

RELATIONSHIP BETWEEN KNOWLEDGE OF FORMATIVE ASSESSMENT OF TEACHER EDUCATORS AND THEIR TEACHING PRACTICES IN EDUCATION DEGREE COLLEGES

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Abstract

The main purpose of the study is to investigate the relationship between knowledge of formative assessment of teacher educators and their teaching practices in Education Degree Colleges. The design used in this study is quantitative research design and descriptive research method. Data were mainly collected through quantitative research methods that were used to find out knowledge of formative assessment of teacher educators and their teaching practices. By using a simple random sampling method, (213) teacher educators from four Education Degree Colleges were selected to participate. Two instruments: a questionnaire of knowledge of formative assessment of teacher educators and a questionnaire of their teaching practices were employed. In pilot testing, the reliable value of knowledge of formative assessment of teacher educators was (0.885) and that for teaching practices of formative assessment was (0.924) using Cronbach's Alpha. The data obtained were analyzed by using descriptive statistics (means, standard deviations, and correlation), one-way ANOVA, and Pearson product-moment correlation. The results showed that there was a positive high correlation ($r=.712$, $p<.01$) between knowledge of formative assessment of teacher educators and their teaching practices in Education Degree Colleges. It can be concluded that the more teacher educators know formative assessment, the more they use it in their teaching.

Keywords: Assessment, Formative Assessment, Teacher Educator, Teaching Practices, Knowledge

Introduction

Assessment in education is the process of gathering, interpreting, recording, and using information about pupils' responses to an educational task (Harlen et al., 1992, as cited in Kivunja, 2015). Today, assessment has long been a part of the educational landscape to measure the achievement or abilities of students, but assessment diverged into two categories with different roles in the late sixties- summative and formative.

Formative assessment is a practice in the classroom that is formative to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than they would have taken in the absence of the evidence that was elicited (Black & William, 2009). Formative assessment is a vital aspect of a child's learning process and should be used to plan and inform instruction (Shephard, 2008). Moreover, formative assessment is a collection of tasks and strategies that give teachers a way to regularly gather information on student understanding during the learning process so it can positively affect student achievement (Stiggins & Dufour, 2009, Stiggins, 2014, as cited in Kenyon, 2019).

By using formative information, teachers can identify individual learning needs and tailor instruction to meet these needs (Black & William, 2009). Therefore, teachers should use formative assessment to improve teaching-learning processes. In addition, Alkharusi (2011) stated that all the formative assessment practices are carried out by teachers, based on their

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formative assessment knowledge. Thus, the knowledge and skill of formative assessment are important for teachers and those who are involved in it.

Purposes of the Research

The main purpose of the study is to investigate the relationship between knowledge of formative assessment of teacher educators and their teaching practices in the classroom. The specific objectives are as follows:

- To investigate the knowledge of formative assessment of teacher educators
- To find out the teaching practices of teacher educators in the classroom
- To measure the relationship between knowledge of formative assessment of teacher educators and their teaching practices in the classroom
- To make suggestions and recommendations for improving the knowledge of formative assessment based on the results of the study

Research Questions

The following research questions are organized based on the purposes of the study.

1. What is the knowledge of formative assessment of teacher educators?
2. What are the differences in knowledge of formative assessment of teacher educators in terms of gender and teaching experience?
3. What are the most frequently used teaching practices of teacher educators?
4. To what extent is there a significant relationship between knowledge of formative assessment of teacher educators and their teaching practices?

Definition of Key Terms

The following are the conceptual definitions of key terms in this study. They are:

Assessment: Assessment is the collection of relevant information that may be relied on for making decisions (Fenton, 1996).

Formative Assessment: Formative assessment is defined as all the activities where teachers are involved to make the teaching-learning process more productive and to eradicate (Black & William, 1998).

Teacher Educator: Teacher educator refers to all those who are formally involved in initial teacher education or in-service teachers' professional development (European Commission, 2013).

