AN INVESTIGATION INTO READINESS AND ENGAGEMENT OF STUDENT TEACHERS TOWARDS BLENDED LEARNING IN SAGAING UNIVERSITY OF EDUCATION

Wai Wai Myint[1] and Wai Wai Oo[2]

Abstract

The purpose of this study is to explore readiness and engagement of student teachers towards blended learning in Sagaing University of Education. The design of this study was descriptive research design. A sample of (258) student teachers from Sagaing University of Education were selected by using cluster sampling. The instrument that measures the readiness for blended learning questionnaires with (33) items and the instrument for student teachers' engagement questionnaires with (25) items were applied. In pilot testing, the reliability value for the readiness towards blended learning was (.734) and that for the engagement towards blended learning was (.746) using Cronbach's alpha. The quantitative data were analyzed by using Statistical Package for Social Science (SPSS). In order to examine the readiness and engagement of student teachers towards blended learning, descriptive statistics (mean and standard deviation) were used. Independent samples *t* test were used to compare the readiness and engagement of student teachers towards blended learning in terms of gender and year of study. Pearson product-moment correlation was used for the relationship of the readiness and engagement of student teachers towards blended learning. The results showed that there was positively moderate correlation between the readiness and engagement of student teachers towards blended learning.

Keywords: blended learning, readiness, engagement, online learning, face-to-face learning

Introduction

Rapidly changing internet technologies have forced higher education worldwide. Additionally there has been a demand for quality learning and teaching at higher education institutions. Educational reform has been performed with respect to the integration of technology in daily classroom practices at higher educational level in Myanmar. Nowadays, digital technologies and digital classrooms become the most significant and dynamic issues in education sector. Since Myanmar is a lower level income country at the very early stage of ICT development, many challenges and barriers would be inevitably experienced both by teachers and students.

With the changing educational conceptions, teacher educators should be up-to-date with the latest technological development and give suggestions to the student teacher concerning technology advancement and up gradation. According to Livingstone (2015), higher education institutions must make every attempt to replace teacher-centered strategies with more student-centered approaches. One strategy many higher education institutions are using to facilitate a more student-centered approach is blended learning. Graham (2016) defined blended learning as the combination of traditional face-to-face learning and online learning.

[1] Department of Curriculum and Methodology, Magway Education Degree College
[2] Department of Curriculum and Methodology, Sagaing University of Education

Therefore, for student teachers to prepare blended learning effectively is important in this technology age. The present study focuses on readiness and engagement of student teachers towards blended learning.

Purpose of the Study

The main purpose of this study is to investigate the readiness and engagement of student teachers towards blended learning. The specific objectives are as follows:

- To explore the readiness of student teachers towards blended learning in terms of gender and year of study.
- To investigate the engagement of student teachers towards blended learning in terms of gender and year of study.
- To find out the relationship between the readiness and the engagement of student teachers on blended learning.
- To make suggestions and recommendations based on the result of the study.

Research Questions

The research questions of this study are as follows:

1. What factors of readiness towards blended learning are perceived as the most important?
2. How do student teachers differ the readiness towards blended learning in terms of gender and year of study?
3. How do student teachers vary the engagement towards blended learning in terms of gender and year of study?
4. What is the relationship between the different factors of readiness and engagement towards blended learning?

Definition of Key Terms

Blended Learning : Blended learning is a combination of face-to-face instruction in classroom and technology-mediated learning, or a support of traditional teaching by using internet-based technology such as chat rooms, discussion groups, podcasts, and self-assessment tools (Sharma & Barrett, 2007).

Engagement : Engagement can refer to the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes (Kuh & Hu, 2001).

Online Learning : Online learning can be defined as acquiring knowledge and skills through synchronous and asynchronous learning applications (Thorne, 2003).

Operational Definition

Readiness **:** Readiness means the preparedness of students to perform learning activities in a learning environment.

Face-to-Face Learning **:** Face-to-face learning is an instructional method where course content and learning material are taught in person to a group of students.

Scope of the Study

This study is restricted to Sagaing University of Education. Student teachers who are studying BEd second year (first semester) and BEd fourth year (first semester) are selected as participants within 2022-2023 Academic Year.

Review of Related Literature

Blended Learning

Blended learning is a combination of face-to-face instruction in classroom and technology-mediated learning, or a support of traditional teaching by using internet-based technology such as chat rooms, discussion groups, podcasts, and self-assessment tools (Allan, 2007). During the technology-mediated learning mode of this learning environment, students are not required to physically gather in the same classroom, but they can connect digitally through online network. In blended learning course, students could involve in a class taught or directed by a teacher in a face-to-face classroom setting and complete online learning component of the course independently, outside of the classroom through online platform. Online learning experiences may replace classroom instruction and can include interaction with others or learning alone using an independent study. The different learning experiences are complementing each other, and managed to process in parallel (Cleveland-Innes & Wilton, 2018). In short, there are two main delivery modes of learning in the blended learning approach: face-to-face classroom learning and online-based learning experience. Hence, blended learning can refer to an incorporation of online learning tools and activities into face-to-face classroom instruction.

