absorption	Below 20	Above 21	1.114*	.032
Academic Engagement (Total)	Below 20	20-21	4.098***	.000
		Above 21	3.782**	.001

* $p < .05$, ** $p < .01$, *** $p < .001$.

Relationship Between Teacher Immediacy and Student Teachers' Academic Engagement

Pearson product moment correlations were calculated to examine the relationships between the variables. The correlations between teacher immediacy and student teachers' academic engagement are presented in Table 13. The results indicated that teacher immediacy

was positively correlated with student teachers' academic engagement ($r = .348$, *** $p < .001$). It could be said that the higher the teacher immediacy, the higher the student teachers' academic engagement (see Table 13).

Table 13 Relationship Between Teacher Immediacy and Student Teachers' Academic Engagement

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Instructional Immediacy	1	.687***	.643***	.888***	.351***	.299***	.224***	.334***
(2) Relational Immediacy		1	.671***	.873***	.341***	.240***	.244***	.319***
(3) Personal Immediacy			1	.847***	.275***	.222***	.175***	.258***
(4) Teacher Immediacy (Total)				1	.369***	.290***	.247***	.348***
(5) Vigor					1	.727***	.586***	.889***
(6) Dedication						1	.573***	.865***
(7) Absorption							1	.846***
(8) Academic Engagement (Total)								1

*** $p < .001$.

The Effect of Teacher Immediacy on Student Teachers' Academic Engagement

To identify the model for predicting student teachers' academic engagement, simple regression was used.

Table 14 Simple Regression Analysis for Predicting Student Teachers' Academic Engagement from Teacher Immediacy

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	R^2	Adjusted R^2	<i>F</i>
Academic Engagement (Constant)	16.569		4.386***	.321	.103	.101	46.973***
Teacher Immediacy	.421	.321	6.854***				

*** $p < .001$, *B* = Unstandardized Coefficient, β = Standardized Coefficient

The results revealed that student teachers' academic engagement was explained by teacher immediacy. Regression analysis revealed that the model significantly explained student teachers' academic engagement, $F = 46.973$, $p < .001$ and *R* for the model was .321 and explained for 10.1% of the variance in academic engagement. By applying regression analysis presented above, the resultant model for academic engagement can be defined as in the following equation.

$$\text{Academic Engagement} = 16.569 + .421 \text{ Teacher Immediacy}$$

The findings indicated that teacher immediacy was the significant predictor in predicting student teachers' academic engagement ($\beta = .321$, $p < .001$) (see Figure 3).

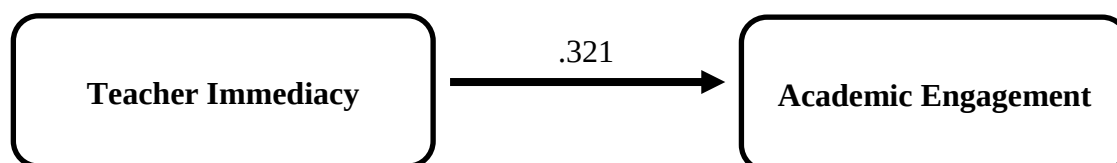


Figure 3 Predictive Power of Teacher Immediacy on Student Teachers' Academic Engagement

Discussion

This study sought to investigate the relationship between teacher immediacy and academic engagement of student teachers. Regarding the first objective, the results stated that student teachers could be classified into three groups regarding teacher immediacy: high group (15.8%), moderate group (74%) and low group (10.2%).

Regarding the second objective, the results indicated that there were no significant gender differences in teacher immediacy and its subscales. The findings were consistent with previous studies (e.g., Özdaş, 2022) that there was no significant gender difference in teacher immediacy. Regarding education levels, the results indicated that there were significant differences of teacher immediacy and its subscales. It can be assumed that first year student teachers have better perception on teacher immediacy than second year, third year, fourth year and fifth year student teachers. Moreover, the results indicated that younger student teachers reported higher level of teacher immediacy and its subscales than older ones. The first year is the transitional period from high schools to teacher education institutions. It can also be said that and younger student teachers may be more sensible to understand teachers' gestures and body language, and pay more attention on teachers' personality than older ones.

The findings of the third objective indicated that student teachers could be classified into three groups: high group (14.6%), moderate group (72.6%) and low group (12.8%).

According to the fourth objective, the results revealed that male student teachers were higher than female student teachers in vigor, absorption and academic engagement (total). However, there was no significant gender difference of dedication. This finding was consistent with the findings of gender differences in previous studies (Karki et al., 2020; Martin, 2012) that male students have good academic engagement than those of female students. In addition, the results indicated that there were significant differences of academic engagement (total) and its subscales by education level. The results were in line with previous studies of Karki et al. (2020) that significant differences in academic engagement were found between various courses/classrooms and year of study. Moreover, the results indicated that there were significant age differences in student teachers' academic engagement (total) and its subscales. Specifically, younger student teachers had higher academic engagement than older ones.

Moreover, the results of the fifth objective revealed that teacher immediacy was positively correlated with student teachers' academic engagement. Thus, the teacher immediacy increases, student teachers' academic engagement increases accordingly.

Finally, the results of the sixth objective revealed that teacher immediacy was the significant predictor in predicting student teachers' academic engagement. The finding was consistent with the findings of the previous studies conducted by van Uden et al. (2014) and Rocca (2001). This finding may be explained by the fact that getting students' attention is the most crucial factor in motivating students. This study suggests that the attraction theory proposed by Mehrabian (1971) should be used to develop teachers' immediacy.

Teacher educators should use immediacy behaviour to improve classroom environment and student-teacher relationship. Moreover, teacher education institutions should add to enhance immediacy behaviours as a part of pre-service teachers' training. In teacher education institutions, both pre-service and in-service teachers should be equipped with the knowledge of

appropriate immediacy behaviours (e.g., close proxemics, smiling, vocal varieties, etc.) to take advantage of these actions in their classrooms. The use of immediacy behaviours develops a relationship with student teachers so they become motivated and participate in classroom discussions for better learning.

Limitations and Future Research

Although the results supported the objectives of the study, there were some limitations. First, it is only examined teacher immediacy and academic engagement among student teachers from Yangon University of Education. Second, it was found that this study merely employed observer-report questionnaire to measure teacher immediacy; hence, the voices/perceptions of teachers regarding their immediacy are not heard.

Future studies should be carried out by selecting student teachers from other teacher education institutions in Myanmar so that the sample might be more representative. Further research should be conducted in different context such as basic education students and university students.

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SOCIAL PROBLEM-SOLVING SKILLS AND ACADEMIC HARDINESS OF STUDENT TEACHERS IN YANGON UNIVERSITY OF EDUCATION

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Abstract

The primary purpose of this study was to investigate the social problem-solving skills and academic hardiness of student teachers. Quantitative and survey research design was used in this study. A total of 1000 student teachers in Yangon University of Education participated. Social Problem-Solving Inventory–Revised; Short Form (SPSI-R;SF) developed by D’Zurilla et al. (2002) and Revised Academic Hardiness Scale (RAHS) developed by Benishek et al. (2005) were used to measure social problem-solving skills and academic hardiness of student teachers. According to this study, there were statistically significant differences in social problem-solving skills and its subscales by gender. There were statistically significant differences in constructive and overall social problem-solving skills by education level except dysfunctional problem-solving skills. Concerned with academic hardiness, significant differences were found in commitment and challenge by gender. Significant differences were found in commitment, control and total academic hardiness by education level. Results of Pearson product moment correlation indicated that academic hardiness was significantly positively correlated with constructive problem-solving skills and overall social problem-solving skills of student teachers whereas academic hardiness was found to be significantly negatively correlated with dysfunctional problem-solving skills. Regression analysis revealed that approximately 27% of the variance in academic hardiness could be explained by constructive problem-solving skills and dysfunctional problem-solving skills. So, student teachers with high social problem-solving skills may be more likely to perform well socially and academically regardless of situations. This study found that social problem-solving skills of student teachers can affect their academic hardiness to some extent.

Keywords: Social Problem-Solving, Social Problem-Solving Skills, Academic Hardiness

Introduction

The university is considered as one of the most important and influential organizations in the world. The university carries out the conversion of naive and committed individuals to healthy, creative, mature, balanced and developed individuals. Moreover, it supplies the demands of human resources at different levels and in different cultural, social and personal sectors. Especially, universities of education deliver professional and committed individuals to the community. College or university students experience higher stress and problems in each semester. Their stressors have been classified into three categories: academic pressures, social issues and financial problems. Student teachers have faced the highest stressful situation and academic demands compared to other student groups. Student teachers are studying or taking courses to prepare for teaching professional career.

Social problem-solving plays a significant role in psychological adjustment, constituting an important coping strategy that has the potential to reduce or minimize psychological distress (D’Zurilla & Nezu, 1990). When an individual considers a stressful situation caused by social problems, according to D’Zurilla and Chang (1995), having a negative tendency towards the problem is a non-functional and frustrating cognitive sequence which involves pessimism, a lack of confidence in problem solving skills, easily losing one’s temper, and worrying. According to Deniz (2004), individuals who have self-confidence in problem solving also have a high degree of self-esteem and more cautiously in making a decision and behave in a less panicked and less evasive manner. If people have the high level of negative problem orientation, they can be

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prepared to increase their level of social self-efficacy by appropriately including applications about effective social problem-solving skills.

Academic hardiness is students' ability to face challenges, carry out commitment and proper control in every academic activity (Fajriani & Marsela, 2021). Academic hardiness helps university students to insulate from the university stressors and may conjecture future well-being and performance. According to Erozkhan (2014), academic hardiness possibly provides the courage and motivation to students to cope with exam demands and the possible raised stress in the academic context (Amponsah, 2010; Robotham, 2008). Implementation of academic hardiness is an individual able to have optimistic attitude, physical and mental health, and personality development (Maddi, 2006), effective leadership, (Bartone et al., 2009), well-being, (Eccles, Vida & Barbel, 2004), and achievement of pride (Maddi et al., 2012).

Therefore, social problem-solving skills and academic hardiness are crucial factors in student teachers' life.

Purpose of the Study

The main aim of this study was to investigate the social problem-solving skills and academic hardiness of student teachers in Yangon University of Education.

The specific objectives are as follows:

- To explore the differences of the social problem-solving skills of student teachers by gender and education level
- To explore the differences of the academic hardiness of student teachers by gender and education level
- To find out the relationship between social problem-solving skills and academic hardiness of student teachers
- To investigate the effect of social problem-solving skills on academic hardiness of student teachers

Definitions of Key Terms

Social Problem-Solving. Social problem-solving is a self-directed cognitive- behavioral process by which a person attempts to identify or discover effective or adaptive solutions for specific problems encountered in everyday living (D'Zurilla & Nezu, 2007).

Social Problem-Solving Skills. Social problem-solving skills is a set of skills involving cognitive and behavioral process in which one works to find positive and adaptive ways to handle problematic situations that count arise in the social environment (Ang et al., 2016).

Academic Hardiness. Academic hardiness is a personality characteristic that may differentiate students who avoid challenging academic course work from others who are willing to pursue these types of challenges (Maddi et al., 2009).

Review of Related Literature

Social Problem-Solving Model

Social problem-solving is an important psychological behavior due to a broad range of situations from social adjustment to stress situations. In addition, it relates to different forms of positive psychological adjustment as well as to pathological and psychological non-adjustment (Morera et al., 2006). The social problem-solving model was generated by D'Zurilla and Goldfried in 1971. The model originated within a behavioral modification context with the goal of using problem solving as a basis for therapeutic intervention. Later, the original model was expanded and refined by D'Zurilla and Nezu in 1982 and in 1990.

In the model, two general partially independent components of the social problem solving were (a) problem orientation and (b) problem-solving skills (D' Zurilla et al., 2002). Constructive or effective problem-solving skills are described as a process in which positive problem orientation facilitates rational problem solving. In turn, the deliberate, systematic application of effective problem-solving skills is likely to produce positive outcomes. Dysfunctional or ineffective problem-solving skills is represented as a process in which negative problem orientation contributes to impulsivity- carelessness style or avoidance style, which are both likely to produce negative outcomes.

The individual with constructive problem-solving skills has a tendency to see problems as challenging, believes in himself in successfully resolving the problem. And it is stated that problem solving is time consuming with problems and requires effort and patience considered them in a positive way (Eskin & Aycan, 2009). Even though the initial outcomes are negative or unsatisfactory, the "good" problem solvers are more likely to persist and recycle, or return to the problem-solving process, to find a better solution or to redefine the problem with more realistic goals. A positive attitude towards solving problems will lead to an appreciable level of interest in developing problem-solving skills (Julius, 2022).

