

THE RELATIONSHIP BETWEEN REFLECTIVE PRACTICES IN TEACHER EDUCATORS AND THEIR PROFESSIONAL DEVELOPMENT

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Abstract

The purpose of this study is to investigate the relationship between reflective practices in teacher educators and their professional development. Quantitative research method, descriptive survey design was used to find out reflective practices of teacher educators and their professional development. One hundred and fifty teacher educators from five Education Degree Colleges in four different Divisions and States in Myanmar were selected by using simple random sampling technique. Two instruments: questionnaire for reflective practices of teacher educators and questionnaire for attitude towards professional development were used to collect the required data. In addition, two open-ended questions and nine interview questions for each dimension of reflective practices and attitude towards professional development were also used. In the analysis of data, descriptive statistics (mean and standard deviation) were used to test reflective practices in teacher educators and attitudes toward their professional development and inferential statistics (one-way ANOVA) were also used to compare reflective practices in teacher educators and their attitudes towards professional development in terms of teaching experience. Pearson product-moment correlation was used to assess whether and to what extent there was a relationship between reflective practices of teacher educators and their professional development. The result showed that there was a positively high correlation between reflective practices of teacher educators and their attitudes towards professional development. It can be concluded that if the using levels of teacher educators' reflective practices are high, they more obviously develop their teaching professions.

Keywords: teacher educators, reflective practices, attitude, professional development

Introduction

The rapid changes and the nature of developing modern society have given rise to new challenges, yet renewed calls for further improvements. In this light, many have voiced the urge for educational reform of schools and teachers, so that they may become capable of facing the current challenges, and fulfill the first and foremost objective of education. Thus, teachers are essential in any education system. Teacher education plays a vital role in reforming and strengthening the education system of any country. The quality of education depends on the quality of teachers and teaching. Reflective practice has become a focus of interest and a powerful movement in teacher education (Gheith & Jaber, 2018). It is also a professional requirement that they have to provide evidence of, usually in a journal or log. Reflection on learning and teaching is not a new thing- most teachers have probably always done it to some extent (Killen, 2016). Thus, it is a process that facilitates teaching, learning and understanding, and it plays a central role in teachers' professional development.

Professional development is a long-term process because teachers connect new experiences with previous knowledge. Professional development occurs in specific contexts which allow teachers to connect training experiences with those of real classroom experiences; it also helps teachers are regarded as active players to build new pedagogical theories and practices which doubtlessly aid them to become experts in the field, which highly improve performance (Gheith & Jaber, 2018).

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Purposes

The main purpose of this study is to explore the relationship between teacher educators' reflective practices and their professional development.

The specific objectives are as follows:

- To investigate reflective practices in teacher educators in terms of teaching experience and teaching subjects.
- To find out attitudes of teacher educators towards professional development in terms of teaching experience.
- To give suggestions and recommendations for improving reflective practices based on the data obtained from this study.

Research Questions

1. Does the level of reflective practices in teacher educators differ in terms of teaching experience and teaching subjects?
2. To what extent do teacher educators commit to each dimension of reflective practices in terms of teaching experience?
3. What are the differences in attitudes towards professional development in terms of teaching experience?
4. What are the differences in all dimensions of attitudes towards professional development in terms of teaching experience?
5. To what extent is the significant relationship between reflective practices of teacher educators in terms of each of six dimensions and their professional development?
6. To what extent is there a relationship between reflective practices of teacher educators and their professional development?

Definition of Key Terms

Teacher educators: Teacher educators mean professional teachers who teach pedagogical and content knowledge to prospective teachers in the teaching profession.

Reflective Practices: Reflective Practices are constructive evaluative processes through which teachers may collect data and utilize feedback in reviewing and improving teaching. This enables teachers to review their previous knowledge and construct new knowledge based on previous experiences they have undergone (Gheith & Jaber, 2018).

Attitude: Attitude refers to a set of emotions, beliefs, and behaviors toward a particular object, person, thing, or event (Cherry, 2021).

Professional

Development: Professional Development is a process that teachers develop their knowledge, skills, and attitudes towards their teaching professions.

Scope

This study is geographically restricted to five Education Degree Colleges in four different Divisions and States in Myanmar. Research participants are (150) teacher educators from Mandalay Education Degree College, Meikhtila Education Degree College, Pakokku Education Degree College, Magway Education Degree College and Taungyi Education Degree College within the 2020-2021 Academic Year.

Review of Related Literature

For Dewey, a fundamental purpose of education is to help individuals acquire habits of reflection so they engage in intelligent action (Schon, 1987, cited in Bruster & Peterson, 2013). Schon proposed that in preparing professionals, educators must guide students in making decisions under conditions of uncertainty.