Blended Learning in Higher Education

Educational reform has been performed with respect to the integration of technology in daily classroom practices at higher educational level in Myanmar. Unfortunately, COVID 19 was announced by the World Health Organization (WHO) in January 2020 as a coronavirus disease outbreak and Myanmar confirmed its first two official cases of COVID-19 on 23 March 2020. Then, the Ministry of Education (MOE) called for the closing of all schools and higher education institutions. Face-to-face education has ended by numerous schools, colleges and universities. This was negative impact on educational activities, so social distance was crucial at this stage. This shutdown stimulated the growth of online learning activities so that there would be no interruption to education. Many faculties have been involved in how best to offer online course material, involve students, and perform evaluation. Nowadays, digital technologies and digital classrooms become the most significant and dynamic issues in the education sector. Since Myanmar is a lower level income country at the very early stage of ICT development, many challenges and barriers would be inevitably experienced both by teachers and students.

With the changing educational conceptions, Myanmar higher education institutions are now required to integrate learning management systems (LMS) in their courses and face-to-face instruction, creating a blended learning environment for their students. The LMS software is a popular approach for planning, delivering and managing blended learning models of instruction in higher education institutions. LMS, such as Moodle and Zoom provide tools to enable communications between lecturers and students online, track student activities, such as assignment submissions, discussion management, group work and other administrative tools

(Pellas & Kazandis, 2015). The most widely used LMS components in all higher education institutions are communications, followed by course delivery, productivity, content development and administration.

The use of social media was recommended by educators and students alike to facilitate interactions. Social media platforms such as Facebook Live, YouTube, Messenger, etc. have increasingly been integrated into the higher education learning experience and have been shown to stimulate student's engagement and collaborative work (Rigby et al., 2012). Studies show that frequent interaction and communication increase students' motivation. As technological devices and tools become more cost-effective and the internet network coverage is expanded, the implementation of blended learning in higher education can be seen to be more wide-ranging.

Higher education institutions are faced with the challenge to modify educational experiences in tandem with the rapid progress in information technologies, as well as the expectations of prospective students for higher quality blended learning experiences. In comparison with traditional face-to-face teaching, incorporation of blended learning has the potential to provide learning opportunities that allow students to engage more deeply with their subject matter and analyze and reflect at their own pace, and should not be limited to finding a new medium to deliver old content (Garrison & Kanuka, 2004). This move requires rethinking the teaching-learning relationship and will have profound yet uncertain implications on teaching practices and the way students engage with the university program.

Research Method

Research Design

The design used in this study was survey research design which is one of descriptive research designs. In this study, data were mainly collected through a quantitative method.

Subjects

The sample of this study were (258) student teachers from Sagaing University of Education. The participants in this study were second year (first semester) and fourth year (first semester) from this university. The participants were selected by using cluster sampling method. The selected population and sample size are presented in Table 1.

Table 1 Population and Sample Size

Year of Study	No. of Participants		Total
	Male	Female	
Second Year	51	57	108
Fourth Year	61	89	150
Total	112	146	258

Instruments

The instruments used in this study were questionnaires for readiness and engagement of student teachers towards blended learning. The survey instrument measuring student teachers' readiness was adapted from Tang and Chaw (2013) study on student readiness for blended learning. This instrument consisted of (33) items on six different dimensions of blended learning: Learning Flexibility (5 items), Online Learning (7 items), Study Management (4 items), Technology (5 items), Classroom Learning (5 items) and Online Interaction (7 items). The

instrument for the engagement of student teachers was constructed based on Student Engagement Questionnaires (SEQ) online scales (Coates, 2006). These instrument contained (25) items of five dimensions: Online Engagement (4 items), Online Social Interaction (4 items), Online Teaching (6 items), Online Collaboration (7 items), Online Academic Relevance (4 items). In order to support the questionnaires, open-ended questions were also used.

Procedure

First of all, in order of the required data, the instruments were constructed under the guidance of the supervisor. After preparing the questionnaires, an expert review was conducted by two expert teachers who have special knowledge from the Department of Curriculum and Methodology, Sagaing University of Education. After that, the questionnaires were modified again according to their advice and guidance. A pilot testing was conducted with (50) student teachers at University for Development of National Races (UDNR). Based on the result of pilot testing, some items were revised for clear understanding. The internal consistency of the questionnaire for attitudes towards blended learning was determined to be (.734) and that of the questionnaire for the engagement towards blended learning was (.746) using Cronbach's Alpha. According to Morgan, Leech, Gloeckner and Barrett (2013), the reliability values for both have acceptable reliability. And then, the permission of Rector from Sagaing University of Education was requested to distribute the instruments to all participants from this university. After a few weeks, all the instruments were returned, and then the data were analyzed by using the Statistical Package for the Social Science (SPSS 25).