The problem solver with high dysfunctional problem-solving skills prefers to avoid problems rather than confront them head on, puts off problem solving as long as possible, waits for problems to resolve themselves, and attempts to shift the responsibility for solving his or her problems to other people (Chang et al., 2004). These problem-solvers behave as delaying, being passive or failing to take action, being addictive, dysfunctional and at the same time deficient. The reason for deficiency is due to addictiveness, inactivity, passiveness and delaying (Eskin & Aycan, 2009; Bayani et al., 2013).

Theoretical Framework of Academic Hardiness

Benishiek and Lopez in 2001 stated that two cognitively oriented theories, Kobasa's hardiness theory (1979) and Dweck and Leggett (1988) theory of academic motivation offered them the perspectives leading towards the academic hardiness. Kobasa's hardiness theory supplied a useful framework for understanding why certain students are more willing to engage in more challenging academic coursework than others (Kobasa, 1979; Ouellette, 1993). High level of hardiness shows authentic life and is not looking for ways of avoid stressful events, but the individual draws strength from the difficulties facing and overcoming obstacles as a challenge (Carr, Kelley, Keaton & Albrecht, 2011).

Dweck and Leggett's model of academic motivation identified two distinct cognitive-affective-behavioral patterns in academic performance and related them to the types of goals that students were apparently pursuing (Dweck, 2002; Dweck & Leggett, 1988). Students who operate from a performance-based orientation attempt to establish the adequacy of their ability and avoid demonstrating their inadequacy. For they perceived ability as being a fixed entity, failure on a given task resulted in feelings of incompetence and a lack of intellectual ability (Dweck, 1986; Elliott & Dweck, 1988; Mueller & Dweck, 1998). When faced with especially challenging tasks or confronted with initial failure experiences, these students demonstrated heightened vulnerability to negative affect and lower task persistence. In contrast, students who followed a learning-based orientation viewed academic challenges as opportunities to acquire new skills and to enhance their competence. They view ability as being an "incremental skill" that can be improved as one acquires knowledge and becomes more competent (Dweck, 1986; Elliott & Dweck, 1988). Failure and errors were perceived to be a normal part of the learning

process. They commented less negative arousal, greater involvement in the task, and more persistence in response to difficult tasks and initial failure.

In keeping with those two theories, Benishek and Lopez in 2001 built up the concept of academic hardiness including the commitment, challenge and control dimensions and its instruments called Academic Hardiness Scale (AHS). Commitment was defined as students' reported willingness to expend consistent effort and to engage in sacrifices in order to achieve academic excellence, irrespective of the content or demands of individual courses, instructors or personal interests (Benishek et al., 2005). High commitment students become deeply involved in their study, seeing this as the best way to turn whatever they are experiencing into something that seems interesting, worthwhile and important (Sheard & Golby, 2007).

Control concerned students' beliefs that they possessed the capacity to achieve desired educational outcomes from personal effort and through effective emotional self-regulation in the face of academic stresses and disappointments (Benishek et al., 2005). High control students are able to manage their studies demonstrating good time management, prioritizing those activities deemed most contributory to academic success and taking responsibility for their own learning and development (Sheard & Golby, 2007).

Challenge was defined as the students' purposeful efforts to seek out difficult academic coursework and experiences and to justify such action as inherently for personal learning (Benishek et al., 2005). High challenge students appraise potentially stressful situations as exciting and stimulating than threatening (Sheard & Golby, 2007) (cited in Spiridon & Evangelia, 2014).

Thus, the quality of students' academic hardiness is influenced by a wide range of environmental factors. These three interrelated hardiness attitudes enhance the personal performance (Maddi, Kobasa & Hoover, 1979), moderate to high correlations with negative emotions (Kravetz et al., 1993), provide a significance related to future orientation (Yunita & Monalisa, 2021), an opportunity to grow, prosper and gain new experiences for the future and cannot be as a threat (Haghighatgoo et al., 2011). So, academic hardiness is very important for students, institutions of learning, educationists and curriculum practices (Daneshamooz & Alamolhodaie, 2012).

Method

Sampling

The participants were student teachers from Yangon University of Education during 2022-23 AY. A total of 1000 student teachers (500 males and 500 females) from YUOE were chosen by using random sampling technique. The characteristics of participants were shown in the following Table 3.1.

Table 3.1 The Characteristics of Participants

Education Level	Male	Female	Total
1 st Year 2 nd Semester	100	100	200
2 nd Year 1 st Semester	100	100	200
2 nd Year 2 nd Semester	100	100	200
3 rd Year 2 nd Semester	100	100	200
4 th Year 2 nd Semester	100	100	200
Total			1000

Research Method

Descriptive survey method and quantitative research design were used to examine social problem-solving skills and academic hardiness of student teachers.

Instrument for Social Problem-Solving Skills

To measure the social problem-solving skills of student teachers, the Social Problem-Solving Inventory-Revised Short Form (SPSI-R: SF) was used in this study. This questionnaire was originally developed by D’Zurilla, Nezu and Maydeu-Olivares (2004) and consisted of 25 items. Each item had a five-point Likert scale (4 = extremely true of me, 3 = very true of me, 2 = moderately true of me, 1 = slightly true of me and 0 = not at all true of me). This questionnaire was composed of two subscales; constructive problem-solving skills and dysfunctional problem-solving skills including 10 items and 15 items respectively. Cronbach’s alpha for this questionnaire was 0.79.

Instrument for Academic Hardiness

To measure the academic hardiness of student teachers, Revised Academic Hardiness Scale (RAHS) designed by Benishek, Feldman, Shipon, Mechan and Lopez (2005) was applied in this study. It was a 4-point Likert Scale questionnaire included by “absolutely disagree” as “1”, “disagree” as “2”, “agree” as “3” and “absolutely agree” as “4”. This questionnaire consisted of three subscales that assessed student teachers’ commitment, challenge and control. These subscales had 19, 11 and 10 items respectively. Cronbach’s alpha for this questionnaire was 0.808.

Data Collection Procedure

First, pilot study was conducted during last week in August, 2023, with a sample of 58 student teachers. The pilot study was done to check whether the wording statement had clarity in Myanmar version and was suitable for student teachers to test the reliability and the validity of the instrument. After that, the reliability test was conducted using SPSS version 22. When the internal consistency for these instruments was considered acceptable, they were selected in this study. Then, for accurate data collection, the researcher requested permission from the Head of Department of Educational Psychology. With the permissions of administrative officers, data collection was made in the selected classes from Yangon University of Education during September, 2023. The participants were explained the purpose and the importance of participation as well as the assurance of confidentiality of their responses to be used only for research purposes. On average, it took participants about 25 minutes to complete all items. Then, all of the participants’ responses were gathered.

Data Analysis and Findings

Descriptive Analysis for Social Problem-Solving Skills of Student Teachers

By using the descriptive procedure with the data obtained from the Social Problem-Solving Inventory-Revised Short Form (SPSI-R: SF) Questionnaire, the social problem-solving skills of student teachers in Yangon University of Education can be computed.

Table 1 Means and Standard Deviations of Social Problem-Solving skills and its Subscales of Student Teachers

Variable	No. of Items	Mean	Mean %	SD	Mini	Max
Constructive Problem-Solving Skills	10	23.66	59.15	5.732	4	40
Dysfunctional Problem-Solving Skills	15	16.74	27.90	9.837	0	49
Social Problem-Solving Skills (Total)	25	40.40	40.40	10.857	15	82

According to Table 1, it was clearly seen that the mean percentage for constructive problem-solving skills was higher than that of dysfunctional problem-solving skills. Therefore, it can be concluded that student teachers' social problem-solving skills was satisfactory. They tend to view a problem as a challenge, believe in their ability to solve problems successfully and apply systematical, rational and effective problem-solving techniques.

Table 2 Means, Standard Deviations, and Results of Independent Samples *t*-test for Social Problem-Solving skills of Student Teachers by Gender

Variable	Gender	N	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>
Constructive Problem-Solving Skills	Male	500	24.34	5.786	3.788***	998	.000
	Female	500	22.98	5.601			
Dysfunctional Problem-Solving Skills	Male	500	18.63	10.778	6.192***	998	.000
	Female	500	14.85	8.389			
Social Problem-Solving Skills	Male	500	42.98	11.721	7.711***	998	.000
	Female	500	37.83	9.236			

* * * $p < .001$.

In Table 2, the mean scores of male student teachers were higher than that of female student teachers in both social problem-solving skills and its subscales by gender.

In order to find out whether there were significant differences between male and female student teachers with regard to the social problem-solving skills, the independent samples *t*-test was computed (see Table 2). The results of independent samples *t*-test indicated that there were significant differences between male and female student teachers for both social problem-solving skills and its subscales at .001 level.

Table 3 Means, Standard Deviations, and ANOVA Results of Student Teachers' Social Problem-Solving Skills by Education Level

Variable	Education Level	N	Mean	SD	<i>F</i>	<i>p</i>
Constructive Problem-Solving Skills	1 st year 2 nd Semester	200	24.07	5.684	7.361***	.000
	2 nd year 1 st Semester	200	23.58	6.113		
	2 nd year 2 nd Semester	200	21.83	5.923		
	3 rd year 2 nd Semester	200	24.51	5.366		
	4 th year 2 nd Semester	200	24.34	5.161		
Dysfunctional Problem-Solving Skills	1 st year 2 nd Semester	200	17.25	9.517	.860	.487
	2 nd year 1 st Semester	200	16.18	9.079		
	2 nd year 2 nd Semester	200	15.96	9.670		
	3 rd year 2 nd Semester	200	16.93	10.333		
	4 th year 2 nd Semester	200	17.40	10.525		

Variable	Education Level	N	Mean	SD	F	p
Social Problem-Solving Skills (Total)	1 st year 2 nd Semester	200	41.32	10.506	4.726**	.001
	2 nd year 1 st Semester	200	39.75	10.252		
	2 nd year 2 nd Semester	200	37.78	10.466		
	3 rd year 2 nd Semester	200	41.44	11.250		
	4 th year 2 nd Semester	200	41.74	11.361		

*** $p < .001$, ** $p < .01$.

According to ANOVA results, there was a significant difference in student teachers' overall social problem-solving skills by education level at $p = .01$ and $p = .001$ respectively (Table 3).

Table 4 Results of Tukey HSD Multiple Comparison for Student Teachers' Social Problem-Solving Skills by Education Level

Categories	(I) Education Level	(J) Education Level	Mean Difference(I-J)	p
Constructive Problem-Solving Skills	2 nd year 2 nd Semester	1 st year 2 nd Semester	-2.240**	.001
		2 nd year 1 st Semester	-1.750*	.017
		3 rd year 2 nd Semester	-2.685***	.000
		4 th year 2 nd Semester	-2.510***	.000
Social Problem-Solving Skills	2 nd year 2 nd Semester	1 st year 2 nd Semester	-3.535**	.009
		3 rd year 2 nd Semester	-3.655**	.006
		4 th year 2 nd Semester	-3.955**	.002

*** $p < .001$, ** $p < .01$, * $p < .05$

According to Table 4, there were significant differences in constructive social problem-solving skills and overall social problem-solving skills by education level. Thus, it could be assumed that student teachers who attending at 2nd year 2nd Semester had deficient social problem-solving skills.

Descriptive Analysis for Academic Hardiness of Student Teachers

By using the descriptive procedure with the data obtained from the Revised Academic Hardiness Scale (RAHS) Questionnaire, academic hardiness of student teachers in Yangon University of Education can be computed.

Table 5 Means and Standard Deviations for Academic Hardiness and its Subscales of Student Teachers

Variable	No. of Items	Mean	Mean %	SD	Mini	Max
Commitment	19	55.02	72.39	5.433	29	73
Challenge	11	25.79	58.61	3.048	16	36
Control	10	30.65	76.63	3.699	15	34
Academic Hardiness (Total)	40	111.46	69.66	8.081	76	146

According to descriptive statistics (Table 5), the mean percentage of control was the highest, commitment was moderate and challenge was the lowest among student teachers. It found that student teachers' academic hardiness was satisfactory. Therefore, it could reasonably

be concluded that student teachers may possess high effective emotional self-regulation in the face of academic stressors and disappointments. They may perceive their academic activities as interesting and exciting things and want to show personal sacrifice to obtain the academic excellence. Moreover, they become deeply involved in their study and feel a moderate sense of responsibility towards performance. But they may avoid the difficult and challenging academic courses with the risk of failure.