Teaching Practice: Teaching practice is a form of apprenticeship or internship that ushers one into the teaching profession (Brown & Brown, 1990).

Knowledge: Knowledge is defined as the meaningful links people make in their minds between information and its application in action in a specific setting (Dixon, 2000).

Scope of the study

This study is geographically restricted to four Education Degree Colleges in Upper Myanmar. Participants were (213) teacher educators in Mandalay, Meiktila, Taunggyi, and Pakokku Education Degree Colleges.

Review of Related Literature

The relationship between knowledge of formative assessment of teacher educators and their teaching practices is grounded in social development theory and the theory of planned behavior.

Social Development Theory

Formative assessment by Black and William (1998) is based on the social development theory, which is grounded in constructivism. Vygotsky (1978) stated that students actively develop knowledge and understanding over time in an interactive social learning context guided by a teacher. Students' knowledge and skills can improve through formative assessment because students and teachers interact with one another during this process. Although the student and the teacher both have roles in formative assessment, this study focused on the role of the teacher. The social development theory highlights the contributions of teachers who have already developed the skills and knowledge needed to assist students in their learning (Vygotsky, 1978). Therefore, this study was intended to explore the knowledge of teacher educators' formative assessment and how to improve their knowledge to assist students' learning according to Vygotsky (1978).

Theory of Planned Behavior

Ajzen (1985) explored the theory of planned behavior. It can explain how knowledge and beliefs influence teaching practices. According to this theory, teacher educators' knowledge and attitudes towards formative assessment, their recognized control over its use, and their subjective norms influence their intention to apply formative assessment. Moreover, teacher educators convert their formative assessment knowledge into actual teaching practices, where a positive attitude and strong belief in the efficacy of formative assessment leads to its frequent and effective use.

The Nature of Formative Assessment

Formative assessment means all the activities where teachers are involved to make the teaching-learning process more productive and to eradicate the hurdle (Black & William, 1998). In this section, formative assessment is described with six parts to learn more. They are the purpose of formative assessment, stages of formative assessment, strategies of formative assessment, essential elements of formative assessment, techniques of formative assessment, and benefits of formative assessment.

(1) Purpose of Formative Assessment: Bloom, Mandus, and Hastings (1971, as cited in Kivunja, 2015) state that the main purpose of formative assessment is to help both the learner and the teacher focus on the particular learning necessary for the movement to mastery. According to the Eberly Center (2014), the goal of formative assessment is to monitor student learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning.

(2) Stages of Formative Assessment: Formative assessment is used by teachers every day. It may occur during all stages of the lesson plan. The three stages of formative assessment are before instruction, during instruction, and after instruction (Andrade & Cizek, 2010).

(3) Strategies of Formative Assessment: The framework represented by William and Thompson (2007) suggests that formative assessment or assessment for learning can be conceptualized as consisting of five key strategies.

1. clarifying, sharing, and understanding learning intentions and criteria for success;
2. engineering effective classroom discussions, questions, and tasks that elicit evidence of learning;
3. providing feedback that moves learners forward;
4. activating students as instructional resources for one another; and
5. activating students as the owners of their learning.

(4) Essential Elements of Formative Assessment: There are four essential elements in formative assessment; (1) identifying the gaps, (2) feedback, (3) students' involvement, and (4) learning progression (Andrade & Cizek, 2010).

(5) Techniques for Using Formative Assessment: Formative assessment information can be culled from different information-gathering activities including traditional classroom tests, observation, oral questioning, class discussion, group work with peer feedback, portfolios, projects, homework, and student self-assessment (Andrade & Cizek, 2010).