Data Analysis

The responses of student teachers to the questionnaires were analyzed and calculated by using descriptive statistics and inferential statistics from the Statistical Package for the Social Science (SPSS 25). To examine the readiness of student teachers towards blended learning, descriptive statistics (mean and standard deviation) were used. Inferential statistics such as independent samples *t* test were used to compare the readiness and engagement of student teachers towards blended learning in terms of gender and year of study. Pearson product-moment correlation was used for the relationship of readiness and engagement of student teachers towards blended learning.

Research Findings

Findings of Research Question (1)

The answers of research questions No.1 “What factors of readiness towards blended learning are perceived as the most important?” were presented in this part.

This research question used descriptive statistics to ascertain that factors of readiness towards blended learning are the most important. The means and standard deviations were employed to examine the six readiness blended learning factors of student teachers. The criteria used to interpret mean values were as shown in Table 2.

Table 2 Interpretation of Score and Level

Score	Level
1.00 – 2.33	Low
2.34 – 3.66	Moderate
3.67 – 5.00	High

Table 3 shows the number of participants, minimum, maximum, means and standard deviations of the six blended learning readiness factors of student teachers.

Table 3 Means and Standard Deviations of Student Teachers' Readiness towards Blended Learning

Readiness towards BL	*N*	Minimum	Maximum	*M*	*SD*
Learning Flexibility	258	2	5	3.93	0.53
Online Learning	258	1	5	2.85	0.72
Study Management	258	1	5	3.03	0.69
Technology	258	1	5	3.26	0.55
Online Interaction	258	2	4	3.17	0.44
Classroom Learning	258	2	5	3.97	0.47

Note. BL= blended learning.

According to Table 3, the six readiness dimensions of blended learning for student teachers rated classroom learning (*M* = 3.97) followed by learning flexibility (*M* = 3.93) and technology (*M* = 3.26) as the more important readiness dimension of blended learning. Online learning was viewed as the least important (*M* = 2.85). Based on the levels identified in this study, the findings revealed student teachers' readiness are high level for classroom learning and learning flexibility. Moreover, student teachers in this study are at a moderate level of technology, online interaction, study management and online learning in readiness towards blended learning. In order to see clearly, Figure 1 is illustrated.

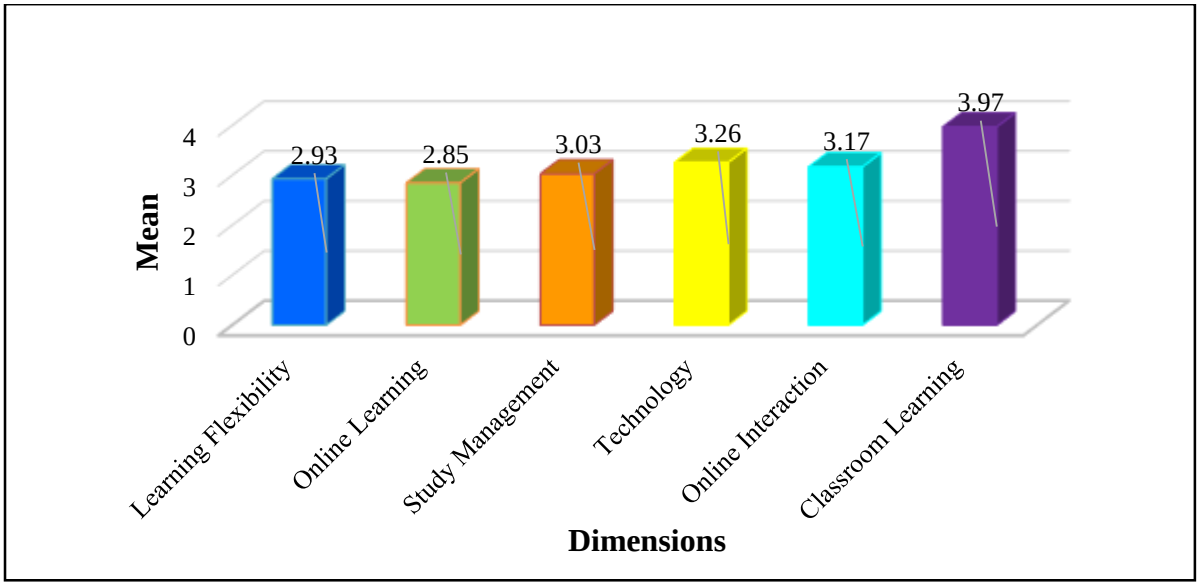

Figure 1. The comparison of means for each dimension of readiness towards blended learning.

Findings of Research Question (2)

The answers of research questions No.2 **"**How do student teachers differ the readiness towards blended learning in terms of gender and year of study?" were presented in this part.

(a) Comparison of Mean Scores on the Readiness towards Blended Learning in terms of Gender

Independent samples *t* test was performed to determine if any significant difference exists between readiness of male and female student teachers. Table 4 illustrates the means of the readiness of student teachers towards blended learning by gender to see clearly.