Comparison for Student Teachers' Academic Hardiness by Gender

To find out whether there was difference in academic hardiness and its subscales among student teachers in YUOE by gender, descriptive statistics and independent samples *t*-test were conducted. The mean scores of female student teachers were higher in commitment and total academic hardiness while male student teachers' mean scores were higher than females in challenge.

Table 6 Means, Standard Deviations, and Results of Independent Samples *t*-test of Student Teachers' Academic Hardiness by Gender

Variable	Gender	N	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>
Commitment	Male	500	54.23	4.927	-4.628***	998	.000
	Female	500	55.80	4.405			
Challenge	Male	500	29.22	2.859	2.407*	998	.016
	Female	500	28.76	2.628			
Control	Male	500	27.92	3.104	0.612	998	.540
	Female	500	27.65	2.662			
Academic Hardiness	Male	500	111.37	8.363	1.845	998	.065
	Female	500	112.22	7.076			

*** $p < .001$, * $p < .05$.

The results of independent samples *t*-test indicated that there were significant differences between male and female student teachers for the commitment at .001 level and for challenge at .05 level. It could be concluded that generally male student teachers usually hang out with their friends and female student teachers have sense shame so that they emphasize on studying.

Table 7 Means, Standard Deviations, and ANOVA Results of Student Teachers' Academic Hardiness by Education Level

Variable	Education Level	N	Mean	SD	<i>F</i>	<i>p</i>
Commitment	1 st year 2 nd Semester	200	52.84	4.713	3.978**	.003
	2 nd year 1 st Semester	200	51.19	4.308		
	2 nd year 2 nd Semester	200	51.37	4.499		
	3 rd year 2 nd Semester	200	51.53	4.737		
	4 th year 2 nd Semester	200	51.53	4.951		
Challenge	1 st year 2 nd Semester	200	28.47	2.771	0.616	.651
	2 nd year 1 st Semester	200	28.52	2.785		
	2 nd year 2 nd Semester	200	28.50	2.679		
	3 rd year 2 nd Semester	200	28.72	2.887		
	4 th year 2 nd Semester	200	28.82	2.645		

Variable	Education Level	N	Mean	SD	F	p
Control	1 st year 2 nd Semester	200	27.54	3.267	2.934*	.020
	2 nd year 1 st Semester	200	26.95	2.882		
	2 nd year 2 nd Semester	200	26.57	2.702		
	3 rd year 2 nd Semester	200	26.99	2.919		
	4 th year 2 nd Semester	200	26.95	2.579		
Academic Hardiness	1 st year 2 nd Semester	200	108.85	7.993	2.985*	.018
	2 nd year 1 st Semester	200	106.65	7.598		
	2 nd year 2 nd Semester	200	106.44	7.349		
	3 rd year 2 nd Semester	200	107.23	8.139		
	4 th year 2 nd Semester	200	107.29	7.517		

** $p < .01$, * $p < .05$.

According to descriptive statistics, mean scores of 1st year 2nd Semester student teachers (52.84) was the highest in commitment, control and overall academic hardiness. There were significant differences in student teachers' academic hardiness by the education level.

Table 8 Results of Tukey HSD Multiple Comparison for Academic Hardiness Among Student Teachers by Education Level

Categories	(I) Education Level	(J) Education Level	Mean Difference (I-J)	p
Commitment	1 st year 2 nd Semester	2 nd year 1 st Semester	1.645**	.004
		2 nd year 2 nd Semester	1.465*	.014
		3 rd year 2 nd Semester	1.310*	.039
		4 th year 2 nd Semester	1.310*	.039
Control	1 st year 2 nd Semester	2 nd year 1 st Semester	1.975**	.007
Academic Hardiness	1 st year 2 nd Semester	2 nd year 1 st Semester	2.195*	.037
		2 nd year 2 nd Semester	2.410*	.016

** $p < .01$, * $p < .05$.

Based on the results of Table 8, 1st year 2nd Semester student teachers had higher than the student teachers in the rest of years for commitment. Thus, student teachers attending at 1st year had higher scores in commitment than others. Moreover, 1st year 2nd Semester student teachers got higher scores in control than 2nd year 1st Semester student teachers. In overall academic hardiness, the student teachers attending in 1st year 2nd Semester received higher scores than those attending in 2nd year 1st Semester and 2nd year 2nd Semester.

This finding is consistent with the study of Lwin Lwin San and Myo Ko Aung (2020) conducted first year student teachers are higher than that of second year and there was significant difference in academic hardiness of student teachers by grade. It can be interpreted that first-year students matriculated very soon and they had to work so hard in order to get high marks to study in the Universities they want to attend. This may be reason why they work like a horse.

The Relationship Between Social Problem-Solving Skills and Academic Hardiness of Student Teachers

To determine the relationship between social problem-solving skills and academic hardiness, Pearson product-moment correlations were computed (see Table 9).

Table 9 Correlation Between Social Problem-Solving Skills and Academic Hardiness of Student Teachers

	1.Constructive Problem-Solving Skills	2.Dysfunctional Problem-Solving Skills	3.Social Problem-Solving Skills	4.Academic Hardiness
1.Constructive Problem-Solving Skills	1	-.104**	.434**	.301**
2.Dysfunctional Problem-Solving Skills		1	-.251**	-.187**
3.Social Problem-Solving Skills			1	.329**
4.Academic Hardiness				1

* $p < .05$, ** $p < .01$.

According to Table 9, academic hardiness was positively correlated with constructive problem-solving skills and social problem-solving skills among student teachers ($r = .301$, $p < .01$) and ($r = .329$, $p < .01$). However, overall academic hardiness was negatively correlated with dysfunctional problem-solving skills among student teachers ($r = -.187$, $p < .01$).

Multiple Regression Analysis for Determining Social Problem-Solving Skills on Academic Hardiness of Student Teachers

In order to investigate the predictive power of social problem-solving skills to academic hardiness of student teachers in detail, multiple regression analysis was conducted (see Table 10).

Table 10 Multiple Regression Analysis for Determining Social Problem-Solving Skills on Academic Hardiness of Student Teachers

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>Adj R</i> ²	<i>F</i>
Constant	104.374		100.263***	.519	.269	.268	183.52
Constructive Problem-Solving Skills	.499	.354	13.006***				
Dysfunctional Problem-Solving Skills	-.283	-.344	-12.636***				

*** $p < .001$.

The regression analysis showed that constructive problem-solving skills had a positive effect on student teachers' academic hardiness ($\beta = .354, t = 13.006, p < .001$) and dysfunctional problem-solving skills had a negative effect on student teachers' academic hardiness ($\beta = -.344, t = -12.636, p < .001$). So, it could be interpreted that the higher constructive problem-solving skills and the lower dysfunctional problem-solving skills, the higher student teachers' academic hardiness. The adjusted R-square value was .268, which indicated that approximately 27% of the variance in academic hardiness could be explained by constructive problem-solving skills and dysfunctional problem-solving skills. The model education for predicting academic hardiness from the subscales of student teachers' social problem-solving skills was as follows:

$$AH = 104.374 + .499CPS - .283DPS$$

Note: AH = Academic Hardiness

CPS = Constructive Problem-Solving Skills

DPS = Dysfunctional Problem-Solving Skills

Discussions and Recommendations

In this study, student teachers' constructive problem-solving skills were higher than their dysfunctional problem-solving skills. Thus, it could be concluded that student teachers have moderately good social problem-solving skills and appraise their problems as challenges and solvable ones. They try to use rationally the deliberate, systematic problem-solving ways and identify as many potential solutions as possible in order to produce the best outcomes. There were statistically significant differences in social problem-solving skills and its subscales at .001 level according to gender. To be specific, male student teachers were significantly higher than female student teachers in total social problem-solving skills. This finding was inconsistent with the study of İcen & Öztaşkın (2017). However, it was inconsistent with the studies of Saracaloglu, Yenice and Karasakaloglu (2009) and Bayrak (2015). According to ANOVA results, there were significant differences in student teachers' overall social problem-solving skills and constructive problem-solving skills whereas there was no significant difference in dysfunctional problem-solving skills by education level. Thus, it could be assumed that student teachers who attending at 2nd year 2nd Semester had deficient social problem-solving skills. They are during the early adult transition period and seek independence by separating from family as well as behave recklessly and impulsively. It was consistent with İcen and Öztasın (2017) and Saracaloglu, Yenice and Karasakaloglu (2009) but, was inconsistent with the studies of Katkat and Mizrak (2003). Thus, social problem-solving skills can be taught in a variety of ways. For example, they can be worked into the curriculum (Gootman, 2001), taught using cooperative learning strategies that give students the chance to develop and practice their social and academic skills at the same time (Van Acker, 1993), or taught in a group counseling setting (Nelson et al., 1996). Peer mediation programs also are a popular forum for teaching students' conflict resolution and problem-solving skills (Cangelosi, 2000).

According to the descriptive statistics, the mean score for commitment was the highest and the mean score for challenge was the lowest among student teachers in academic hardiness. Therefore, it could reasonably be concluded that student teachers perceive their academic

activities as interesting and exciting things and want to show personal sacrifice to obtain the academic excellence. But they may avoid the difficult and challenging academic courses with the risk of failure. They may possess less effective emotional self-regulation in the face of academic stressors and disappointments. According to gender, the mean scores for the total academic hardiness of female student teachers were higher than that of male student teachers. The results of independent samples *t*-test indicated that there were significant differences between male and female student teachers for the commitment at .001 level and for challenge at .05 level. But significant differences were not found in total academic hardiness and control subscale by gender. This finding was consistent with the study of Lwin Lwin San and Myo Ko Aung (2020), Benishek and Lopez (2001) and Vogt et al., (2008). Results confirmed with previous results of with Daneshamooz and Alamolhodaie (2012). According to ANOVA results, there were significant differences in overall academic hardiness, commitment and control by the education levels. Student teachers attending at 1st year 2nd Semester had higher scores in commitment than others. Moreover, 1st year 2nd Semester student teachers got higher scores in control than 2nd year 1st Semester. In overall academic hardiness, the student teachers attending in 1st year 2nd Semester received higher scores than those attending in 2nd year 1st Semester and 2nd year 2nd Semester. This finding was consistent with the study of Lwin Lwin San and Myo Ko Aung (2020) and contrast with findings of Kamtsios and Karagiannopoulou (2014; 2015). It can be interpreted that first-year students matriculated not very soon and they had to work so hard in order to get high marks to study in the Universities they want to attend.

The result of Pearson product moment correlation indicated that constructive problem-solving skills and overall social problem-solving skills was significantly positive correlated with academic hardiness of student teachers whereas dysfunctional problem-solving skills was found to be significantly negative correlated with academic hardiness. The analysis showed that constructive problem-solving skills had a positive effect on student teachers' academic hardiness and dysfunctional problem-solving skills had a negative effect on student teachers' academic hardiness. So, it can be interpreted that the higher constructive problem-solving skills and the lower dysfunctional problem-solving skills, the higher student teachers' academic hardiness. The adjusted R-square value was .268, which indicated that approximately 27% of the variance in academic hardiness could be explained by constructive problem-solving skills and dysfunctional problem-solving skills. Hence, student teachers who had good social problem-solving skills were more resilient in facing academic challenges, committing to participate in the activities and better controlled difficulties and severe pressure being experienced. Student teachers' low dysfunctional problem-solving skills will increase their level of academic hardiness.

Conclusion

In this study, the results indicated that generally, student teachers possess good constructive problem-solving skills. Therefore, student teachers with high social problem-solving skills tended to view the problems as challenges with a positive outlook and applied the reasonable intentional and systematical techniques to produce the best solutions. Academically hardy attitudes build a person's coping skills and make him able to develop thoughts and behave effectively in overcoming academic demands. This attitude reflects the participant's ability to

alter the pressure situation into an opportunity to develop him (Eschleman et al., 2010; Maddi & Khoshaba, 2005). According to the results, the mean score for commitment was the highest in the academic hardiness' subscales. It was found that the mean score for challenge was the lowest among student teachers. Therefore, it could reasonably be concluded that student teachers perceive their academic activities as interesting and exciting things and want to show personal sacrifice to obtain the academic excellence. But they may avoid the difficult and challenging academic courses with the risk of failure. They may possess less effective emotional self-regulation in the face of academic stressors and disappointments. The finding of this study supports the view that social problem-solving skills correlates positively with academic hardiness. The regression results indicated that approximately 27% of the variance in academic hardiness could be explained by constructive problem-solving skills and dysfunctional problem-solving skills. Therefore, individuals with high social problem-solving skills may be more likely than those with low SPS in order to perform well socially and academically regardless of situations. This study found that social problem-solving skills of student teachers can affect their academic hardiness to some extent.