(6) Benefits of Formative Assessment: There are many benefits when formative assessments are used in classrooms. Because formative assessment supports students to align their learning goals with the aim and objectives of the coursework or training. It preserves the learning goal in the minds of everyone and instructors can help students to resolve any challenges they face before they get off track. It advances the overall learner performance. As teachers monitor learners' progress, they can handle the feedback to improve the learning experience and ultimately, the learner's performance. It is an effective way to upgrade students' motivation. Formative assessment urges learners to smash their goals by consistently tracking their progress toward specific knowledge objectives. By tracking learners' progress using different formative assessment methods, the teacher can spawn personalized learning experiences for the students. It supports understanding the unique needs of students and knowing the best ways to support them on their learning journeys. It allows the instructors to make data-driven decisions. Using the data gathered from frequent learning checks, the instructor can prepare valid and informed decisions that are grounded in real-time experiences. It supports instructors in adjusting their teaching methods to better suit the needs of the learners (William, 2017).

Teacher Skills for Using Formative Assessment

Heritage (2007) suggested that the four specific skills are all defined as pedagogical knowledge. The specific skills for practicing formative assessment that teachers need to be able to do are 1) creating the conditions for the formative assessment, 2) using student self-assessment, 3) being able to interpret evidence of student learning and 4) matching instruction to the gap.

(1) Creating the Conditions: According to Heritage (2007), two things need to happen if students are going to be involved in assessment. First, a classroom culture must be created by teachers that support self-and peer assessment. Second, the skills to build a community of learners must be had as a teacher, characterized by a recognition and appreciation of individual differences. Students listen to classroom norms respectfully to one another, respond positively

and constructively, and appreciate the different skill levels among peers will enable all students to feel safe in the learning environment and to learn with and from one another. Above all, teachers will need the skills to model the “safety” norms of the classroom in their behavior.

(2) Student Self-Assessment: Teachers must teach students to assess their learning and the learning of others. This involves helping students to set goals and criteria for success, reflect on their own and others’ understanding, and to evaluate learning according to the criteria. (Heritage, 2007).

(3) Interpreting Evidence: Teachers’ skills in drawing inferences from students’ responses are crucial to the effectiveness of formative assessment. No matter what the assessment strategy - observation, dialogue, asking for a demonstration, or a written response - teachers must examine students’ responses from the perspective of what they show about their conceptions, misconceptions, skills, and knowledge. This involves a careful analysis of the responses about the criteria for success. In essence, teachers need to infer the just right gap between the current learning and desired goals, identifying students’ emerging understanding or skills to build on these by modifying instruction to facilitate growth (Heritage, 2007).

(4) Matching Instruction to the Gap: According to Heritage (2007), it is axiomatic to formative assessment that, if the next instructional steps to close the gaps are too hard for the student, frustration will almost certainly result, and if they are too easy, boredom and disaffection are potential outcomes. Therefore, teachers need the skills to translate their interpretations of the assessment results into instructional actions that are matched to the learning needs of their students. In summary, teachers must not only have the theoretical knowledge of formative assessment but also the skills to use it more effectively.

Research Method

Population and Sample Size

This study was conducted in the Mandalay Region, Magway Region, and Shan State. The sample education degree colleges for this study were selected by using a simple random sampling technique. Four Education Degree Colleges were selected as sample colleges. Although there are 302 teachers in four education degree colleges, only 213 questionnaires have been returned. Table 1 shows the number of the sample size in the selected colleges.

Table 1 Population and Sample Size

Education Degree College	No. of Teacher		
	Male	Female	Total
Mandalay	6	74	80
Meiktila	5	47	52
Pakokku	2	30	32
Taunggyi	5	44	49
Overall	18	195	213

Research Design

The research design used in the study is correlational research design which is one of the descriptive research designs and it involves the collection of information from a sample of individuals by asking them to respond to the survey questions.

Instruments

In this study, there are two types of instruments for collecting data about knowledge of formative assessment and their teaching practices. These are questionnaires for teacher educators' knowledge about formative assessment and questionnaires for their teaching practices in the classroom. The personal information form included questions about teacher educators' gender, teaching experience years, teachers' qualifications, and training programs.