Table 4 **t Values for the Readiness of Student Teachers towards Blended Learning in terms of Gender**

Variable	Gender	*N*	*M*	*SD*	*df*	*t*	*p*
Readiness towards BL	male	112	208.97	21.01	256	0.618	.537 (ns)
	female	146	207.31	21.76			

Note. ns = not significant.

According to Table 4, it could be found that the means of male and female student teachers on the readiness towards blended learning were (208.97) in male and (207.31) in female respectively. The means of male and female student teachers were nearly the same. It showed that there was no significant difference between the male and female student teachers' readiness towards blended learning. According to this data, it can be interpreted that the attitudes of male and female student teachers towards blended learning were equivalent. It can be clearly seen in Figure 2.

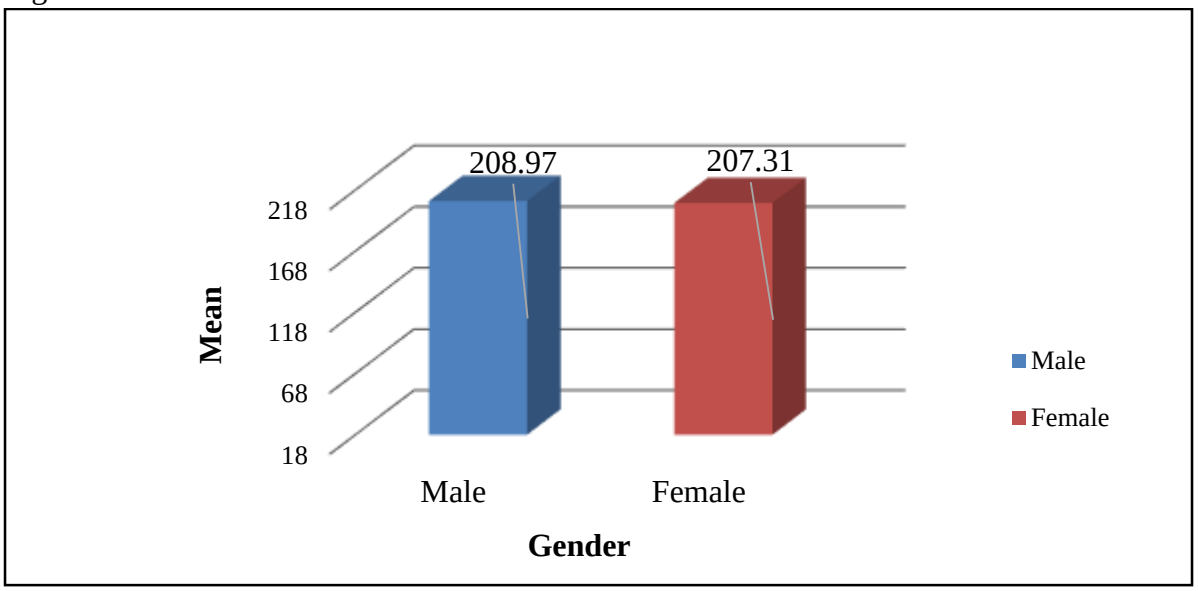

Figure 2. The comparison of means for readiness towards blended learning by gender.

(b) Comparison of Mean Scores on the Readiness towards Blended Learning in terms of Year of Study

Independent samples *t* test was performed to determine if any significant differences exists in readiness towards blended learning by year of study. Table 5 illustrates the means of the readiness of student teachers towards blended learning by year of study to see clearly.

Table 5 t Values for the Readiness of Student Teachers towards Blended Learning in terms of Year of Study

Variable	Year of Study	*N*	*M*	*SD*	*df*	*t*	*p*
Readiness towards BL	Second Year	108	204.6	21.07	156	-2.2	.029*
	Fourth Year	150	210.5	21.38			

Note. $^{*}p < .05$.

Table 5 shows the means of fourth year student teachers (M = 210.5) was higher than that of second year student teachers (M = 204.6). Thus, the fourth year student teachers were significantly different from the second year student teachers on the readiness towards blended learning. It indicated that there was a significant difference in student teachers' readiness towards blended learning between the second year and fourth year student teachers. Therefore, the fourth year student teachers had more positive attitudes of readiness towards blended learning. To see clearly, Figure 3 is illustrated.