Limitations and Future Research

A large and more representative sample was not implemented. Due to the time limitation, this study is restricted to participants from Yangon University of Education. It may be limitation to the generalizability for the whole sample. As only using a questionnaire survey method inference related to causality is equivocal. Future research should be explored more deeply and more specifically the effects of student teachers' social problem-solving skills and academic hardiness. Future research should determine the contribution of other factors that may affect social problem-solving skills and academic hardiness such as socioeconomic status, parenting style and so on. This study was carried out in only Yangon University of Education. Similar studies could be carried out in other parts of the country and other education stages to gather adequate information on the subject to be able to generalize. There was a lack of studies that explained the relationship of social problem-solving skills and academic hardiness. Therefore, it highlighted the need to investigate further the relationship between these variables.

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A STUDY ON MOTIVATIONAL BELIEFS AND SELF-REGULATED LEARNING OF MIDDLE SCHOOL STUDENTS

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Abstract

The main objective of the study was to study motivational beliefs and self-regulated learning of middle school students. The explanatory sequential design was used in this study. A total of 800 middle school students (Grade 6 students and Grade 9 students) participated in the quantitative study. The instruments used in this study were Motivational Beliefs Scale with 22 items to examine motivational beliefs and Self-Regulated Learning Strategies Scale with 22 items to assess self-regulated learning of middle school students. According to findings, there were significant differences in self-efficacy subscale in terms of gender and age. Additionally, there were also significant differences in intrinsic value subscale by gender and age. Finally, no significant differences were not found in test-anxiety subscale in terms of gender and age. Then, there were significant differences in total self-regulated learning by gender and age. There were positive and moderate relationships between self-efficacy, intrinsic value and self-regulated learning of middle school students. Conversely, test anxiety was negatively related to self-regulated learning of middle school students. Besides, self-efficacy was the strongest predictor of self-regulated learning and intrinsic value was the second strongest but test anxiety was the weakest and negative predictor of self-regulated learning. Finally, a qualitative follow-up study was conducted by semi-structured interview. Moreover, the information obtained from qualitative study prominently supported the findings of quantitative study. These findings will be valuable for teachers, aiding them in comprehending their students better and enabling adjustments to support the attainment of educational objectives.

Keywords: Motivational Beliefs, Self-Efficacy, Intrinsic Value, Test Anxiety, Self-Regulated Learning

Introduction

Nowadays, the capacities to learn effectively and adapt to new challenges is more important. Traditional models of learning focus only on the delivery of information from teacher to student, but research has shown that learners who take an active role in their own learning process tend to be more successful in acquiring and retaining knowledge (Ongowo and Hungi, 2014). The approaches that have gained significant attention in recent years are motivational beliefs and self-regulated learning (SRL) (Bong, & Choi, 2000).

Motivational beliefs are significant as they shape individuals' goal-setting, effort, resilience, adaptability, self-confidence, and overall success in various domains (Abdullah, 2016). Developing and nurturing positive motivational beliefs can lead to enhanced performance, personal growth, and well-being. These beliefs are the internalized perceptions and expectations individuals hold about their ability to achieve goals, overcome obstacles, and exert effort to accomplish desired outcomes.

Self-regulated learning is a vital aspect of learning and achievement in academic contexts. It refers to the ability to take control of one's own learning process through planning, monitoring, and adapting strategies to achieve academic or learning goals (Zimmerman, 1989). It involves

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being aware of one's strengths and weaknesses, setting goals, managing time effectively, monitoring progress, and employing effective learning strategies (Kuyper et al., 2000).

Motivational beliefs play a vital role in shaping an individual's self-regulated learning behaviors, while self-regulated learning, in turn, influences and reinforces motivational beliefs (Pintrich et al., 1993). Fostering positive motivational beliefs and developing self-regulated learning skills can create a powerful synergy that enhances learning outcomes, persistence, and motivation in educational and personal settings. Therefore, this research will study the motivational beliefs and self-regulated learning of middle school students. This study will contribute for students' wellness, enjoyment, persistence and goal in their student-life. They will be overcome the challenges and possess positive outcomes in school.

Purpose of the Study

The main objective of the study was to investigate motivational beliefs and self-regulated learning of middle school students in Myanmar.

The specific objectives of this study are:

To examine motivational beliefs of middle school students by gender and age

To examine self-regulated learning of middle school students by gender and age

To find out the relationships between motivational beliefs and self-regulated learning of middle school students

To find out whether motivational beliefs predict self-regulated learning of middle school students

To explore how motivational beliefs related with self-regulated learning of middle school students in qualitative study

Definitions of Key Terms

Motivational beliefs. As used in this study, motivational beliefs are defined in terms of self-efficacy, intrinsic value, and test anxiety.

Self-efficacy. Self-efficacy means a measurement of the extent to which the learner recognizes his ability to master a task. It involves the learner's evaluation of his ability to complete a task and confidence in his skills to perform the task. (Pintrich & De Groot, 1990).

Intrinsic value. Intrinsic value means the value element of motivational belief, which consists of students' goals for the task and their beliefs about the importance of, interest in, and value of the task. (Pintrich & De Groot, 1990).

Test anxiety. Anxiety means the affective element of motivational belief, which involves students' emotional reactions to the tasks and catch on students' worry and concern over taking exams. (Pintrich & De Groot, 1990).

Self-regulated learning. Self-regulated learning is an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment (Pintrich, 2000).

Review of Related Literature

Motivation is frequently characterized as a response to internally or externally induced conditions or events (Aldridge & Rowntree, 2021). Motivational beliefs pertain to students' perspectives, thoughts, and value assessments regarding objects, events, or the subject matter (Boekaerts, 1997). Students possessing appropriate motivational beliefs have the potential to achieve academic excellence. The theoretical structure of motivational beliefs, crucial in the learning organization process, is derived from a modification of the general expectation-value model of motivation. Proponents of this model, such as Wigfield and Eccles (2000), propose that students' beliefs regarding their competence in performing an activity and the significance they attribute to the activity may impact their individual preferences, their persistence in engaging with the activity, and their overall performance. The expectation-value model of motivation outlines three components related to self-regulated learning strategies. The initial element is the expectation known as self-efficacy, encompassing learners' convictions about their ability to perform a task. The second component is the value component, encompassing learner objectives and their beliefs about the task's significance. This is articulated through various concepts such as learner objectives, intrinsic orientation, the importance attached to the task, and intrinsic values. The third component is the affective aspect, involving learners' emotional responses to the task (Pintrich & De Groot, 1990).

Numerous studies examining students' capacity to strategize, structure, and contemplate their educational progress and performance have employed the framework of self-regulated learning. Self-regulated learning involves five fundamental learning principles: cognitive, metacognitive, behavioral, motivational, and affective aspects (Panadero, 2017). It also includes two dimensions such as cognitive strategy use and self-regulation. Cognitive strategy use plays a crucial role in human cognition, facilitating effective information processing and problem-solving. Cognitive strategy use encompasses a wide range of mental techniques and processes that enable individuals to process, retain, and manipulate information effectively (Cromley, 2023). Self-regulation serves as both the adhesive and driving force that enables students to oversee their strategic learning at both a broad and immediate level. On a global scale, this aspect involves employing a methodical approach to learning, engaging in macro-level time management (spanning weeks, months, and years), utilizing an instructional approach to seeking assistance, and effectively managing motivation for learning (McClelland et al., 2018).

Method

Participants of the Study

The participants for this study were chosen by using random sampling technique. 800 Grade 6 and Grade 9 students (400 male students and 400 female students) were selected from 8 schools in Yangon Region and Rakhine State.

Research Method

The Explanatory sequential design of mixed method (quantitative and qualitative) was used in this study.

Instrumentation

Motivational Beliefs Scale

This motivational beliefs scale initially developed by Pintrich and De Groot (1990) and updated by Zurina et al. (2022) was used in this study. It contained 24 items and also had 5-point Likert scale range from “strongly disagree” to “strongly agree”. It had three subscales namely “self-efficacy,” “intrinsic value” and “test anxiety”. The first subscale “self-efficacy” consists of 9 items. The second subscale “intrinsic value” contains 9 items. The third subscale “test anxiety” consists of 4 items. Each item in this questionnaire is to be rated on the 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree).

Self-regulated Learning Strategies Scale

This self-regulated learning strategies scale initially developed by Pintrich and De Groot (1990) and updated by Zurina et al. (2022) was used in this study. It contained 22 items and also had 5-point Likert scale range from “strongly disagree” to “strongly agree”. It had two subscales namely “cognitive strategy use” and “self-regulation”. The first subscale “cognitive strategy use” consists of 13 items. The second subscale “self-regulation” contains 9 items. Each item in this questionnaire is to be rated on the 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree).

Research Findings

Comparison of Students’ Motivational Beliefs by Gender

In this research, Table 1 presented the means and standard deviations of motivational beliefs for both male and female students. Descriptive analysis indicated that the mean scores for all three motivational beliefs (self-efficacy, intrinsic value, and test anxiety) were higher for female students compared to male students. This suggested that, in this study, female students exhibited a greater enjoyment of learning, a belief in their ability to understand and grasp the material taught in classes, and a perception of learning as personally valuable, interesting, and significant. Additionally, female students in this study tended to experience higher levels of test anxiety in relation to learning and classroom performance compared to male students.

Table 1 Means, Standard Deviations and Independent Samples *t*-test Results of Students’ Motivational Beliefs by Gender

Variable	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Self-efficacy	Male	400	35.40	3.939	-2.121*	798	.034
	Female	400	35.99	3.893			
Intrinsic Value	Male	400	38.06	3.686	-4.176***	792	.000
	Female	400	39.10	3.369			
Test anxiety	Male	400	12.04	4.137	-1.396	798	.163
	Female	400	12.45	4.219			

* $p < .05$, *** $p < .001$.

The independent samples *t* -test was used to examine whether gender differences were significant or not in three motivational beliefs (see Table 1). According to the Table 1, the results of independent samples *t*-test confirmed that there were significant gender differences for self-efficacy ($t(798) = -2.121$, $p < .05$) and for intrinsic value ($t(792) = -4.176$, $p < .001$). However,

there was no significant gender difference for test anxiety. It can be concluded that female students had higher self-efficacy and intrinsic value than male students.

Comparison of Students' Motivational Beliefs by Age

To investigate variations in motivational beliefs among middle school students based on age, the students were categorized into three groups: "12-13 years," "14-15 years," and "16-17 years." The outcomes revealed that the mean values for students aged 12-13 years were the highest across in all subscales of motivational beliefs, whereas those aged 16-17 years in exhibited the lowest mean value (refer to Table 2).

Table 2 Means, Standard Deviations and ANOVA Results of Students' Motivational Beliefs by Age

Variable	Age	N	M	SD	F	p
Self-efficacy	12-13 years	341	36.31	4.186	9.699***	.000
	14-15 years	359	35.44	3.709		
	16-17 years	100	34.52	3.386		
Intrinsic Value	12-13 years	341	38.79	3.925	3.353*	.035
	14-15 years	359	38.60	3.585		
	16-17 years	100	37.75	3.554		
Test anxiety	12-13 years	341	11.89	3.465	2.053	.129
	14-15 years	359	12.49	3.567		
	16-17 years	100	12.52	4.142		

* $p < .05$, *** $p < .001$.

Then, one-way analysis of variance was conducted to find out the significant differences of motivational beliefs by age. ANOVA results showed that there were significant differences in students' self-efficacy ($F(2,797) = 9.699$, $p < .001$), intrinsic value ($F(2,797) = 3.353$, $p < .05$) (see Table 2).

In order to make more detailed investigation, Tukey HSD test was calculated (see Table 3). Post hoc multiple comparison results indicated that students who were 12-13 years had higher self-efficacy than those who were 14-15 years and 16-17 years. In addition, students who were 12-13 years had greater intrinsic value than who were 16-17 years.

Table 3 Results of Tukey HSD Multiple Comparison for Students' Motivational Beliefs by Age

Categories	(I)Age	(J)Age	Mean Difference(I-J)	p
Self-efficacy	12-13 years	14-15 years	.876**	.008
		16-17 years	1.794***	.000
Intrinsic Value	12-13 years	16-17 years	1.045*	.027

* $p < .05$, ** $p < .01$, *** $p < .001$.

Comparison of Students' Self-Regulated Learning by Gender

In this research, Table 4 provides the means and standard deviations of self-regulated learning for both male and female students. The findings indicated that the mean scores of female students exceeded those of male students across all subscales of self-regulated learning and in total self-regulated learning.