Reflective practice is a professional development strategy with roots in the constructivist paradigm. A learning strategy for professionals, the primary agenda of the reflective practice model is behavioral change. While reflective practice (Schon, 1987, cited in Osterman, 1998) focuses on improvement in dimensions of professional practice, constructivism aims more generally at the ability to apply knowledge. Neither constructivism nor reflective practices are methods of teaching; however, both have implications for teaching. Constructivism focuses on the important role that the teacher plays in supporting the learning process. Reflective practice expands on constructivism distinguishing between two types of cognitive activity: theories in use and espoused theories (Osterman, 1998). The reflective practice is an ongoing, dynamic process of thinking honestly, deeply and critically about all aspects of professional practice.

Reflective teachers have strong feelings of security and self-efficacy and can talk and write readily about their experiences and are more likely than non-reflective teachers to allow their students to learn by investigating and structuring things for themselves. A reflection is an important tool for helping teachers to move through a learning process that takes them from novice to expert. Professionals develop their expert knowledge through two separates, but relate, processes that he describes reflection-on-action and reflection-in-action (Killen, 2016).

Ur (1999, cited in Mathew et al., 2017) stated that the first and most important basis for professional progress is simply the teachers' reflection on daily classroom events. Personal progress through reflecting on one's activities and practices that happened in the class and thinking are focused in her study. Obviously, reflective teaching is a beneficial process in teacher professional development, both for pre-service and in-service teachers.

Research Method

The research design for the study was a descriptive research design, in which the researcher seeks to determine whether, and to what degree, a relationship exists between two variables (reflective practices and attitude towards professional development). The quantitative method was used to find out reflective practices of teacher educators and attitude towards their professional development.

Subjects

The required education degree colleges were selected by the use of a simple random sampling method to carry out the research. Table 1 presented the selected education degree colleges and sample size of the study.

Table 1 The Selected Education Degree Colleges and Sample Size

Name of Education Degree College	Sample Size
Mandalay	30
Meikhtila	30
Pakokku	30
Magway	30
Taungyi	30
Total	150

Instruments

In this study, a questionnaire for reflective practices and a questionnaire for attitude towards professional development were used as the instruments. The question items of reflective practice are based on six dimensions: (1) Creating a student-centered learning environment, (2) Creating a reflective classroom environment, (3) Appreciating criticism, (4) Self-evaluation, (5) Decision-making and Problem-solving and (6) Developing lifelong learning skills. This questionnaire was developed on a five-point Likert scale: never, seldom, sometimes, often and always. And then, the question items for attitude towards professional development are based on three dimensions: (1) Social Competency, (2) Professional Competency and (3) Pedagogic Competency. Moreover, this questionnaire for attitude towards professional development was developed: strongly disagree, disagree, undecided, agree and strongly agree on a five-point Likert scale. There are forty items in the questionnaire for reflective practices and thirty items in the questionnaire for attitudes towards professional development. In addition, two open-ended questions and nine interview questions for each dimension of reflective practices and attitude towards professional development were also used.

Procedure

In order to obtain the required data, the instruments were constructed under the guidance of the supervisor. After preparing the questionnaire, expert review was conducted by two expert teachers who have special knowledge in teacher education from the Department of Curriculum and Methodology, Sagaing University of Education. After that, the questionnaire was modified. The questionnaire was validated through the pilot testing on a non-sample group of (28) teacher educators from Sagaing Education Degree College. The internal consistency of the questionnaire for reflective practices was determined to be (0.834) and that of the questionnaire for attitude towards professional development was (0.897) using Cronbach's Alpha. According to Bonet and Wright (2014), the reliability values for both have excellent reliability. Then, the permission of principals was requested to distribute the instruments to all participants of five sample education degree colleges in November 2021. After three weeks, all the instruments were returned, and then the data were entered into a computer data file and analyzed by using the Statistical Package for the Social Science (SPSS 21).

Data Analysis

The data obtained were analyzed by using descriptive statistics (mean and standard deviation) and inferential statistics (one-way ANOVA and Pearson product-moment correlation) to examine reflective practices in teacher educators and attitudes toward their professional development. A one-way ANOVA was used to compare reflective practices in teacher educators and their attitudes towards professional development in terms of teaching experience. Pearson product-moment correlation was used to assess whether and to what extent there was a relationship between reflective practices of teacher educators and their professional development.