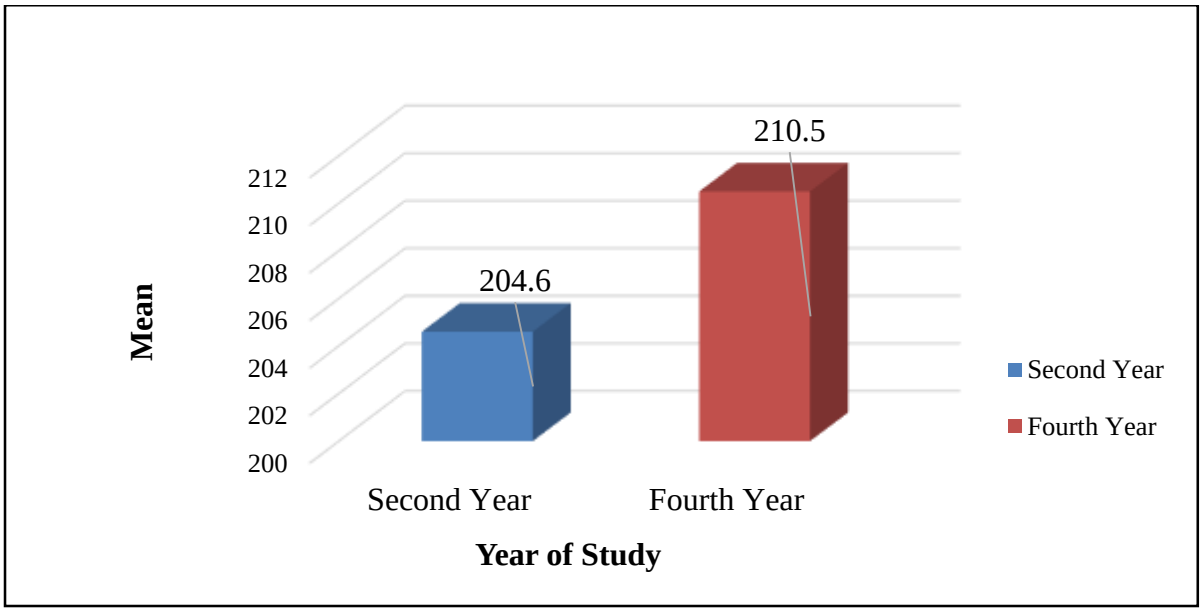

Figure 3. The comparison of mean for readiness towards blended learning by year of study.

Findings of Research Question (3)

The answers of research questions No.3 "How do student teachers vary the engagement towards blended learning in terms of gender and year of study?" were presented in this part.

(a) Comparison of Mean Scores on the Engagement towards Blended Learning in terms of Gender

To find out whether there is a significant difference in terms of gender, independent samples t test was used to examine the difference between the male and female student teachers. Table 6 illustrates the means of the engagement of student teachers towards blended learning by gender to see clearly.

Table 6 t Values for the Engagement of Student Teachers towards Blended Learning in terms of Gender

Variable	Gender	*N*	*M*	*SD*	*df*	*t*	*p*
Engagement towards BL	male	112	147.29	24.38	256	1.71	.089 (ns)
	female	146	142.41	20.45			

Note. ns = not significant.

According to Table 6, it can be found that the means of male and female on the engagement towards blended learning were (147.29) in male and (142.41) in female respectively.

It showed that there was no significant difference between the male and female student teachers' engagement towards blended learning. According to this data, it could be interpreted that the male and female student teachers had the same participation during blended learning activities. It can be clearly seen in Figure 4.

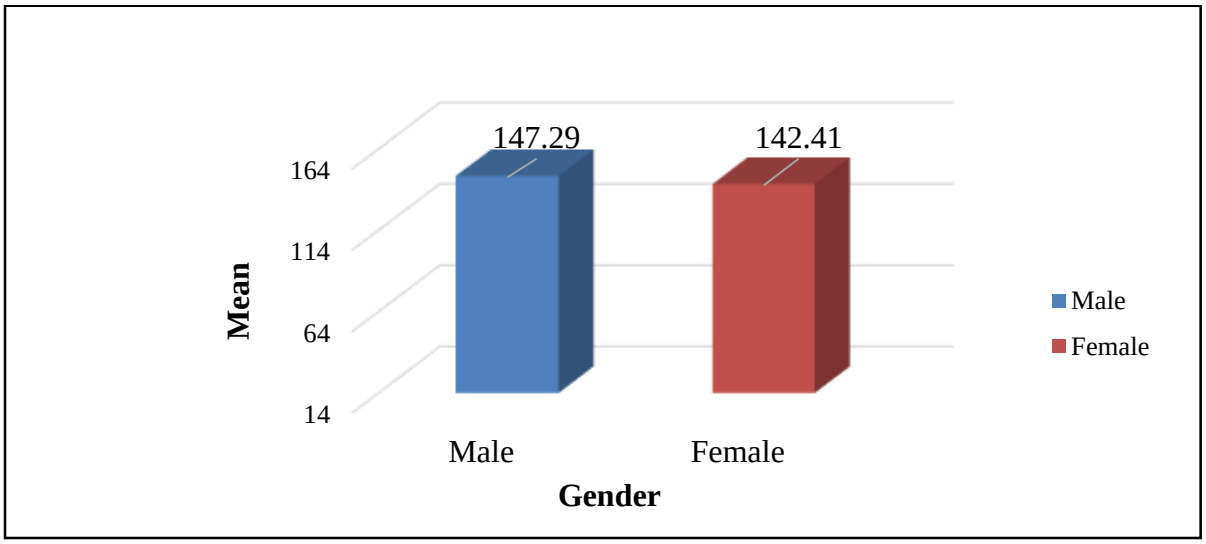

Figure 4. The comparison of means for the engagement towards blended learning by gender.