Table 4 Means, Standard Deviations and Independent Samples *t*-test Results of Students' Self-Regulated Learning by Gender

Variable	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Cognitive strategy use	Male	400	51.75	5.424	-2.935**	798	.003
	Female	400	52.87	5.369			
Self-regulation	Male	400	34.92	4.566	-1.161	798	.246
	Female	400	35.28	4.130			
Total Self-regulated learning	Male	400	86.66	9.084	-2.378*	794	.018
	Female	400	88.14	8.477			

* $p < .05$, ** $p < .01$.

The independent samples *t*-test was used to examine whether gender differences were significant or not in self-regulated learning (see Table 4). According to the Table 4, the results of independent samples *t*-test confirmed that there was a significant gender difference for total self-regulated learning ($t(794) = -2.378, p < .05$). And then, there was a significant gender difference for cognitive strategy use ($t(798) = -2.935, p < .01$). However, there was no significant gender difference for self-regulation. Female students had higher in cognitive strategy use subscale and total self-regulated learning than male students. It can be concluded that female students can study by their own ways better than male students.

Comparison of Students' Self-Regulated Learning by Age

To find out the differences in middle school students' self-regulated learning between ages, students were grouped under three groups as "12-13 years, 14-15 years and 16-17 years". According to the results, the mean values of students who were 12-13 years were the highest and in all subscales of self-regulated learning while those who were 16-17 years had the lowest mean value (see Table 5).

Table 5 Means, Standard Deviations and ANOVA Results of Students' Self-Regulated Learning by Age

Variable	Age	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Cognitive strategy use	12-13 years	341	90.02	8.656	29.955***	.000
	14-15 years	359	85.85	8.203		
	16-17 years	100	84.03	9.065		
Self-regulation	12-13 years	341	53.56	5.500	17.740***	.000
	14-15 years	359	51.57	5.010		
	16-17 years	100	50.66	5.703		
Total Self-regulated learning	12-13 years	341	36.46	4.101	33.382***	.000
	14-15 years	359	34.28	4.184		
	16-17 years	100	33.37	4.487		

*** $p < .001$.

Then, one-way analysis of variance was conducted to find out the significant differences of motivational beliefs by age. ANOVA results showed that there were significance differences in total self-regulated learning ($F(2,797) = 33.382, p < .001$), cognitive strategy use ($F(2,797) = 29.955, p < .001$) and self-regulation ($F(2,797) = 17.740, p < .001$) (see Table 5).

For a more comprehensive examination, Tukey HSD test was conducted, and the results are presented in Table 6. Post hoc multiple comparison outcomes revealed that students aged 12-13 years exhibited higher cognitive strategy use and self-regulation compared to those aged 14-15 years and 16-17 years. Additionally, students aged 12-13 years demonstrated greater self-regulated learning than those aged 14-15 years and 16-17 years.

Table 6 Results of Tukey HSD Multiple Comparison for Students' Self-Regulated Learning by Age

Categories	(I)Age	(J)Age	Mean Difference(I-J)	<i>p</i>
Cognitive strategy use	12-13 years	14-15 years	4.168***	.000
		16-17 years	5.991***	.000
Self-regulation	12-13 years	14-15 years	1.989***	.000
		16-17 years	2.900***	.000
Total Self-regulated learning	12-13 years	14-15 years	2.179***	.000
		16-17 years	3.090***	.000

*** $p < .001$.

The Relationship Between Motivational Beliefs and Self-Regulated Learning of Middle School Students

In order to find out whether the relationships between motivational beliefs and self-regulated learning of middle school students, the Pearson product moment correlation analysis was used and the results from this analysis were indicated in the following table (see Table 7).

Table 7 Relationship Between Motivational Beliefs and Self-Regulated Learning of Middle School Students

Variable	SE	IV	TA	SRL	CSU	SR
SE	-	.435***	-.100**	.563***	.541***	.465***
IV		-	.022	.510***	.526***	.377***
TA			-	-.134***	-.087*	-.163***
SRL				-	.922***	.876***
CSU					-	.620***
SR						-

Note.

SE =Self-efficacy

IV =Intrinsic value

TA =Test anxiety

SRL =Self-regulated learning

CSU =Cognitive strategy use

SR =Self-regulation

* $p < .05$, ** $p < .01$, *** $p < .001$

According to the Table 7, there were significant relationships between motivational beliefs and self-regulated learning of middle school students. In more details, the self-efficacy subscale of motivational beliefs had a significant positive relationship with total self-regulated learning at ($r=.563$, $p < .001$) and with its respective subscales, cognitive strategy use at ($r=.541$, $p < .001$) and self-regulation ($r=.465$, $p < .001$). Moreover, the intrinsic value subscale was significantly positively correlated with total self-regulated learning at ($r=.510$, $p < .001$) and with

its respective subscales, cognitive strategy use at ($r=.526, p < .001$) and self-regulation ($r=.377, p < .001$).

However, test anxiety subscale had a significant negative relationship with total self-regulated learning at ($r=-.134, p < .001$) and with its respective subscales, cognitive strategy use at ($r=-.087, p < .001$) and self-regulation ($r=-.163, p < .001$). According to the strength of correlations, two subscales of motivational beliefs, self-efficacy and intrinsic value, had moderately positive correlations with total self-regulated learning but test anxiety subscale of motivational beliefs was low negatively correlated with total self-regulated learning.

Regression Analysis for the Prediction of Self-Regulated Learning

To find the prediction of motivational beliefs on self-regulated learning, analysis of simultaneous multiple regression was applied. Subscales of motivational beliefs, including self-efficacy, intrinsic value and test anxiety, were independent variables. Middle school students' self-regulated learning served as dependent variable (see Table 8).

Table 8 Simultaneous Multiple Regression Analysis Summary for Motivational Beliefs Versus Self-Regulated Learning of Middle School Students

Variable	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	Adj <i>R</i> ²	<i>F</i>
Self-regulated learning	25.461		8.613***	.643	.413	.411	186.883***
Self-efficacy	.913	.407	13.380***				
Intrinsic value	.829	.335	11.093***				
Test anxiety	-.212	-.101	-3.683***				

*** $p < .001$.

According to Table 8, the results indicated how much self-efficacy, intrinsic value and test anxiety subscales of motivational beliefs explained on self-regulated learning of middle school students. The results of multiple regression model stated that subscales of motivational beliefs significantly predicted on self-regulated learning ($F=186.883, p < .001$) and explained for 41.1 % (Adjusted R^2) of the variance in self-regulated learning.

According to the results, three subscales of motivational beliefs significantly predicted on self-regulated learning: self-efficacy ($B=.913$), intrinsic value ($B=.829$) and test anxiety ($B=-.212$). Specifically, the results confirmed that self-efficacy was the strongest predictor of self-regulated learning and intrinsic value was the second strongest. However, test anxiety subscale of motivational beliefs was the weakest and negative predictor of self-regulated learning.

Finally, based on the findings of multiple regression analysis, the diagram was drawn describing how self-efficacy, intrinsic value and test anxiety subscales of motivational beliefs significantly affected their levels of self-regulated learning (see Figure 1). Then, the resultant model can therefore be defined as in the following equation

$$\text{SRL} = 25.461 + .913\text{SE} + .829\text{IV} - .212\text{TA}$$

SRL=Self-regulated learning

SE=Self-efficacy

IV=Intrinsic value

TA=Test anxiety

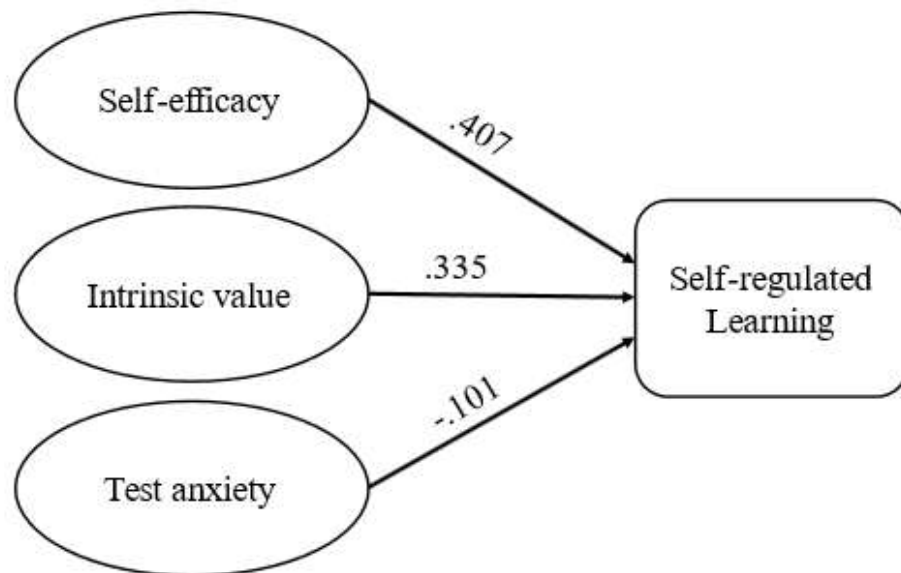


Figure 1 Predicting Power of Motivational Beliefs on Self-Regulated Learning

Qualitative Study

Qualitative study was conducted to provide further insights into the findings of the quantitative study. Subsequently, follow up semi-structured interview was performed with 20 middle school students. Participants were asked five main open-ended 5 core questions, including academic efficacy in their class, strategies for understanding lessons, strategies for coping with challenging lessons, interest in grade-level lessons and confidence in exam performance based on literature. The summary findings of qualitative results were briefly described in the following Figure.

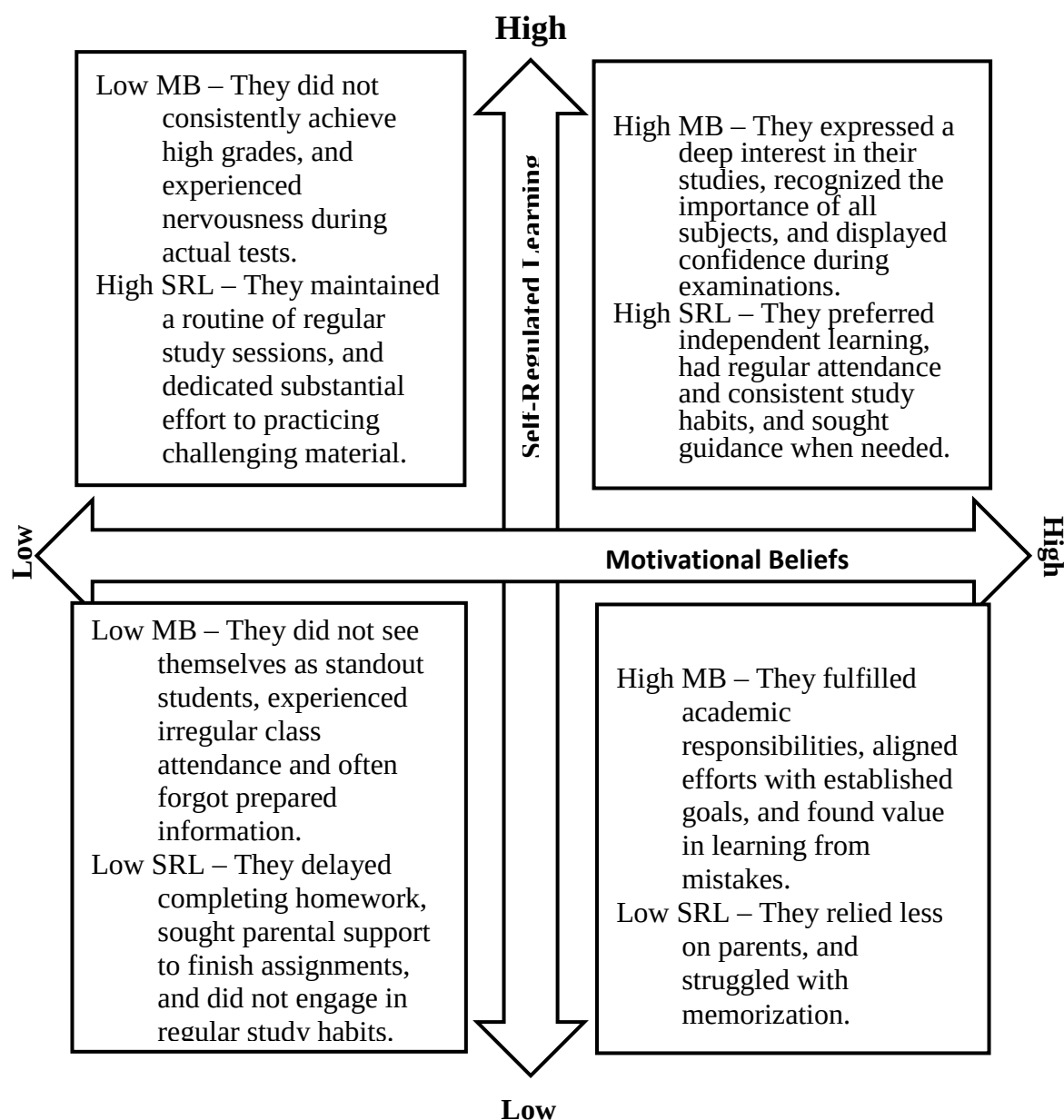


Figure 2 Summary Results of Motivational Beliefs and Self-Regulated Learning of Middle School Students

Conclusion and Discussion

The primary objective of this study was to investigate motivational beliefs and self-regulated learning of middle school students.