Findings

Analysis of Reflective Practices in Teacher Educators in terms of Teaching Experience

The research question (1) *Does the level of reflective practices in teacher educators differ in terms of teaching experience and teaching subjects?*

To find out whether there is a significant difference in reflective practices in terms of teaching experience, a questionnaire on reflective practices for teacher educators was used. Therefore, a one-way ANOVA was used to examine the difference among teaching experiences (see Table 2).

Table 2 ANOVA Results of Reflective Practices in Teacher Educators in terms of Teaching Experience

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2939.827	4	734.957		
Within Groups	31344.367	145	216.168	3.4	.011*
Total	34284.193	149			

Note: * $p < .05$

It was found that reflective practices in teacher educators differ in terms of teaching experience.

Table 3 Results of Multiple Comparisons for Reflective Practices in Teacher Educators by Teaching Experience

Experience (I)	Experience (J)	Mean Difference	Sig.
11 - 15 years	20 years and above	-11.200	.03*

Note: * $p < .05$

According to Table 3, there was a significant difference between the teachers who have 11 - 15 years of teaching experience and the teachers who have 20 years and above of teaching experience at .05 level.

Table 4 Means and Standard Deviations of Reflective Practices of Teacher Educators in terms of Teaching Subject

Subject	Mean	N	SD
Education	164.46	24	16.387
Myanmar	166.33	15	18.050
English	159.63	16	12.473
Mathematics	170.65	26	15.305
Science	172.74	31	13.005
Social Studies	166.67	21	16.995
ICT	157.25	4	3.862
Co-Curricula	164.92	13	11.629

It was found that reflective practices of teachers who teach science subjects are the highest mean and that of teachers who teach ICT are the lowest mean (see Table 4). To see clearly, Figure 1 is illustrated.

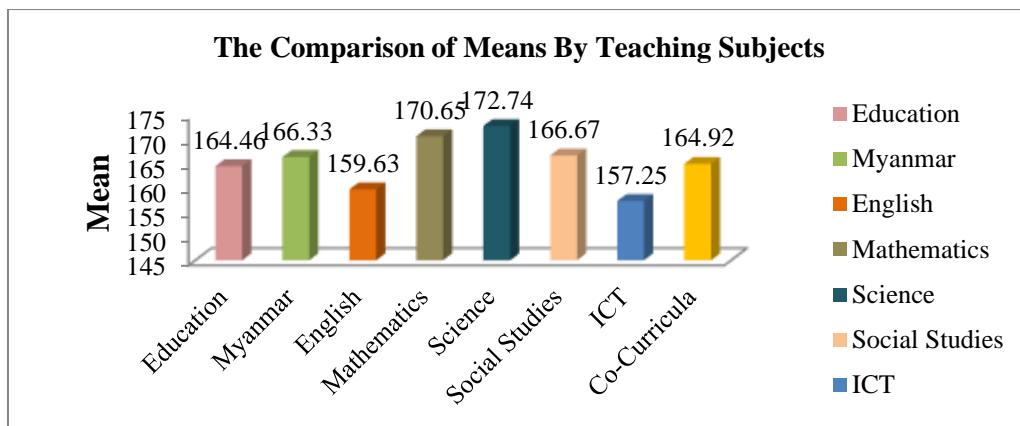


Figure 1 The Comparison of Means for Reflective Practices by teaching subjects

Table 5 ANOVA Results of Reflective Practices in Teacher Educators in terms of Teaching Subjects

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2838.992	7	405.570	1.831	.086
Within Groups	31445.202	142	221.445		(ns)
Total	34284.193	149			

Note. ns = not significant

The result showed that reflective practices in teacher educators do not differ in terms of teaching subjects (see Table 5).

Analysis of Each Dimension of Reflective Practices in Teacher Educators in terms of Teaching Experience

The research question (2) *To what extent do teacher educators commit to each dimension of reflective practices in terms of teaching experience?*

Table 6 illustrated the means of each dimension of reflective practices to see clearly.