In this study, a questionnaire for knowledge of formative assessment of teacher educators was modified from a questionnaire by Alkharusi (2011). The questionnaire on knowledge of formative assessment of teacher educators included five dimensions. They are Purposes of Formative Assessment, Benefits of Clear Learning Outcomes, Strategies and Important Factors of Formative Assessment, Challenges to Using Formative Assessment, and Administrator Support. There were (40) five-point Likert scale items in this instrument. All items were positive items. These items were rated as follows, 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree.

The teaching practices questionnaire was developed by Johnson (2016). The questionnaire for teacher educators' teaching practices comprises five dimensions. They are Types of Formative Assessment, Communicating Assessment, Assessment Standards and Criteria, Student-Involved Assessment, and Non-Achievement-Based Grading Factors. There were (38) five-point Likert scale items in this instrument. These items were rated as follows, 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always.

Data Collection Procedures

First of all, the relevant data and information were collected from the library and internet sources. The instruments were constructed under the guidance of the supervisor to investigate knowledge of formative assessment of teacher educators and their teaching practices. The content validity was determined by experienced teachers. Some of the items were revised according to the pilot results. After getting the validity and reliability of the instrument, the questionnaires were distributed to the target teacher educators in selected Education Degree Colleges. Then, the collected data was analyzed and interpreted.

Data Analysis

After collecting the required data, quantitative data analysis was performed by using the Statistical Package for Social Sciences (SPSS) version (22). Data was analyzed by using descriptive statistics, independent samples *t-test*, a one-way ANOVA, and Pearson product-moment correlation coefficient. Descriptive statistics was used to examine knowledge of formative assessment of teacher educators and their teaching practices. An independent samples *t-test* was used to compare knowledge of formative assessment of teacher educators in terms of gender and one-way ANOVA was used to compare teaching experience in years and qualifications. Moreover, Pearson product-moment correlation was used to explore the relationship between knowledge of formative assessment of teacher educators and their teaching practices.

Findings

The quantitative research data were examined using independent samples *t*-test, one-way ANOVA, and Pearson product-moment correlation. The quantitative research findings are described in the following.

Findings of Research Question (1)

To know the knowledge of formative assessment of teacher educators among the selected education degree colleges, descriptive statistics was used. The means and standard deviations for teacher educators' knowledge of formative assessment on each dimension are shown in Table 2.

Table 2 Means and Standard Deviations for Knowledge of Formative Assessment of Teacher Educators on Each Dimension

EDCs	n	M/SD	Dimension					Overall
			D1	D2	D3	D4	D5	
EDCs	213	M	4.06	4.10	4.20	3.92	3.97	3.88
		SD	0.291	0.301	0.375	0.587	0.762	0.324

Note. D1 = Purposes of Formative Assessment, D2 = Benefit of Clear Learning Outcomes, D3 = Strategies and Important Factors of Formative Assessment, D4 = Challenges of Using Formative Assessment, D5 = Administrators Support.

The total mean of dimension three was the greatest. Thus, the teacher educators in the selected EDCs are rich in knowledge about the strategies and important factors of formative assessment. However, the total mean of dimension four was the lowest. Therefore, teacher educators in EDCs are weak in understanding the challenges of using formative assessment and the ways to overcome these challenges. However, most teacher educators in EDCs are knowledgeable about the formative assessment because the overall mean is 3.88. Based on the means of the knowledge of formative assessment of teacher educators in EDCs, Figure 1 was illustrated.