Differences in motivational beliefs by gender. The results suggested that there were significant differences in all subscales of motivational beliefs in terms of gender. Abdullah (2016) found that students' self-efficacy differed according to gender. For this study, in self-efficacy, intrinsic value, test anxiety, the results revealed that the mean scores of female students were greater than those of male students. For intrinsic value, females' self-efficacy mean scores and intrinsic value mean scores were higher than those of males. This finding was consistent with the finding of Abdullah (2016), Htin Mar Zaw (2015), Mahyuddin et al. (2006), Tin Zar Aung (2015) and Özkan (2003). This finding was inconsistent with Ryan and Connell (1989) and Harper and Marshall (1991) who found that male have higher self-efficacy and intrinsic value

than females. The result of this study might be because girls thought more deeply and more intense about everything and they had more preparations for learning so females were more confident about themselves and faced the strange situations effectively learning and confidence with their ability and their appearance. For test anxiety, female students were also higher than male students. And this finding was consistent with the finding of Chapell et al. (2005), and Özkan (2003) who found that female students' test anxiety was higher than male students. This finding was inconsistent with the finding of Htin Mar Zaw (2015) who found that male students' test anxiety was higher than female students. Female students felt more intense with exams and test anxiety symptoms and higher levels of emotionality and more worried and anxious.

Differences in self-regulated learning by age. The results indicated that there were significant differences in students' self-efficacy and intrinsic value in terms of age. Findings revealed that students who were 12-13 years had higher self-efficacy than those who were 14-15 years and 16-17 years. In addition, students who were 12-13 years had greater intrinsic value than who were 16-17 years. The findings were inconsistent with previous studies of Tin Zar Aung (2015) found that there were no significant differences in age of all motivational beliefs. Generally, it could reasonably be concluded that 12-13 years of students had higher self-efficacy belief and intrinsic value than 14-15 years and 16-17 year students. As the means indicate, most of 12-13 years students were obedient to their parents' and teachers' guidelines. When grade 14-15 years and 16-17 years transferred to adolescence level, they were distracted by their personal and environmental factors. This finding was consistent with the finding of Kivinen (2003) who found that the youngest students had as higher self-efficacy and intrinsic value. This finding was inconsistent with the finding of Khin Thu Thu Win (2013) who found that the students over 17 have low self-efficacy and intrinsic goal than the students over 17. Pintrich (1999) found that earlier adolescents were obedient to their parents' and teachers' guidelines and more sensitive to regulate their learning and later adolescents were distracted by their personal and environmental factors.

Differences in self-regulated learning by gender. The results of independent samples *t*-test showed that there was a significant gender difference for total self-regulated learning and cognitive strategy. Abdullah (2016) found that students' self-regulated learning differed according to gender. The results showed that female students use subscale of cognitive strategy use and total self-regulated learning than male students. It could be concluded that female students can study by their own ways better than male students. Similarly, Abdullah (2016) found that female and male students were different in self-regulated learning. Female students were higher self-regulated learning as they are more efficacious in managing their own learning activities (Abdullah, 2016). Successful tasks-completion experiences and effective usage of strategies could enhance male self-regulated learning (Schunk & Pajeres, 2002). It could be seen that females were more efficacious in managing their own learning activities and also used specific self-regulated learning strategies and took immediate action doing homework and often participated in activities. One of the main reasons for male students had lower in cognitive strategy and self-regulated learning is their addiction in internet. They played games at home and outside by using their mobile phones while females students were more exert control over internet and games. Some studies suggested that males have a stronger motivation to play (Chou

& Tsai, 2007) and picked up more positive thoughts from playing digital games, and thus, games are regarded as a “male toy” (Horzum, 2011).

Differences in self-regulated learning by age. The results indicated that there were significance differences in total self-regulated learning, cognitive strategy use and self-regulation. The results indicated that students who were 12-13 years had higher cognitive strategy use and self-regulation than those who were 14-15 years and 16-17 years. In addition, students who were 12-13 years had greater self-regulated learning than who were 14-15 years and 16-17 years. This finding was consistent with the findings of Effeney et al. (2013) and Kopp (1982). Later adolescence, which was one of the important stages of development, was associated with many emotional and behavioral difficulties (Çelik et al., 2008). During later adolescence, despite gaining increased cognitive competence, students often experienced a decline in both motivation and self-regulation (Pintrich & Zusho, 2002). Young students were academically regulated in their learning (Purdie et al., 2004). Cognitive abilities and self-regulation skills might be more advanced in early adolescence (12-13 years) as individuals go through significant cognitive and emotional development during this period. Educational programs at this age might emphasize skill-building and provide more guidance and support. However, the above educators noticed that according to developmental stages, 14-15 years and 16-17 years had many factors such as peer influence, family support, and exposed to diverse experiences which could distract the development of cognitive strategies and self-regulation. In his research, Effeney et al. (2011) emphasized that motivation tended to decline as individuals grow older, leading to adverse impacts on self-regulation, particularly during the adolescent phase.

Moreover, to find out the relationship between motivational beliefs and self-regulated learning of middle school students, Pearson Product Moment Correlation was analyzed. It was found that there was a positive correlation between students' self-efficacy and self-regulated learning. The highest correlation to self-regulated learning for this study was found to be students' self-efficacy beliefs. These results suggested that higher beliefs about self-efficacy might lead to higher levels of performance. In an achievement context, self-efficacy included students' confidence in their cognitive skills to learn and performed the academic course work (Pintrich, 1999). This result was consistent with previous studies of Abdullah (2016), Ocak and Yamaç (2013), Özkan (2003) and Zurina et al. (2022). The findings of Abdullah (2016) showed that self-efficacy and intrinsic value were positively related to students' self-regulated learning.

A negative correlation was found between students' test anxiety and self-regulated learning. This result was consistent with previous studies of Abdullah (2016), Ocak and Yamaç (2013), Özkan (2003) and Zurina et al. (2022). This finding supported previous research indicating that test anxiety interfered with self-regulated learning. Moline and Borkivec (1994) and Busari and Uwakwe (2001) had suggested that high level of anxiety might become poor learning outcomes in school.

Finally, a regression analysis was conducted to ascertain the amount of variance in students' self-regulated learning scores explained by the variable of motivational beliefs. The regression analysis indicated that 41% of the variance in self-regulated learning was explained by the students' motivational beliefs. Specifically, the results confirmed that self-efficacy was the strongest predictor of self-regulated learning and intrinsic value was the second strongest. This

result was consistent with previous studies of Gall (1985), Pintrich and De Groot (1990) and Zimmerman (1989). Self-efficacy is deemed as the key motivational beliefs affecting self-regulated learning (Zimmerman, 1989). However, test anxiety subscale of motivational beliefs was the weakest and negative predictor of self-regulated learning. This result consistent with previous studies of Gall (1985), Pintrich and De Groot (1990) and Zimmerman (1989). Test Anxiety could be a debilitating factor, which caused distraction and disorientation (Gall,1985).

The study employed semi-structured interviews to explore the relationship between motivational beliefs and self-regulated learning in middle school students. Findings revealed that students with high motivational beliefs tended to exhibit high levels of self-regulated learning. These students demonstrated effective communication skills, confidence in mastering subjects, and a proactive approach to learning. They preferred challenging lessons, sought guidance when needed, and balanced study with leisure activities. Their intrinsic motivation drove them to pursue self-driven learning, finding genuine joy in studying. They maintained a clear separation between work and relaxation, engaged in leisure activities, and valued acquiring knowledge through reading. Regular study sessions, attentive note-taking, and proactive exam preparation were integral to their structured learning approach. Despite setbacks, they embraced results and maintained confidence in their abilities. Overall, these students described their learning process as systematic and derived satisfaction from their academic achievements.

The interview results revealed a correlation between low motivational beliefs and low self-regulated learning among middle school students. Those with low motivational beliefs struggled with feelings of inferiority when presenting in class, preferred leisure activities with friends over revisiting challenging lessons, had difficulty maintaining focus, lacked resilience with new material, avoided complex math problems, and lacked familial support. They found reading easier than math, leading them to focus on simpler parts of lessons. As exams neared, they intensified their efforts but still struggled with persistent worry, lack of confidence, and difficulty recalling prepared information during tests.

Recommendations

The following strongly recommendations can be made based on the findings of this study;

- Students should learn and practice to improve motivational beliefs and self-regulated learning to have consistent study habits and effort to practicing challenging material.
- Teacher educators should help students to maintain and develop their motivational beliefs and self-regulated learning by tutoring, counseling, or access to resources tailored to address individual learning needs.
- Teacher educators should try to improve students' self-efficacy as well as intrinsic value and reduce their anxiety level and should give more autonomy, freedom and choices during the learning processes.
- Teacher educators should provide them with opportunities to self-regulate in learning and reduce procrastination and provide guidance on effective time management and collaborative skills and help students create schedules, prioritize tasks, and develop routines
- Teacher educators should conduct and prioritize the importance of learning itself rather than being excessively focused on exams during the teaching and learning processes, aiming to reduce students' anxieties related to examinations.

Limitations and Suggestions for Future Research

There are some research limitations and several extended studies that can be further undertaken. Firstly, in this research, results of this study were limited to middle school students in Yangon Region and Rakhine State. Therefore, sample of this study did not represent all students of Myanmar as a whole. Thus, future studies will need to collect data from different regions and states of Myanmar to be more generalized, reliable and valid and to be representative for all student in Myanmar across ethnicities, cultures and socio- economic backgrounds. Secondly, the sample used in this research was Grade 6 and Grade 9 middle school students from 8 schools in Yangon Region and Rakhine State. Thus, the sample should be selected from others high schools to higher education level, such as universities with different age groups. Thirdly, demographic factors such as parents' job, parent's education level, socioeconomic status, locality and birth order should be considered in future research. Finally, this study focused the explanatory sequential design of mixed method (quantitative and qualitative studies), only qualitative research should be studied to investigate deeply about motivational beliefs and self-regulated learning of students.

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A STUDY ON ENGLISH WRITING ANXIETY OF GRADE 10 STUDENTS IN SAGAING TOWNSHIP: A MIXED-METHODS STUDY

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Abstract

The main purpose of this study was to investigate English writing anxiety of Grade 10 students in Sagaing Township. Explanatory sequential mixed methods research design was used in this study. A total of 182 Grade 10 students (81 males and 101 females) were selected from two high schools in Sagaing Township by using simple random sampling technique for quantitative data. For quantitative data analysis, descriptive statistics and independent samples *t*-test were used. According to Cheng (2004) and the result of descriptive statistics, the level of English writing anxiety among Grade 10 students in Sagaing Township was high (the mean score of 67.93 > 65). Semi-structured interviews with ten participants who were selected by purposive sampling method indicated that a lack of coping mechanisms, along with concerns about language proficiency, fear of criticism, and low confidence, were key factors contributing to this anxiety. In order to alleviate such anxiety, building self-confidence, using familiar vocabulary, regular writing practice, and incorporating technology were effective strategies. Learning from mistakes and adopting a constructive mindset were also important approaches. Regarding the type of writing anxiety, the cognitive anxiety was the highest and the avoidance behaviour, the lowest in mean percent. Although there was no significant difference in English writing anxiety by gender, the nature of subject stream had a significant effect on it with students in STEAM 1 experiencing less anxiety due to additional English exposure ($t = -2.076, p < .05$). Similarly, students who attended English courses outside of school reported significantly lower anxiety levels than those who did not attend English courses ($t = -2.790, p < .01$). Finally, this study provided valuable insights into the factors that contribute to English writing anxiety and offered practical strategies for teachers and students to help reduce it.