Table 6 Means and Standard Deviations of Each Dimension in Reflective Practices of Teacher Educators in terms of Teaching Experience

		D1	D2	D3	D4	D5	D6	Total
0 - 5 Years	M	25.80	16.57	24.83	22.33	25.37	56.60	171.5
	SD	2.325	2.344	2.245	2.245	2.341	5.028	11.156
6 - 10 Years	M	25.73	17.20	23.70	21.63	25.53	53.57	167.37
	SD	2.348	1.919	4.103	4.103	2.529	5.354	14.995
11 - 15 Years	M	24.97	16.27	23.83	20.70	23.97	51.33	161.07
	SD	2.008	1.893	3.185	3.185	2.385	6.370	14.753
16 - 20 Years	M	25.80	16.87	23.30	20.37	24.37	52.47	163.17
	SD	2.427	1.634	2.693	2.693	2.205	5.661	13.028
20 Years and above	M	26.13	17.43	25.30	22.07	25.70	55.63	172.27
	SD	2.636	1.960	3.436	3.436	3.426	6.744	18.551

Note. D1= Creating a student-centered learning environment, D4= Self-evaluation
 D2= Creating a reflective classroom environment, D5= Decision-making and Problem-solving
 D3= Appreciating criticism, D6= Developing lifelong learning skills

According to Table 6, it can be found that the means of all teachers with respective teaching experiences are the lowest in creating a reflective classroom environment and the highest are in developing lifelong learning skills for all teachers. Teachers who have 11 - 15 years services are the lowest in using reflective practices. To see clearly, Figure 2 is illustrated.

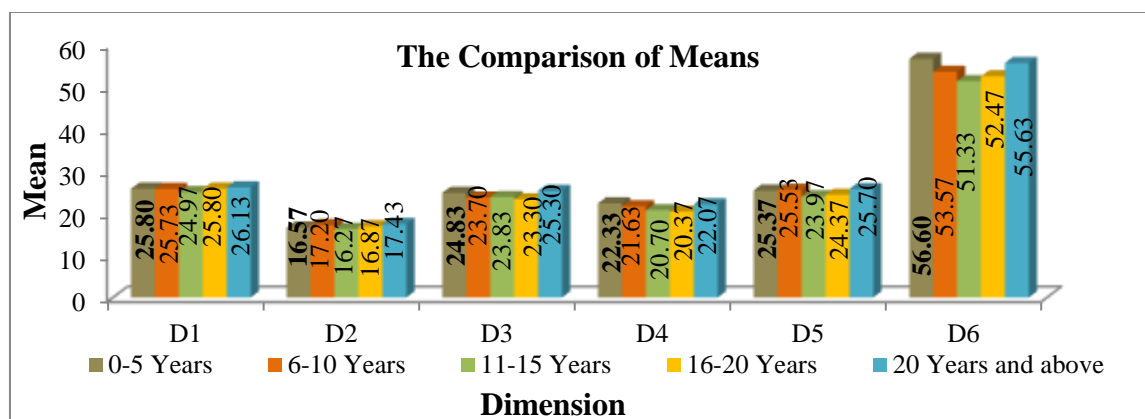


Figure 2 The Comparison of Means for each dimension of Reflective Practices by teaching experience

Note. D1= Creating a student-centered learning environment, D4= Self-evaluation
 D2= Creating a reflective classroom environment, D5= Decision-making and Problem-solving
 D3= Appreciating criticism, D6= Developing lifelong learning skills

Table 7 ANOVA Results of Each of Six Dimensions in Reflective Practices of Teacher Educators in terms of Teaching Experience

Dimension	Teaching Experience Group	Sum of Squares	df	Mean Square	F	Sig.
D1	Between Groups	22.373	4	5.593	1.006	.406
	Within Groups	805.900	145	5.558		
	Total	828.273	149			
D2	Between Groups	26.467	4	6.617	1.717	.149
	Within Groups	558.867	145	3.854		
	Total	585.333	149			
D3	Between Groups	84.160	4	21.040	2.060	.089
	Within Groups	1481.233	145	10.215		
	Total	1565.393	149			
D4	Between Groups	87.773	4	21.943	4.227	.003**
	Within Groups	752.767	145	5.191		
	Total	840.540	149			
D5	Between Groups	71.307	4	17.827	2.609	.038*
	Within Groups	990.667	145	6.832		
	Total	1061.973	149			
D6	Between Groups	571.373	4	142.843	4.151	.003**
	Within Groups	4989.667	145	34.411		
	Total	5561.040	149			

Note. D1= Creating a student-centered learning environment, D4= Self-evaluation
 D2= Creating a reflective classroom environment, D5= Decision-making and Problem-solving
 D3= Appreciating criticism, D6= Developing lifelong learning skills

Table 7 stated that there were no significant differences in three dimensions of reflective practices: creating a student-centered learning environment, creating a reflective classroom environment and appreciating criticism, in terms of teaching experience. In addition, it was also found that there were significant differences in terms of teaching experience in two dimensions of reflective practices: self-evaluation and developing lifelong learning skills at the .01 level. Moreover, the result showed that there was a significant difference in one dimension of reflective practices: decision-making and problem-solving in terms of teaching experiences at the .05 level. Therefore, according to the result of Table 7, it can be concluded that if teacher educators can more use these three dimensions of reflective practices: self-evaluation, decision-making and problem-solving and developing lifelong learning skills, their teaching profession will also improve.