(b) Comparison of Mean Scores on the Engagement towards Blended Learning in terms of Year of Study

To explore whether there is a significant difference in terms of year of study, independent samples *t* test was used to examine the difference between years of study of student teachers. Table 7 illustrates the means of the engagement of student teachers towards blended learning by year of study to see clearly.

Table 7 t Values for the Engagement of Student Teachers towards Blended Learning in terms of Year of Study

Variable	Year of Study	*N*	*M*	*SD*	*df*	*t*	*p*
Engagement towards BL	Second Year	108	139.31	20.04	156	-3.25	.001**
	Fourth Year	150	148.29	23.19			

Note. $^{**}p < .01$.

Table 7 exhibits the means of the fourth year student teachers were significantly higher than those of the second year student teachers' engagement in blended learning. It indicates that there were a statically significant variation between the second year and fourth year student teachers to participate in blended learning activities. Therefore, the fourth year student teachers had a positive participation, completed their activities and assigned tasks during blended learning activities. In order to see clearly, Figure 5 is illustrated.

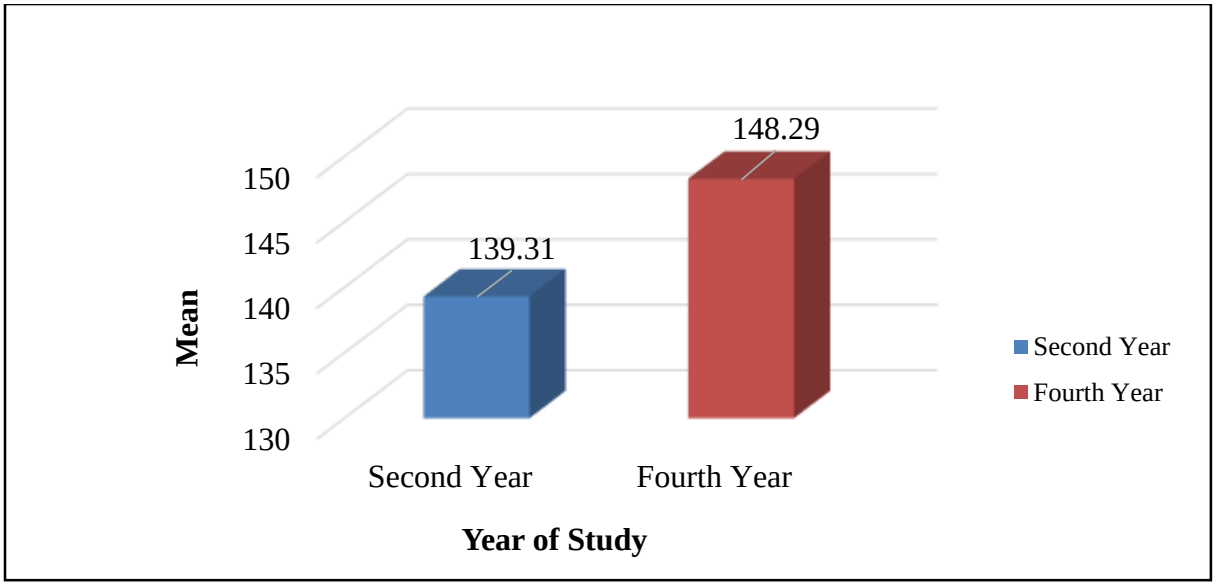

Figure 5. The comparison of means for engagement towards blended learning by year of study.

Findings of Research Question (4)

The answers of research questions No.4 "What is the relationship between the different factors of readiness and engagement towards blended learning?" were presented in this part.

To explore the relationship between the readiness and engagement of student teachers towards blended learning, Pearson product-moment was used. It was found that there was a significant correlation between the readiness and engagement of student teachers towards blended learning at the .01 level (r = .614). The result showed that the direction of correlation was positive. The more if the student teachers ready in blended learning, the more they participate in their learning activities. Table 8 shows the relationship between the readiness and engagement of student teachers towards blended learning.

Table 8 Pearson Product Moment Correlation Between the Readiness and Engagement of Student Teachers towards Blended Learning

Correlations

		Readiness	**Engagement**
Readiness	Pearson Correlation	1	.614**
	Sig. (2-tailed)	-	.000
	N	258	258
Engagement	Pearson Correlation	.614**	1
	Sig. (2-tailed)	.000	-
	N	258	258

Note. ** Correlation is significant at the 0.01 level (2-tailed).

According to Mills and Gay (2016), it can be interpreted that there was a positively moderate correlation between the readiness and engagement of student teachers towards blended learning. This means that the more ready student teachers are in blended learning, the more active they participate in their blended activities.