Keywords: Writing Anxiety, Somatic Anxiety, Cognitive Anxiety, Avoidance Behaviour, STEAM 1, STEAM 2

Introduction

In 21st century, the global significance of English education has grown rapidly due to the rapid exchange of information. To keep up with the most updated global developments, English is mandated as a compulsory subject from primary to high school levels in all nations over the world. Also in Myanmar, English is categorized as one of the core subjects and is taught from primary school through university. English encompasses four essential skills: listening, speaking, reading, and writing. Among these skills, writing skill is essential component in the curriculum

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of primary, secondary, and colleges and also applies to colleges offering pre-university programs. It is also crucial for both academic achievement and professional development.

English writing is a basic skill in the academic journey of high school students. This skill plays a crucial role in their ability to communicate effectively, think critically, and succeed in various subjects. However, at the high school level, anxiety appears when students will write a composition with different limitations such as lack of vocabulary and feel unaccustomed to writing in a foreign language (Hartono & Maharani, 2019; Hudayani et al., 2020; Setyowati et al., 2020). Experts also argued that fear of negative evaluation by teachers and peers, and fear of writing under time limits also make it difficult for students to improve their English writing skills (Jebreil et al., 2015; Nazari et al., 2020; Rezaei & Jafari, 2014; Türnük & Aydın, 2020; Yayli & Genc, 2019). Therefore, they often encounter what is called writing anxiety.

Writing anxiety is considered as the psychological condition experienced by students where they are afraid of the writing process using a foreign language (Soleimani, Hamasaid & Saheb, 2020). It can also be defined as the negative emotions and feelings such as anxiety, nervousness, low confidence (Nordin, et al, 2020), tension, apprehension, and worry (Rudiyanto, 2017) experienced by learners in any writing activity (Nordin, et al., 2019). This anxious feeling is claimed to obstruct students' writing activities, including their process and achievement (Jawas, 2019, Qashoa, 2014; Rehelmi, 2020).

English writing anxiety is defined as the fear and unease concerned with writing activities, often resulting from low confidence, fear of evaluation, and lack of proficiency in English (Cheng, 2004). According to Ratnasari (2020), there are many factors that can contribute to this anxiety, such as classmates, linguistic knowledge, teachers' attitudes toward students, and time pressure on an activity of writing. Jawas (2019) has also highlighted that creating ideas, developing statements of writing, developing content writing, types of essay assignments, and classroom atmosphere cause students' writing anxiety. This anxiety can lead to avoidance behaviours, decreased motivation, and lower academic achievement, making it an important area of concern for educators and researchers alike (Zhang, 2011).

For many students, writing is competently a non-inherent skill and also the most challenging skill to master since there are many aspects of writing such as punctuation, spelling, and grammar (Daud, Daud, & Kasssim, 2007). Therefore, writing in English can be a source of significant anxiety, which has negative impact on their performance and willingness to engage in writing tasks. Many results of previous studies in this decade also highlight that writing anxiety in foreign languages has negative effects on attitudes, success, students' achievement, hinders the writing process, and reduces interest in writing (Nugroho & Ena, 2021).

For the above reasons, to investigate English writing anxiety is a necessity and of great importance, due to its negative effects on language learning, performance, achievement, and perception towards the whole educational process (Dornyei, 2005). Therefore, this study aimed to investigate English writing anxiety of Grade 10 students.

Aim of the Study

The main aim of this study was to investigate English writing anxiety of Grade 10 students in Sagaing Township. The specific objectives were:

1. To examine the level of English writing anxiety among Grade 10 students

2. To identify the factors that contribute to English writing anxiety among Grade 10 students
3. To find out some strategies for reducing English writing anxiety among Grade 10 students
4. To identify the type of English writing anxiety among Grade 10 students
5. To investigate the difference in English writing anxiety of Grade 10 students by gender,
6. To examine the difference in English writing anxiety of Grade 10 students by subject stream
7. To find out the difference in English writing anxiety of Grade 10 students by English structured course

Scope of the Study

A total of 182 Grade 10 students were selected from two high schools in Sagaing township. This scope was limited within 2024-2025 Academic Year.

Definition of the Key Terms

Writing Anxiety. Writing anxiety was defined as a general avoidance of writing behaviour and situations thought to potentially require some amount of writing accompanied by the potential for evaluation of that writing (Hassan, 2001).

Somatic Anxiety. Somatic anxiety refers to one's perception of the physiological effects of the anxiety experience, as reflected in increase in state of unpleasant feelings, such as nervousness and tension (Cheng, 2004).

Cognitive Anxiety. Cognitive anxiety refers to the cognitive aspect of anxiety experience, including negative expectations, preoccupation with performance and concern about others' perception (Cheng, 2004).

Avoidance Behaviour. Avoidance behaviour refers to the behavioural aspect of the anxiety experience, avoidance of writing (Cheng, 2004).

STEAM 1. STEAM 1 refers to a subject stream that consists of six common core areas of learning (Myanmar, English, Mathematics, Chemistry, Physics and Biology) plus social science (Geography, History and Economics) (Ministry of Education, 2015).

STEAM 2. STEAM 2 refers to a subject stream that consists of six common core areas of learning (Myanmar, English, Mathematics, Chemistry, Physics, and Economics) plus social science (Geography and History) (Ministry of Education, 2015).

Literature Review

Regarding writing anxiety, Daly and Miller (1975), originally developed Writing Apprehension Test (WAT) for first language (L1) learners which has been widely used to measure this anxiety. However, it showed limitations in second language (L2) contexts. The result of previous studies highlighted concerns with the WAT's validity (Cheng, 2004), as only a few items directly relate to anxiety, and it often conflates anxiety with self-confidence (McKain, 1991). To address these limitations, McKain (1991) developed the Writing Anxiety Questionnaire (WAQ), though it remained unidimensional and inadequate for L2 learners. Researchers have advocated for a multidimensional approach to measuring writing anxiety, focusing on cognitive, somatic, and behavioral components.

Therefore, Cheng (2004) developed the Second Language Writing Anxiety Inventory (SLWAI) based on data from English as a Foreign Language (EFL) learners. The SLWAI,

validated through exploratory factor analysis, includes three subscales: Somatic Anxiety, Cognitive Anxiety, and Avoidance Behavior. It has demonstrated strong reliability and validity, making it a more effective tool for assessing L2 writing anxiety. Based on these results, Cheng (2004) conceptualized writing anxiety with three dimensions called somatic anxiety, cognitive anxiety, and avoidance behaviour.

Somatic anxiety refers to one's perception of the physiological effects of the anxiety experience, as reflected in increase in state of unpleasant feelings, such as nervousness and tension (Cheng, 2004). This type of anxiety is connected with psychological changes in a person associated with anxiety (Rudiyanto, 2017). In other studies, Ekmekçi (2018) cited that it deals with the psychological effects experienced by a person, reflected in increased autonomic arousal and unpleasant feelings such as nervousness and tension.

Cognitive anxiety refers to the cognitive aspect of anxiety experience (Cheng, 2004). The mental aspect when someone experiences anxiety such as negative expectations, preoccupation with performance, regards to other people's perceptions connects to cognitive anxiety (Cheng, 2004; Ekmekçi, 2018; Rudiyanto, 2017).

Avoidance behaviour refers to the behavioural aspect of the anxiety experience, avoidance of writing (Cheng, 2004) and can be explained as the behavioural aspect where a person avoids or refuses to write (Cheng, 2004; Ekmekçi, 2018). According to Cheng (2004), the negative relationship between test anxiety and English writing performance is primarily due to the cognitive components rather than somatic components or avoidance behaviour.

The essence of Cheng's model of second language writing anxiety is its ability to provide a targeted and nuanced assessment of writing anxiety in second language learners. Unlike Daly and Miller (1975), who focused broadly on writing apprehension in native speakers, Cheng (2004) specifically addressed the unique challenges faced by second language learners, such as the difficulty of expressing thoughts in a non-native language and the increased fear of making mistakes. By measuring somatic, cognitive, and behavioural aspects of anxiety, it offers a comprehensive view of how writing anxiety manifests in second language contexts. Therefore, in the present study, Cheng's model was used to study English writing anxiety.

Methodology

Sample of the Study

In order to obtain the required quantitative data, a total of 182 Grade 10 students (81 males and 101 females) were selected as sample by using simple random sampling method from two high schools in Sagaing Township. Then 10 participants were selected by using purposive sampling method for qualitative data.

Research Method

Explanatory sequential mixed methods research design was used in this study. Quantitative method was applied to collect numerical information for English writing anxiety. Then qualitative method was used to get detailed information regarding the perception of students on the causes and strategies for their English writing anxiety.

Instrumentation of Second Language Writing Anxiety Inventory (Cheng, 2004)

In this study, the demographic questions and Second Language Writing Anxiety Inventory (SLWAI) were used to collect the required quantitative data. The instruments were as follows.

Demographic Questions. It consisted of questions on the participant's personal information such as (a) gender, (b) subject stream, and (c) whether or not they had attended English structured courses outside of school.

The Second Language Writing Anxiety Inventory (SLWAI). It was devised by Cheng (2004), and it is the tool used to measure the levels and types of second language writing anxiety. This inventory consists of a 22-item questionnaire which is divided into three subscales. i) Cognitive anxiety, which comes from negative expectations, and worries about self-performance, ii) Somatic anxiety, which is reflected by negative feelings like tension or nervousness, and iii) Avoidance behavior, which can be related to restraint in writing.

The SLWAI uses a five-point Likert scale ranging from 1 (strongly disagree), to 5 (strongly agree). As previously mentioned, the 22 questions are divided into three categories. Questions 2, 6, 8, 11, 13, 15 and 19 return data for somatic anxiety. Questions 1, 3, 7, 9, 14, 17, 20 and 21 supply data for cognitive anxiety, while questions 4, 5, 10, 12, 16, 18 and 22 refer to avoidance behaviour. Five items (1, 4, 17, 18 and 22) are negatively worded. Total scores of 65 points and up indicate a high level of writing anxiety, whereas the scores of 50 and less are categorized as low level of anxiety. Scores between 50 and 65 are classified as moderate level of writing anxiety (Cheng, 2004a).

In terms of reliability, Cheng (2004), in his study on Taiwanese EFL students, revealed that Cronbach's alpha of the SLWAI was established at .91 (Cheng, 2004). The researcher chose this tool to measure writing anxiety because it has been proven to have high reliability and validity scores (Cheng, 2004a; Jennifer & Ponniah, 2017; Abdullah, Hussin, & Shakir, 2018; Aloairdhi, 2019).

For the current study, an expert review was conducted by 8 experts in the field of Educational Psychology and Educational Test and Measurement for face and content validity, after translating this inventory into Myanmar version. According to their suggestions, the necessary changes were done.

In order to determine the reliability of the instruments, pilot testing was conducted with 50 students from No (3) Basic Education High School in Sagaing. The internal consistency was 0.886 for the Second Language Writing Anxiety Inventory (SLWAI). The administration process for the inventory approximately took about 30 to 45 minutes.

Semi-structured Interview. Based on review of related literature and quantitative data, the researcher developed two questions for semi-structured interview as follows:

1. What do you think about your level of English writing anxiety—high or low? And why?
2. How would you suggest reducing English writing anxiety of the students?

Data Collection Procedure

After pilot testing, the demographic questions and the Second Language Writing Anxiety Inventory (SLWAI) were administered to 182 Grade 10 students for quantitative data. In

order to get in-depth data about English writing anxiety, the researcher interviewed 10 participants (5 from highest-anxiety group and 5 from lowest-anxiety group).

Data Analysis

After collecting the data, the Statistical Package for the Social Science (SPSS) version 23 was used to analyze the quantitative data. In this study, descriptive statistics and independent samples *t*-test were used to analyze quantitative data.

For analysis of qualitative data, the steps of preliminary exploration of the data by reading through the transcriptions, coding the data by segmenting and labeling text, using codes to develop themes by grouping similar codes, connecting any interrelating themes, and constructing a narrative suggested by Creswell (2007) were followed for coding process in the interview.

Findings

Based on the review of related literature, the quantitative and qualitative data analyses were empirically conducted. The results were discussed as follows.

Descriptive Statistics for English Writing Anxiety of Grade 10 Students by Level of Anxiety

In order to investigate English writing anxiety, statistical descriptive procedure was carried out. The result was shown in Table 1.

Table 1. Descriptive Statistics for English Writing Anxiety

Variable	N	Minimum	Maximum	Mean	SD
English Writing Anxiety	182	23	95	67.93	14.419

According to Table 1, the mean score of students was 67.93 which reflected a high level of anxiety (Mean of 67.93, >65) according to Cheng (2004). The possible scores on the SLWAI range from 22 to 110. The participants' scores in this study ranged from 23 to 95.

In order to see the number of participants in each level of English writing anxiety, the frequency counting and percentage were executed. The results were described in Table 2.