Table 8 Results of Multiple Comparisons for Two Dimensions in Reflective Practices of Teacher Educators in terms of Teaching Experience

Dimension	Experience (I)	Experience (J)	Mean Difference	Sig.
D4	0 - 5 Years	11 - 15 Years	1.633*	.048*
		16 - 20 Years	-1.967*	.009**
	16 - 20 Years	20 Years and above	-1.700*	.035*
D6	0 - 5 Years	11 - 15 Years	5.267*	.006**
	11 - 15 Years	20 Years and above	-4.300*	.041*

Note. D4= Self-evaluation, D6= Developing lifelong learning skills, *p < .05, **p < .01.

According to Table 8, there was a significant difference between the teachers who have 0 - 5 years of teaching experience and the teachers who have 11 - 15 years of teaching experience at .05 level and the teachers who have 0 - 5 years of teaching experience significantly differ the teachers who have teaching experience have 16 - 20 years at .01 level in self-evaluation: one dimension of reflective practices. Moreover, in this dimension, the teachers who have 0 - 5 years and ones who have 20 years and above in teaching experience are different at .05 level. And then, in another dimension of reflective practices; developing lifelong learning skills, the teachers who have 0 - 5 years of teaching experience and who have 11 - 15 years are different at .01 level. Next, there was a significant difference between the teachers who have 11 - 15 years the teachers who have 20 years and above of teaching experience at .05 level.

Analysis of Attitudes towards Professional Development in terms of Teaching Experience

The research question (3) *What are the differences in attitudes towards professional development in terms of teaching experience?*

In order to find out the differences in attitudes towards professional development in terms of teaching experience, a questionnaire on attitudes towards professional development for teacher educators was used. Thus, a one-way ANOVA was used to find out the differences in terms of teaching experience. It was found that there were no differences in attitudes towards professional development in terms of teaching experience (see Table 9).

Table 9 ANOVA Results of Attitudes towards Professional Development in terms of Teaching Experience

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	810.600	4	202.650	2.033	.093
Within Groups	14454.733	145	99.688		(ns)
Total	15265.333	149			

Note. ns = not significant

It can be interpreted that there was not a significant difference between different groups of teaching experience according to Table 9.

Analysis of Each Dimension of Attitudes towards Professional Development of Teacher Educators in terms of Teaching Experience

The research question (4) *What are the differences in each dimension of attitudes towards professional development in terms of teaching experience?*

Table 10 Means and Standard Deviations for Each Dimension of Professional Development of Teacher Educators by teaching experience

		D1	D2	D3	Total
0 - 5 Years	M	39.77	56.50	34.43	130.70
	SD	3.126	4.249	2.622	9.158
6 - 10 Years	M	38.40	54.13	33.23	125.77
	SD	3.297	4.058	2.431	8.916
11 - 15 Years	M	38.20	54.20	33.20	125.60
	SD	3.377	4.080	2.469	9.000
16 - 20 Years	M	38.37	54.60	33.63	126.60
	SD	3.439	4.157	2.553	8.923
20 Years and above	M	39.60	56.43	34.63	130.67
	SD	4.065	5.811	3.672	130.67

Note. D1= Social Competency, D2= Professional Competency, D3= Pedagogic Competency

It was found that the highest mean for all teachers who have respective teaching experience levels is professional competency and the lowest mean is in pedagogic competency for all teachers. Teachers who have 11 - 15 years services are the lowest in implementing professional development (see Table 10). Based on the result of the means, Figure 3 is illustrated. It shows the comparison of the means for each dimension by teaching experience.