Discussion and Suggestions

Discussion

This study aims to investigate the readiness and engagement of student teachers towards blended learning based on gender, year of study in Sagaing University of Education. Firstly, the findings supported six factors of readiness towards blended learning: online learning, classroom learning, online interaction, technology, learning flexibility and study management. Based on the study results, classroom learning was rated as the most important factor of readiness towards blended learning followed by learning flexibility and technology. According to the highest mean in classroom learning factor, the possibility that the student teacher believed face-to-face classroom learning was more effective than online learning, and they could learn better through in-class learning. This meant students still perceived face-to-face learning essential for them, and they want to learn through the setting in which there were teachers and peers with them. However, the main problem mentioned by the questionnaire respondents was the considerable class size. Because of a large number of students in the class, the high level of noise was inevitable. This contributed to the lack of students' focus on study. Students also perceived that in the large class, it was not easy for interacting with teacher when they need help.

The total mean of the online learning factor was the lowest. It could be assumed that the student teachers might not feel comfortable and not be ready for a full online course in which they require to perform learning process by themselves. This echoed by Osman and Hamzah (2017) who stated that the lowest mean score of the item on self-learning could reflect students' low readiness to learn on their own since they still relied on the teacher.

Secondly, the study found no significant difference in blended learning readiness between male and female student teachers. This is consistent with past finding of Yagci, Sirakaya and Ozudogru (2015). They also found no significant difference in level of male and female pre-service teachers towards web-based learning. This finding means that male and female student teachers had similar levels in all readiness factors and they exhibited equal attitudes and behaviors.

The results of the study showed that there were significant differences between second year and fourth year student teachers in readiness towards blended learning. These findings differ from those of Yagci, Sirakaya and Ozudogru (2015) who found that there were no significant differences in readiness at the grade level. These differences in attitude may be because the second year student teachers have a preference for greater teacher-directed learning which may be as a result of their past experiences in the authoritarian classrooms that still exists in both secondary and primary schools. This finding is consistent with Hung and et al (2010) reported that there was significant difference in online learning readiness levels of students according to their grade level.

Thirdly, for student teachers' engagement in blended learning based on gender, it showed that there was no significant difference based on female and male student teachers. This means that male and female student teachers were the same participation in blended learning activities. This is an interesting finding as other studies have reported that male pre-service teachers were more ready for online classes as compared to female pre-service teachers (Win & Wynn, 2015).

Additionally, male students preferred online learning as compared to female students who preferred traditional face-to-face learning (Yu, 2021).

In term of year of study, there was significant difference across year groups in their blended learning engagement. This finding disclosed the fourth year student teachers were more engaged in blended learning activities than the second year student teachers. Similar findings were reported by Adams et al. (2018) who also found mature students, compared to younger students, were more engaged and adaptable in blended learning activities. A possible explanation for this result might be that the fourth year student teachers are more mature and independent in utilizing information technology for their learning.

Finally, the descriptive result of the study showed that there was a significant correlation between the readiness and engagement of student teachers towards blended learning at the .01 level (r = .614). According to Mills and Gay (2016), it can be interpreted that there was a positively moderate correlation between the readiness and engagement of student teachers towards blended learning. This means that the more ready the student teachers are in blended learning, the more active they participate in their blended activities. Additionally, active participation, which gives students a feeling of stronger engagement and a better learning quality, is a key for students to perform well in blended learning courses.

Suggestions

As more education institutions move towards e-learning as a means of enhancing teaching and learning, it is important to understand the students' readiness for engaging in e-learning. As the findings of this study show, the readiness of student teachers to participate in blended learning is moderate level among second year and fourth year of the Bachelor of Education programme. The second year student teachers showed a less positive attitude towards many factors involved in blended learning. This study has raised a number of issues pertaining to university student teachers' e-readiness that need to be considered before students can successfully engage in blended learning. This suggests that improvement and preparation of students in many aspects of blended learning is necessary to implement blended learning in a teacher education programme.

As such, one of the recommendations for success in adopting a blended learning approach in teacher education would be to familiarise all stakeholders with the concept of blended learning and the advantages and disadvantages of this type of learning before its implementation.

Moreover, based on the findings of the study, several recommendations for further research are presented as follows:

1. Firstly, this study was conducted only on Sagaing University of Education in Myanmar. Thus, generalizing the finding is not possible as one group of students in this university cannot represent all students in other universities. Therefore, future studies could be conducted and expanded to other universities.
2. Secondly, the current study is limited to a quantitative research design, where data were collected from 258 student teachers from SUOE. As such, future studies could involve a larger sample size to include more undergraduate or postgraduate students to ensure data are representative and generalizable.