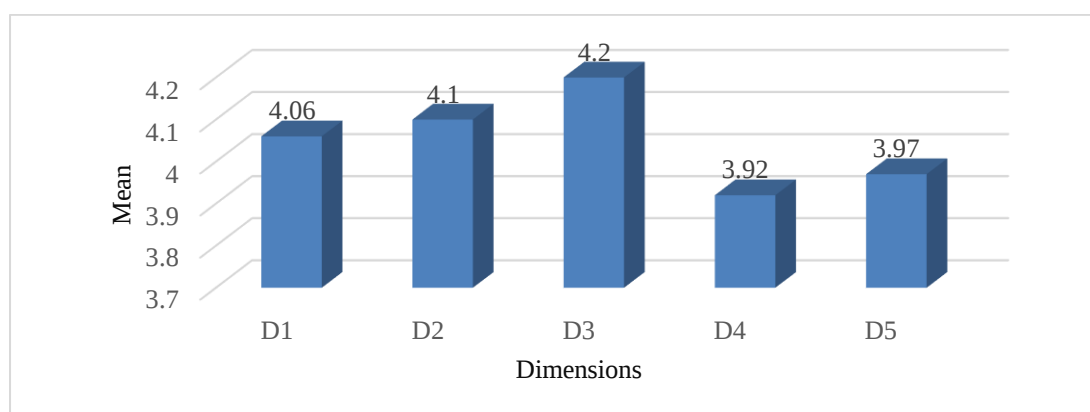


Figure 1. Comparisons of means for knowledge of formative assessment of teacher educators on each dimension.

Findings of Research Question (2)

Analysis for Knowledge of Formative Assessment of Teacher Educators in terms of Gender

The independent samples *t*-test was used to determine the knowledge of formative assessment of teacher educators in terms of gender. The results of the independent sample *t*-test were performed to determine whether there was a significant difference in terms of gender

among the knowledge of formative assessment of teacher educators in EDCs. The results of the *t*-test are given in Table 3.

Table 3 *t*-Values for Knowledge of Formative Assessment of Teacher Educators in terms of Gender

Dimension	Gender	<i>n</i>	<i>M</i>	<i>SD</i>	<i>MD</i>	<i>t</i>	<i>df</i>	<i>p</i> (2-tailed)
D1	Male	18	3.88	0.423	-0.19	-1.870	211	.078
	Female	195	4.07	0.272				
D2	Male	18	3.85	0.488	-0.27	-2.318	211	.032*
	Female	195	4.12	0.268				
D3	Male	18	3.89	0.446	-0.34	-3.729	211	.000***
	Female	195	4.22	0.356				
D4	Male	18	3.56	0.637	-0.40	-2.836	211	.005*
	Female	195	3.96	0.572				
D5	Male	18	3.61	0.737	-0.39	-2.105	211	.036*
	Female	195	4.00	0.757				
Overall	Male	18	3.62	0.424	-0.29	-2.818	211	.011*
	Female	195	3.90	0.303				

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

Table 3 shows that there was a significant difference between the knowledge of formative assessment of teacher educators in terms of gender. According to the findings, the average means (3.90) for females were slightly more significant than the average means (3.62) for males. Figure 2 shows the comparison means for knowledge of formative assessment of teacher educators in terms of gender.