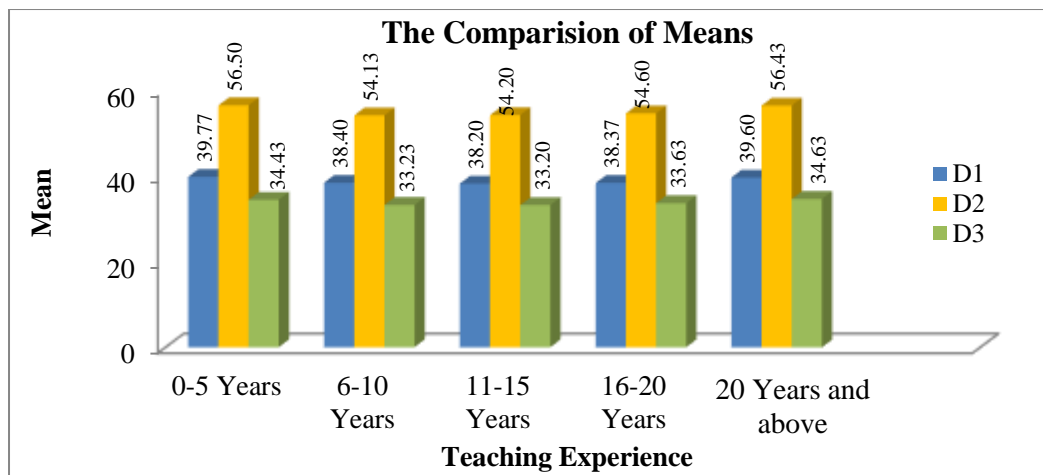


Figure 3 The Comparison of Means for each dimension of Professional Development by teaching experience

Note. D1= Social Competency, D2= Professional Competency, D3= Pedagogic Competency

To find out the differences in all dimensions of attitudes towards professional development by teaching experience, a one-way ANOVA was used. Then, the result showed that there were no significant differences in all dimensions of professional development; social competency, professional competency and pedagogic competency among teaching experiences.

Table 11 ANOVA Results of all dimensions of attitudes towards professional development in terms of teaching experience

		Sum of Squares	df	Mean Square	F	Sig.
D1	Between Groups	67.800	4	16.950	1.403	.236
	Within Groups	1751.533	145	12.080		(ns)
	Total	1819.333	149			
D2	Between Groups	171.160	4	42.790	2.093	.085
	Within Groups	2964.333	145	20.444		(ns)
	Total	3135.493	149			
D3	Between Groups	54.027	4	13.507	1.737	.145
	Within Groups	1127.467	145	7.776		(ns)
	Total	1181.493	149			

Note. ns = not significant

D1= Social Competency, D2= Professional Competency, D3= Pedagogic Competency

According to Table 11, it can be interpreted that there were no significant differences in all dimensions of attitudes towards professional development by teaching experience. Thus, teacher educators’ attitudes towards professional development are the same by teaching experience.

Relationship between Reflective Practices of Teacher Educators in terms of each of Six Dimensions and their Professional Development

The research question (5) *To what extent is a significant relationship between reflective practices of teacher educators in terms of each of six dimensions and their professional development?*

In order to examine the relationship between six dimensions of reflective practices of teacher educators, Pearson product-moment correlation was used (see Table 12).

Table 12 *Correlations between Teacher Educators’ Reflective Practices in terms of Each of Six Dimensions and their Professional Development*

		Correlations	
			Professional Development
Six Dimensions of Teacher Educators’ Reflective Practices	D1	Pearson Correlation Sig. (2-tailed)	.413** .000
	D2	Pearson Correlation Sig. (2-tailed)	.446** .000
	D3	Pearson Correlation Sig. (2-tailed)	.387** .000
	D4	Pearson Correlation Sig. (2-tailed)	.456** .000
	D5	Pearson Correlation Sig. (2-tailed)	.519** .000
	D6	Pearson Correlation Sig. (2-tailed)	.510** .000

Note. **. Correlation is significant at the 0.01 level (2-tailed),
 D1= Creating a student-centered learning environment, D4= Self-evaluation
 D2= Creating a reflective classroom environment, D5= Decision-making and Problem-solving
 D3= Appreciating criticism, D6= Developing lifelong learning skills

The result revealed that six dimensions of teacher educators’ reflective practices are positively related to their professional development. Moreover, according to Cohen (1988), four dimensions of teacher educators’ reflective practices creating a student-centered learning environment, creating a reflective classroom environment, appreciating criticism and self-evaluation are moderately positive in correlation with their professional development. And then, two dimensions of teacher educators’ reflective practices; decision-making and problem-solving and developing lifelong learning skills are highly positively related to their professional development. Therefore, according to the results, it can be concluded that if teacher educators focus on reflecting on their teaching process more and more, they develop and improve knowledge and skills of their profession.

Relationship between Reflective Practices of Teacher Educators and their Professional Development

The research question (6) *To what extent is there a relationship between reflective practices of teacher educators and their professional development?*

To explore the relationship between reflective practices of teacher educators and their professional development, Pearson product-moment correlation was used. It was found that there was a significant correlation between reflective practices of teacher educators and their professional development at the .01 level ($r = .573$). The result shows that the direction of correlation was positive. This means that the more teacher educators do reflective practices, the more they develop professionally in their teaching. Table 13 shows the correlation between the reflective practices of teacher educators and their professional development. Thus, reflective practices are very important to develop their teaching profession.