3. Furthermore, the addition of qualitative data such as interviews and focus group interviews are needed to further explore and explain the quantitative findings.
4. Future research on blended learning could also look specifically into students' engagement and how pedagogy and course designs affect their participation in a blended learning model of instruction (Adams et al., 2018).
5. Furthermore, investigating what specific blended learning strategies are most effective for different fields of studies would add significantly to the body of knowledge.

Conclusion

The widespread of the COVID-19 pandemic has challenged training institutions to rethink the execution of their training programs. New approaches to teaching and learning are now needed due to the forced shift to e-learning modes. The student teachers need to adapt to this change. Overall findings of this study revealed many student teachers were not ready for blended learning during 2022-2023 Academic Year. However, student teachers were found to be actively engaged in blended learning. Further analysis indicated there were differences in student teachers' readiness and engagement in online learning based on their year of study. Therefore, future student teachers' online trainings, class activities, and its facilitation need to be devised according to student teachers' interest, competencies, and skills. However, the readiness of students must be taken into consideration first. From this research, it can be concluded that the implementation of a blended learning model of instruction is closely tied with institutional policy and adoption practices. As blended learning continues to grow in popularity, so must support systems and training programmes be developed and are in place to ease the transitional process of students and instructors from traditional methods to a blended learning model of instruction.

Acknowledgements

We would like to offer our respectful gratitude to Dr. Myat Myat Thaw (Rector, Sagaing University of Education), Dr. Khin Hnin Yee and Dr. Cho Kyi Than (Pro-Rectors, Sagaing University of Education) who gave us the permission to undertake this research. We would like to express our great respect and heartfelt gratitude to Dr. Soe Than (Professor & Head of Department (Retired), Department of Curriculum and Methodology, Sagaing University of Education) for his invaluable suggestions, encouragement and patience throughout the research.

References

Adams, D., Sumintono, B., Mohamed, A., & Mohamad Noor, N. S. (2018). E-learning readiness among students of diverse backgrounds in a leading Malaysian higher education institution. *Malaysian Journal of Learning and Instruction, 15*(2), 227-256.

Allan, B. (2007). *Blended learning: Tools for teaching and training*. London: Facet Publishing.

Cleveland-Innes, M., & Wilton, D. (2018). *Guide to blended learning*. Burnaby: Common Wealth of Learning.

Coates, H. (2006). *Student engagement in campus-based and online education*. New York: Taylor & Francis e-Library.

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education, 7*(2), 95-105.

Graham, C. R. (2016). Blended learning system: Definition, current trends, future directions. In C. J. Bonk & C. R. Graham (Eds.). *Handbook of blended learning.* San Francisco, Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education, 55*(3), 1080-1090.

Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education, 55*(3), 1080-1090.

Kuh, G. D., & Hu, S. (2001). The effects of student-faculty interaction in the 1990s. *The Review of Higher Education, 24*(8), 309-332.

Livingstone, K. (2015). Teaching faculty's perception about implementing e-learning practices at The University of Guyana. *International Journal of Education and Development Using Information and Communication Technology (IJEDICT), 11(2*), 85-103.

Mills, G. E., & Gay, L. R. (2016). *Educational research: Competencies for analysis and application* (11th ed.). Harlow: Pearson Education Limited.

Morgan, G. A., Leech, N. L., Gloeckner, G. W., & Barrett, K. C. (2013). *IBM SPSS for introductory statistics: Use and interpretation* (5th ed.). New York: Routledge.

Osman, N., & Hamzah, M. I. (2017). Student readiness in learning Arabic language based on blended learning. *International Journal of Applied Linguistics and English Literature, 6*(5), 83-89.

Pellas, N., & Kazandis, I. (2015). On the value of second life for students' engagement in blended and online courses: A comparative study from the higher education in Greece. *Education and Information Technologies, 20*(3), 445-466.

Rigby, L., Wilson, I., Baker, J., Walton, T., Price, O., Dunne, K., & Keeley, P. (2012). The development and evaluation of a blended inquiry-based learning model for mental health nursing students: Making your experience count. *Nurse Education Today, 32*(3), 303-308.

Sharma, P., & Barrett, B. (2007). *Blended learning: Using technology in and beyond the language classroom.* New York: Macmillan.

Tang, C., & Chaw, L. (2013). Readiness for blended learning: Understanding attitude of university students. *International Journal of Cyber Society and Education*, *6*(2), 79-100.

Thorne, K. (2003). *Blended learning: How to integrate online and traditional learning*. London: Kogan Page.

Win, N. L., & Wynn, S. D. (2015). Introducing blended learning practices in our classrooms. *Journal of Institutional Research Southeast Asia, 13*(2), 17-27.

Yagci, M., Sirakaya D. A., & Ozudogru, G. (2015). The investigation of attitude and readiness of information and communication technologies pre-service teachers toward web based learning. *Procedia – Social and Behavioral Sciences, 174*, 1099-1106.

Yu, Z. (2021). The effects of gender, educational level, and personality on online learning outcomes during the COVID-19 pandemic. *International Journal of Educational Technology in Higher Education,18*(1),14-16.