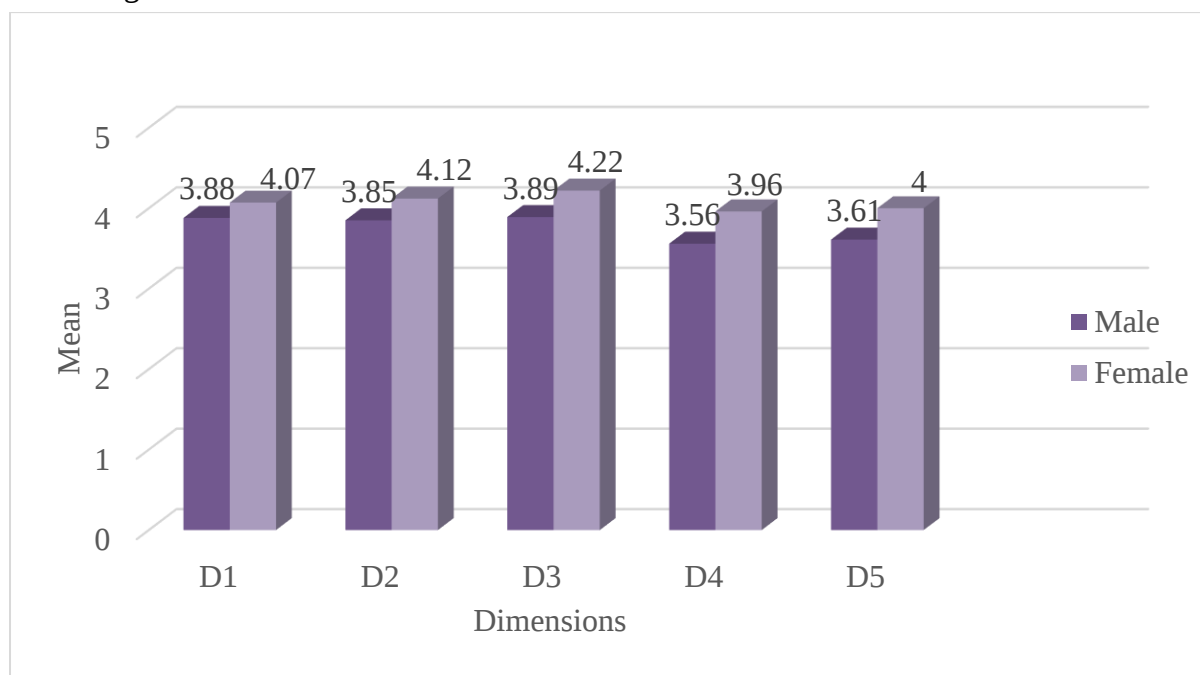


Figure 2. Comparisons of means for knowledge of formative assessment of teacher educators in terms of gender.

Analysis for Knowledge of Formative Assessment of Teacher Educators in terms of Teaching Experience

In terms of years of teaching experience, the respondents were spread out into five groups of experience. To know the differences in teacher educators' knowledge of formative assessment in terms of teaching experience, descriptive statistics were used. Table 4 illustrates the means and standard deviation of knowledge of formative assessment of teacher educators in terms of teaching experience.

Table 4 Means and Standard Deviations for Knowledge of Formative Assessment of Teacher Educators in terms of Teaching Experience

Teaching Experience (Years)	<i>n</i>	<i>M/SD</i>	D1	D2	D3	D4	D5
0-5	30	<i>M</i>	4.00	4.06	4.09	3.81	3.79
		<i>SD</i>	0.240	0.305	0.281	0.550	0.739
6-10	40	<i>M</i>	4.10	4.14	4.30	4.01	4.19
		<i>SD</i>	0.348	0.309	0.391	0.623	0.677
11-15	52	<i>M</i>	4.24	4.21	4.50	4.21	4.38
		<i>SD</i>	0.186	0.193	0.236	0.617	0.753
16-20	44	<i>M</i>	4.00	4.04	4.04	3.83	3.74
		<i>SD</i>	0.208	0.271	0.306	0.536	0.704
Above 20	47	<i>M</i>	3.92	4.02	3.98	3.70	3.66
		<i>SD</i>	0.334	0.374	0.352	0.458	0.673
Overall	213	<i>M</i>	3.79	3.96	4.12	3.77	3.70
		<i>SD</i>	0.285	0.351	0.203	0.293	0.285

According to the results shown, teacher educators who have more than 20 years of experience have the lowest knowledge of formative assessment. To explore whether a significant difference between the knowledge of formative assessment of teacher educators in terms of teaching experience, one-way ANOVA was used. Table 5 illustrates the result of one-way ANOVA.

Table 5 ANOVA Result for Knowledge of Formative Assessment of Teacher Educators in terms of Teaching Experience

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Between Groups	5.551	4	1.388	17.277	.000***
Within Groups	16.706	208	0.800		
Overall	22.256	212			

Note. *** $p < .001$.

According to the results, there was a significant difference between different groups of teaching experience at the .001 level.

Finding of Research Question (3)

The means and standard deviations of teaching practices of teacher educators on each dimension were presented in the following table.