Table 13 Correlation between Reflective Practices of Teacher Educators and their Professional Development

Correlations			
		Reflective Practices	Professional Development
Reflective Practices	Pearson Correlation	1	.573**
	Sig. (2-tailed)	-	.000
	N	150	150
Professional Development	Pearson Correlation	.573**	1
	Sig. (2-tailed)	.000	-
	N	150	150

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

According to Cohen (1988), it can be interpreted that there was a positively high correlation between reflective practices of teacher educators and their attitudes towards professional development. Therefore, if the using levels of teacher educators' reflective practices are high, they more obviously develop their teaching professions.

Discussion and Suggestions

Discussion

The purpose of this study is to explore the relationship between reflective practices in teacher educators and attitudes towards their professional development. Teacher educators who more practice reflection on teaching develop their profession pedagogically and socially. By analyzing the statistical results, there were significant differences in reflective practices in terms of teaching experience. According to the interview question, teacher educators are obviously different in using reflective practices and they reflect on their teaching to various extents by teaching experience. Rayan (2013, cited in Gheith & Jaber, 2018) asserted that reflective practices were significant by teaching experience. Therefore, the result of the present study is consistent with the result of Rayan (2013, cited in Gheith & Jaber, 2018). Teachers with more experience are more likely to use reflective practices in their teaching, while teachers with little or no experience do not give the matter enough thought (Ostaz, 2011, cited in Gheith & Jaber, 2018). Moreover, it was found that teachers who have 11 - 15 years of teaching experience and who have 20 years and above of teaching experience differ significantly at the .05 level. However, there were no significant differences in reflective practices in terms of teaching subjects. The result showed that reflective practices of teachers who teach science subjects are the highest mean and that of teachers who teach ICT are the lowest mean. By comparing the means of each dimension of reflective practices in terms of teaching experience, the means of all teachers with respective teaching experiences are the lowest in creating a reflective classroom environment and the highest are in developing lifelong learning skills for all teachers. In addition, teachers who have 11 - 15 years of teaching experience are the lowest in using reflective practices.

And then, in three dimensions of reflective practices; creating a student-centered learning environment, creating a reflective classroom environment and appreciating criticism, there were no significant differences in terms of teaching experience. There was a significant difference between the next three dimensions of reflective practices, self-evaluation; decision-making and problem-solving and developing lifelong learning skills by teaching experience. Moreover, in self-

evaluation, teachers who have 0 - 5 years of teaching experience differ from teachers who have 11 - 15 years of teaching experience and 16 - 20 years of teaching experience. And also, teachers who have 16 - 20 years of teaching experience, who have 20 years and above of teaching experiences are different in this dimension. In developing lifelong learning skills, teachers who have 0 - 5 years of teaching experience differ from teachers who have 11 - 15 years of teaching experience and then it was found that teachers who have 20 years and above and teachers who have 11 - 15 years of teaching experiences are different at .05 level.

The results of the one-way ANOVA suggested that there were no significant differences in attitudes towards professional development by teaching experience. By teaching experience, most of the teacher educators in the selected education degree colleges involve professional development programs so that they have equal attitudes towards their professional development according to the interview question. Thus, it can be interpreted that teacher educators are not significantly different in attitude and interest in their teaching profession. When comparing means for each dimension of professional development of teacher educators by teaching experience, the highest means for all teachers with respective teaching experience levels are in professional competency and the lowest means are in pedagogic competency for all teachers. In addition, teachers who have 11 - 15 years of teaching experience are the lowest in implementing professional development.

According to the obtained data, there were no significant differences in each dimension of attitudes towards professional development by teaching experience. By interviewing, most teacher educators involve professional development programs so that they have equally attitudes towards their professional development and then they want to be competent some factors included professional development such as knowledge and skills about teaching, social skills and pedagogical skills. Thus, it can be interpreted that their attitudes and mindset on professional development are not significantly different.

The descriptive result indicated that there was a positive and significant correlation between reflective practices in teacher educators and their attitudes towards professional development. It is also suggested that statistical analysis showed reflective practices in teacher educators were high and positively correlated to their attitudes towards professional development with each other. This means that if teacher educators use frequently reflective practices in their teaching, they develop and improve their profession and be more effective in their teaching. The study of Gheith and Jaber (2018) indicated that reflective practices in teacher educators positively and highly correlated to their attitudes towards professional development. It is quite assertive that teachers' attitudes direct their behaviors toward reflecting on teaching practices and improving performance. Therefore, the findings of this study are consistent with Gheith and Jaber's study.