Table 2. Number of Grade 10 Students by Level of English Writing Anxiety

Level of Anxiety	Frequency	Percentage
High anxiety	115	63%
Moderate anxiety	45	25%
Low anxiety	22	12%
Total	182	100%

According to Table 2, 115 students (63%) were found to experience high level of anxiety, 45 students (25%) experienced moderate level of anxiety and 22 students (12%) experienced low level of anxiety.

In order to confirm these quantitative data, individual semi-structured interviews were conducted. These interviews covered two subtopics: (A) Causes for high or low anxiety, and (B) Strategies to reduce English writing anxiety.

The information obtained from the individual interviews with the high-anxiety students was expressed as follows.

Participant 1 said, *"I experience high English writing anxiety. I think, at the upper secondary level, the sentences should be more complex than those at the lower secondary level. So, I'm worried about making mistakes in sentence structure."*

Participant 2 said, *“I think my English writing anxiety was high because I’m poor in grammar and so I have some difficulties with sentence structure, even though I know many vocabulary words. Moreover, I also lack writing practice. This makes me low self-confidence and increased my anxiety.”*

Participant 3 said, *“I have high English writing anxiety because I did not learn English well at the basic and lower secondary levels. This led me face challenges with spelling and translating into Myanmar. So I’m afraid of English and become poor in English.”*

Participant 4 said, *“My English writing anxiety is high because I’m afraid of teachers since childhood and do not dare to ask them questions. Next, I’m also worried about criticism from others regarding my writing.”*

Participant 5 said, *“I have high anxiety because I have never been interested in English since childhood and did not study it well. As a result, I have to struggle with spelling, usage, and grammar. So, my English writing anxiety is high.”*

By summarizing the interviews of these high-anxiety participants, the present study provided the following themes for arising English writing anxiety.

1. **Concerns about Language Proficiency:** Many participants suffered from anxiety due to their perceived weaknesses in grammar, sentence structure, spelling, and vocabulary. Some felt that their earlier struggles with learning English at the basic and lower secondary levels contributed to their difficulties at the upper secondary level.
2. **Fear of Criticism:** Several participants were afraid of criticism from others, including teachers and peers since they had difficulties and weakness in language proficiency. This fear discouraged them from seeking clarification, which in turn contributed to low self-confidence and increase writing anxiety.
3. **Lack of Confidence:** Participants also highlighted that insufficient practice in writing and fear of making mistakes contributed to low self-confidence and consequently leads to high anxiety.

Again, the researcher interviewed another 5 participants from the low-anxiety group to find out why their writing anxiety was low. Their responses revealed that they also had some anxiety in English writing. However they tried to cope with their anxieties in various ways.

Participant 1 said, *“I have also more or less anxiety in English writing because English isn’t our mother tongue. But I use only familiar words to manage my anxiety.”*

Participant 2 said, *“I feel less anxious about writing because I’m used to English through using smartphones. Even if I did not know the meaning of some words, I can quickly translate them with Google.”*

Participant 3 said, *“I think everyone may have some degree of anxiety in English writing because English is not our native language. So do I. But I believe that practice makes perfect. So, I write anything, right or wrong, without caring any mistakes and learn from those mistakes. By doing so, my English writing anxiety become low.”*

Participant 4 said, *“I experience low anxiety because I have attended summer English courses every year and exert additional effort into studying to overcome English writing anxiety.”*

Participant 5 said that, *“I have low anxiety because I think the context in Myanmar first, then translate it into English and use simple words in my writing.”*

To sum up the above responses, it was found that the low-anxiety students adopted several coping mechanisms to overcome their writing anxiety in various ways such as using simple and familiar words, making effective use of smartphone technology, and so on.

For the second interview question, participants with high and low anxiety groups suggested the following common strategies for managing and reducing their anxiety.

1. **Building self-confidence.** It is important to build self-confidence for reducing English writing anxiety.
2. **Using familiar words.** This helps reduce anxiety and improves writing ability.
3. **Practicing writing regularly.** Participants suggested practical strategies such as reading more English texts, practicing writing regularly, studying basic grammar and vocabulary and listening to English songs and the like. To practice writing regularly contributes to skill development and anxiety management.
4. **Utilizing Technology.** Many participants highlighted the role of technology, such as smartphones and translation tools, in making English more accessible.
5. **Learning from mistakes.** It is important to learn from mistake to improve writing skill. Changing the mindset about errors helps overcome writing anxiety.
6. **Taking structured courses.** Taking the structured courses can significantly reduce English writing anxiety.
7. **Seeking Support:** The students should ask teachers, peers or someone for help in writing without hesitation.
8. **Early English Learning:** The importance of building a strong foundation in English from an early stage was also highlighted by several participants as a key to preventing anxiety in later stages of learning.

Based on the above strategies, English writing anxiety can be reduced by integrating consistent practice, strategic use of technology, and maintaining a positive attitude toward learning significantly.

The SLWAI also offers a three-dimensional conceptualization of anxiety, such as somatic anxiety, cognitive anxiety, and avoidance behaviour (Cheng, 2004). By calculating the scores of the items related to each type, the distribution of the three types of English writing anxiety were presented in Table 3.

Table 3. Descriptive Statistics for Each Type of English Writing Anxiety

Type of Anxiety	No. of items	Minimum	Maximum	Mean	Mean percent	SD
Cognitive Anxiety	8	8	38	27.14	67.85	5.575
Somatic Anxiety	7	7	33	22.58	64.51	5.941
Advoidance Behaviour	7	8	31	18.21	52.02	5.869

In Table 3, it is obvious that cognitive anxiety is the most common type of English writing anxiety experienced by Grade 10 students with mean percent of 67.85. The next common type of anxiety is somatic anxiety with the mean percent of 64.51. And the least common anxiety is advoidance behaviour with the mean percent of 52.02. Most of the previous studies (Hussein,

2013; Rasuan & Wati, 2021; Quvanch & Na, 2022) were aligned with the current study. Cheng (2004) also expressed that cognitive anxiety plays a significant role in writing anxiety.

Mean Comparisons for English Writing Anxiety by Gender

In order to compare the differences in English writing anxiety between male and female students, independent samples *t*-test was conducted. The result of *t*-test was shown in Table 4.

Table 4. The Result of Independent Samples *t*-test on English Writing Anxiety by Gender

Variable	Gender	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
English Writing Anxiety	Male	81	68.46	15.519	.437	180	<i>ns</i>
	Female	101	67.51	13..538			

Note. *ns* = not statistically significant

As presented in Table 4, there was no significant difference in English writing anxiety by gender. This result was consistent with Harnoto and Maharani (2019), and Chen, Guo and Kuai (2023).

Mean Comparisons for English Writing Anxiety by Subject Stream

In order to find out whether there was any significant difference in English writing anxiety by subject stream, independent samples *t*-test was conducted. The result was shown in Table 5.

Table 5. The Result of Independent Samples *t*-test on English Writing Anxiety by Subject Stream

Variable	Subject Stream	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
English Writing Anxiety	STEAM 1	73	65.25	15.622	- 2.076	180	.039*
	STEAM 2	109	69.73	13.327			

Note. **p* < .05

As presented in Table 5, there was a significant difference in English writing anxiety by subject stream (*t* = -2.076, *p* < .05). Therefore, it can be said that the nature of the subjects can influence English writing anxiety of students.

Mean Comparisons for English Writing Anxiety by English Course

In order to examine whether there was any significant difference in English writing anxiety by English course, independent samples *t*-test was conducted. The result was shown in Table 6.

Table 6. The Result of Independent Samples *t*-test on English Writing Anxiety by English Structured Course

Variable	English Structured Course	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
English Writing Anxiety	Attended	44	62.75	4.517	- 2.790	180	.006* *
	Not attended	13 8	69.59	14.04 2			

Note. ***p* < .01

Table 6 described the comparison of mean, standard deviation and the result of *t* test on English writing anxiety of the students by English course, indicating that there was a significant difference in English writing anxiety by English course. Therefore, it can be said that the students

who did not attend any English structured course had higher anxiety than those who had attend some English structured courses outside of school.

Conclusion, Suggestion and Recommendation

Based on the major findings, the following conclusions can be drawn.

The first objective of this present study was to examine the level of English writing anxiety among Grade 10 students. The study showed that the Grade10 students suffered from high level of English writing anxiety.

In order to support the quantitative data, the second objective was to identify the factors that contribute to English writing anxiety among Grade 10 students. According to the interview result, the main reason for such anxiety was that the students made no attempt to cope with it although language proficiency concerns, fear of criticism, and lack of confidence were significant factors contributing to this anxiety among Grade 10 students.

To effectively mitigate English writing anxiety, the third objective was to find out some strategies to reduce English writing anxiety among Grade 10 students. After interviewing with participants of high and low levels of English writing anxiety, several strategies for managing and reducing their anxiety were suggested. The results highlighted the importance of building self-confidence and using familiar vocabulary to enhance writing skills and lower anxiety. Regular writing practice, including reading English texts and studying basic grammar, was also essential for reducing writing anxiety. Participants also highlighted the positive role of technology, such as smartphones and translation tools, in making English more accessible. Moreover, learning from mistakes and adopting a constructive mindset about errors were crucial for improvement in English writing. Additionally, joining English structured courses and seeking support from teachers and peers were recommended as effective ways to reduce anxiety. Finally, establishing a strong foundation in English from an early age was deemed essential for preventing anxiety in later stages of learning.

On the basis of such findings, teachers should implement comprehensive support systems that include tailored writing instruction, confidence-building activities, and opportunities for peer feedback. Additionally, fostering a classroom environment where mistakes are viewed as learning opportunities can help reduce anxiety. Incorporating technology, such as writing apps and online resources, can make learning more accessible and engaging for students to alleviate English writing anxiety.

Concerning the type of English writing anxiety, the fourth objective was to identify the type of English writing anxiety among Grade 10 students. The present study indicated that the cognitive anxiety was the most prevalent type of anxiety among Grade 10 students. This finding supported the previous studies that revealed cognitive anxiety as the most frequently experienced type of writing anxiety (Hussein, 2013; Rasuan & Wati, 2021; Quvanch & Na, 2022).

Again, the fifth objective was to investigate the difference in English writing anxiety of Grade 10 students by gender. The result showed that there was no significant difference in English writing anxiety by gender. This result was consistent with Harnoto and Maharani (2019), and Chen, Guo and Kuai (2023). This may be due to the fact that Myanmar's Ministry of Education conducted the uniformity of the education quality monitoring for basic education regardless of gender and this study examined English writing anxiety among Grade 10 students

only, who receive nearly the same level and amount of English language education despite their gender difference. These differences suggest that while gender can play a role in writing anxiety, it is not a sole or universal factor. Other elements, such as instructional methods and cultural attitudes towards writing, also contribute to this anxiety.

The sixth objective was to examine the difference in English writing anxiety of Grade 10 students by subject stream. According to the result, there was a significant difference in English writing anxiety by subject stream. Therefore, it can be said that the nature of subjects can affect on English writing anxiety of students. This may be because STEAM 1 students have to learn an additional subject, Biology, which is a science subject taught in English. This additional exposure to English may give them more practice and potentially lower their anxiety unlike STEAM 2 students.

The last objective was to find out the difference in English writing anxiety of Grade 10 students by English structured course. This study indicated that there was a significant difference in English writing anxiety by English course. Therefore, it can be said that the students who did not attend English course had higher anxiety than those who did not attend some English courses outside the school. This may be due to the fact that students who participate in English courses benefit from structured learning environments that enhance their writing skills and boost their confidence which can alleviate anxiety (Ehrman & Leaver, 2003; Liu, 2018). Regular practice within these courses allows students to write in supportive atmospheres, helping to reduce the pressure associated with writing tasks (Cheng et al., 1999). Additionally, the constructive feedback from instructors helps students recognize their strengths and areas for improvement, mitigating the fear of negative evaluation—a common source of writing anxiety (Daly & Miller, 1975).

This research contributes to the understanding of English writing anxiety by identifying specific sources and types of anxiety experienced by students. It provides empirical support for previous findings and offers practical insights into how English writing anxiety can be reduced through targeted strategies. The study also highlights the importance of early language learning and consistent practice in reducing writing anxiety.

However, this study had some limitations in this study. Due to time and reference constraints, this study was conducted in only two high schools. Therefore future studies should be carried out with larger, more diverse samples to enhance the generalizability of findings.

As for recommendations, future research should include longitudinal studies to examine the long-term effects of interventions on writing anxiety. Finally further research can be conducted to measure whether there is a correlation between the level of anxiety experienced by learners and their performance in writing English composition.

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