Table 6 Comparison of Means and Standard Deviations for Teaching Practices of Formative Assessment of Teacher Educators on Each Dimension

EDC	n	M/SD	Dimension				
			D1	D2	D3	D4	D5
EDC 1	52	M	3.99	4.00	3.65	3.89	3.85
		SD	0.488	0.418	0.663	0.363	0.743
EDC 2	80	M	4.41	4.36	4.19	4.30	4.57
		SD	0.325	0.457	0.450	0.337	0.500
EDC 3	49	M	3.78	3.74	3.89	3.91	3.62
		SD	0.415	0.638	0.769	0.685	0.859
EDC 4	32	M	4.08	4.05	3.55	3.86	3.94
		SD	0.549	0.510	0.759	0.428	0.812
Overall	213	M	4.11	4.08	3.89	4.04	4.08
		SD	0.492	0.555	0.682	0.497	0.804

Note. D1 = Types of Formative Assessment, D2 = Communicating Assessment, D3 = Assessment Standards and Criteria, D4 = Student-Involved Assessment, D5 = Non-Achievement-Based Grading Factors.

The total mean of dimension one was the greatest. Thus, the teacher educators in the selected EDCs are using all kinds of formative assessment in the classroom. However, the total mean of dimension three was the lowest. Therefore, teacher educators in EDCs are using formative assessment in the classrooms, but they do not set assessment standards and criteria.

Finding of Research Question (4)

To investigate the relationship between knowledge of formative assessment of teacher educators and their teaching practices, the Pearson product-moment correlation was analyzed. The result is shown in Table 7.

Table 7 Results of Correlation between Knowledge of Formative Assessment of Teacher Educators and their Teaching Practices

		Knowledge of Formative Assessment of Teacher Educators	Teaching Practices of Teacher Educators
Knowledge of Formative Assessment of Teacher Educators	Pearson	1	.712**
	Sig (2-tailed)		.000
	N	213	213
Teaching Practices of Teacher Educators	Pearson	.712**	1
	Sig (2-tailed)	.000	
	N	213	213

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

Table 7 shows that the knowledge of formative assessment of teacher educators and their teaching practices had a significant relationship ($r = .712, p < .01$). The strength of correlation was high according to Cohen (1988). The result stated that the direction of the correlation was positive. It can therefore be concluded that if the level of the knowledge of formative assessment is high, the level of teaching practice will be high or if the level of the knowledge of formative assessment is low, the level of teaching practice will be low.

Discussion and Conclusion

Discussion

Research question one investigated the knowledge of formative assessment of teacher educators in EDCs. The findings of the study pointed out that the mean values of teacher educators' knowledge of formative assessment were greater than 3.88 in all dimensions. The study results described that teacher educators have an average level of understanding of different aspects of formative assessment. These results are supported by the study of Riaz (2008) that teachers have formative assessment knowledge to enhance students' learning competencies toward higher attainments. On the contrary, these results didn't match with the result of Suah (2012) who studied primary school teachers and found that teachers have a low level of knowledge for formative assessment.

Research question two investigated the differences in knowledge of formative assessment of teacher educators in terms of teaching experience and gender. The findings of the study stated that the means of teacher educators who have (11-15) years of teaching experience were the highest and the means of over 20 years of experienced teacher educators were the lowest. The ANOVA results showed that there was a significant difference between teacher educators in terms of teaching experience. The study's results were consistent with Mertler's (2004) findings that some factors influence educators' knowledge, such as gender and major, education and assessment training, and teaching experience. The result findings indicated that the means of females were (3.90) greater than the means of males (3.62). So, female teacher educators are more knowledgeable and interested in formative assessment than male teacher educators. According to the result, this refused Alkharusi's research (2011) that male teachers tend to have a higher level of measurement and testing knowledge than female teachers.