Based on the research findings, there was a positive and significant correlation between each dimension of reflective practices and attitudes towards professional development. The value of the correlation coefficient between overall reflective practices and attitudes towards professional development is (.573). So, all dimensions of reflective practices of teacher educators and their attitudes towards professional development correlated with each other. This means that if teacher educators do effectively these dimensions of reflective practices, they will know the merits and drawbacks of their teaching and then will get effective teaching strategies. Moreover, they will develop and improve the teaching profession. Thus, every teacher should use reflective practices effectively to develop their profession.

Suggestions

This study indicated that using reflective practices and practicing reflection on the teaching process are essential tools for developing the teaching profession and obtaining effective teaching. Therefore, every teacher should create a student-centered learning environment, create a reflective classroom environment, appreciate criticism, self-evaluate, use decision-making and problem-solving strategies and develop lifelong learning skills to some extent. By doing this, teachers will gain more social competency, pedagogical competency and professional competency for developing their teaching. If teachers use reflective practices to a little extent, they will have little competency in professional skills and then they would not develop in their profession perfectly. Teacher educators should always reflect on their own teaching by writing reflective journals themselves if possible. Whenever using reflective practices, the teacher should make the changes that improve and develop their teaching. And then, to develop the teaching profession, teachers should have reflective partnerships who serve as observers when they are teaching. Teachers gain insights and good or bad comments from their colleagues that improved their teaching. Like the students, they should be openly presented with the strengths and weaknesses of their teachers and the teaching style of their teachers not only by writing reflective journals but also by creating a reflective classroom environment. Teachers also should consider their students' presentations. Thus, all teacher educators should often use reflective practices as much as possible.

Conclusion

Reflective practices are essential tools for every teacher to develop in their profession. Every teacher should do a reflection on their teaching. By doing reflective practices, they improve their social skills, pedagogical competency and professional competency. At least, a teacher should reflect on teaching to some extent.

In this study, there was a positive significant correlation between all dimensions of teacher educators' reflective practices and their professional development. In addition, it was found that there was a positively high correlation between reflective practices of teacher educators and their professional development at the .01 level ($r = .573$).

To sum up, reflection is the key to being a successful teacher and it is a tool for teachers to improve their ability, think about their teaching and judge the quality of their teaching based on evidence. If a teacher practices reflection, he can more effectively encourage learners to reflect on, analyze, evaluate and improve their own learning (Habib, 2017). Thus, teachers should use always reflective practices in teaching all subjects. By using reflective practices in teacher education, prospective teachers can know how to use reflective practices and doing reflective practices can also develop the teaching profession. Reflective practices are now widely employed in the field of teacher education for their professional development. Reflective practices are very useful not only for teachers to improve their ability and teaching but also for learners to be effective in learning. Using reflective practices is one of the professional developments and all teachers need to use reflective practices to be proficient in their teaching. That is why reflective practices are essential in the field of education especially for teacher educators to improve their professional development.

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References

- Bonet, D. G., & Wright, T. A. (2014). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behavior*. doi: 10.1002/job.1960
- Bruster, B. G., & Peterson, B. R. (2013) Using critical incidents in teaching to promote reflective practice, *Reflective Practice: International and Multidisciplinary Perspectives*, *Routledge*, 14 (2), doi: 10.1080/14623943.2012.732945
- Cherry, K. (2021). Attitudes and Behavior in Psychology. Retrieved from <https://www.verywellmind.com/attitudes-how-they-form-change-shape-behavior-2795897>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New York: Lawrence Erlbaum Associates.
- Gheith, E., & Jaber, N. (2018). Reflective teaching practices in teachers and their attitudes toward professional self-development. *International Journal of Progressive Education*, 14 (3). doi: 10.29329/ijpe.2018.146.11
- Habib, H. (2017). A study of reflective practice and its role for teachers. *International Journal of Creative Research Thought*, 5 (4). Retrieved from <http://www.ijcrt.org/papers/IJCRT1704126.pdf/>
- Killen, R. (2016). *Effective teaching strategies: Lessons from research and practice* (7th ed.). South Melbourne: Cengage Learning Australia.
- Mathew, P., Mathew, P., & Peechattu, P. J. (2017). Reflective practices: *Asia Pacific Journal of Contemporary Education and Communication Technology (APJCECT)*, 3(1).
- Osterman, K. F. (1998). Using constructivism and reflective practice to bridge the theory/practice gap: *Educational leadership and administration*. Retrieved from <https://www.researchgate.net/publication/234734398>