Research question three explored the most frequently used teaching practices of teacher educators. The results of the study indicated that teacher educators frequently use MCQs, short answer questions, and other formative assessment forms in their classrooms. Both traditional and authentic methods of assessment are adopted by the majority of teacher educators. The results are not supported by McMillian (2008) who thought that traditional methods of assessment are easy to execute and mark; therefore, the majority of teachers prefer to use these methods in the assessment of their students' learning.

Research question four explored the relationship between knowledge of formative assessment of teacher educators and their teaching practices in EDCs. The result findings revealed that the knowledge of formative assessment of teacher educators was significantly, positively, and highly correlated with their teaching practices ($r = .712, p < .01$). The results suggested that knowledge of formative assessment positively contributes to the teaching practices of teacher educators. The research by Cauley and McMillian (2010) indicated that teacher

educators' assessment knowledge is associated with their classroom assessment practices. Similarly, the results supported the study of Bell and Ford (2007) where it was revealed that teachers' knowledge of formative and summative assessment has a strong impact on their teaching practices. Therefore, the current study's result was consistent with the above-mentioned studies. The results of this study confirmed that the more knowledge teacher educators have about formative assessment, the more they use it in the classroom.

Suggestions

Myanmar has changed the school curriculum according to grade level to achieve higher education standards today. Such reforms include the curricula of education degree colleges. As the curriculums change in EDC, it is found that the forms of assessment have also changed. Therefore, teacher educators of education degree colleges must know and master various forms of assessment. Teacher educators may have difficulties in using new forms of formative assessment. To resolve the difficulties that teacher educators face, the following recommendations are made.

1. Teacher educators do not have enough in-service training in formative assessment throughout their professional careers. Therefore, it is recommended that a series of workshops with the help of the Department of Teacher Education be arranged to enhance the knowledge and skills of teacher educators in formative assessment.
2. Teacher educators do not have enough resources to use formative assessment. Therefore, it is recommended that the administrators need to support resources.
3. Teacher educators did not properly establish the standards and criteria for formative assessment. Therefore, it is recommended that along with in-service training and workshops, they may also be designed for teacher educators on criteria and standards of formative assessment.
4. Teacher educators did not have enough time and space for formative assessment. Therefore, it is recommended that it is necessary to provide teacher educators and prospective teachers with sufficient time and space in their classrooms.
5. It is necessary to have an appropriate teacher-student ratio to be effective in formative assessment.

Conclusion

In today's educational reforms, formative assessment plays an important role. As the formative assessment is a continuous process, teachers are the main ones who have to continuously assess the student's performance throughout the year. Therefore, the knowledge and skills of teachers to conduct formative assessment techniques are particularly important. Teachers' knowledge, skills, and attitudes toward formative assessment affect teaching practices. Therefore, teachers must continuously improve their knowledge and skills of formative assessment. Moreover, teacher educators should be able to apply their knowledge of formative assessment to practice, no matter how difficult it may be. In addition, administrators also need to support teacher educators with the resources they need to conduct formative assessment activities. In addition to this, teacher educators should learn from books, documents, and online resources, although they have not been given training about formative assessment. In summary, formative assessment is important throughout students' learning process and should be given

attention by administrators, including teacher educators. In conclusion, this study is intended for teacher educators, administrators, and teachers of primary, secondary, and university to know about formative assessment thoroughly. And it hopes to gain knowledge that can be applied in the future.

Acknowledgments

We would like to express our respectful thanks to Dr. Myat Myat Thaw (Rector, Sagaing University of Education), Dr. Khin Hnin Yee (Pro-Rector, Sagaing University of Education), and Dr. Cho Kyi Than (Pro-Rector, Sagaing University of Education), who permit us to undertake this research. Then, our genuine respect and special thanks go to our supervisor, Dr. Soe Than, Professor Emeritus and Head of the Curriculum and Methodology Department, Sagaing University of Education, for his valuable advice and skillful guidance, attention to detail, and willingness to spend hours of working with us to shape our research and focus our writing throughout the study.

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