

**A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON  
STUDENTS' ACADEMIC ACHIEVEMENT IN MYANMAR**

By

**KAUNG, Pyae Pyae**

**THESIS**

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

**MASTER OF PUBLIC MANAGEMENT**

**2020**

**A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON  
STUDENTS' ACADEMIC ACHIEVEMENT IN MYANMAR**

By

**KAUNG, Pyae Pyae**

**THESIS**

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

**MASTER OF PUBLIC MANAGEMENT**

**2020**

Professor Liu, Cheol

**A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES  
ON STUDENTS' ACADEMIC ACHIEVEMENT IN MYANMAR**

By

**KAUNG, Pyae Pyae**

**THESIS**

Submitted to

KDI School of Public Policy and Management

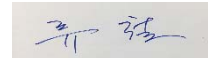
In Partial Fulfillment of the Requirements

For the Degree of

**MASTER OF PUBLIC MANAGEMENT**

Committee in charge:

Professor Liu, Cheol, Supervisor



Professor Cho, Yoon Cheong



Approval as of May, 2020

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT  
ACHIEVEMENT IN MYANMAR

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT  
ACHIEVEMENT IN MYANMAR

Table of Contents

I. Introduction.....	2
II. Literature Review .....	6
2.1 Reflective Teaching Practice and its benefits in Teacher Education.....	6
2.2 Strategies for Reflective Teaching for in-service teachers .....	9
2.2.1 Reflective Journal Writing.....	10
2.2.2 Peer Observation.....	11
2.2.3 Using Students' Feedback for Reflective Teaching .....	11
2.3 The Effectiveness of Reflective Teaching on Students' Academic Achievement.....	12
2.3.1 Academic Achievement and Competencies Needed to Attain it.....	12
2.3.2 Studies of the Effects of Reflective Teaching Practices on Student Academic Achievement .	13
II. Theoretical Foundation .....	15
3.1 Dewey's Theory on Experience and Reflective Thought and Action.....	15
3.2 Schon's Approach to Reflection.....	17
3.3 Bloom's Taxonomy of Learning.....	18
IV. Hypotheses Development .....	18
V. Methodology .....	20
VI. Data Analysis .....	21
6.1 Demographics .....	21
6.2 Hypotheses Testing .....	22
6.3 Findings .....	29
6.4 Additional Findings .....	31
VII. Conclusion .....	32
7.1 Summary .....	32

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT  
ACHIEVEMENT IN MYANMAR

7.2 Policy Implication .....	34
7.3 Future Research and Limitation .....	35
Reference .....	35
Appendix A. Survey Questionnaire .....	41

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT  
ACHIEVEMENT IN MYANMAR

List of Tables

Table 1. Demographic Variables.....	22
Table 4. Effects of Teachers' Reflective Teaching Practices (RTP) on Students' Academic Achievement.....	23
Table 3. Effects of Teachers' Reflective Teaching Practices (RTP) on Students' Cognitive Competencies.....	24
Table 4. Effects of Teachers' Reflective Teaching Practices (RTP) on Students' Affective Competencies.....	25
Table 5. Effects of Teachers' Reflective Teaching Practices (RTP) on Students' Affective Competencies.....	26
Table 6. Summary of Hypothesis Testing Results .....	27
Table 7. Component Matrix: Teachers' Reflective Teaching Practices .....	28
Table 8. Component Matrix: Students' Academic Competencies for Academic Achievement.....	28
Table 9. Component Matrix: Students' Academic Achievement.....	29

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT  
ACHIEVEMENT IN MYANMAR

List of Figures

Figure 1. Dewey's model of reflective thought and action.....15

Figure 2: Schon's Model of Reflection.....17

Figure 3. Model of Teachers' Reflective Teaching Practices on Students' Academic Achievement. 19



A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT  
ACHIEVEMENT IN MYANMAR

**Abstract**

**Teachers' Reflective Teaching Practices on Students' Academic Achievement**

**By**

**Kaung, Pyae Pyae**

Recently, the quality of government schools is questioned and criticized due to evidences on students' academic achievement data. According to the current educational transformations in Myanmar, teachers' capacity building and in-service professional development became prioritized areas to develop for students' quality education. However, the existence of various developmental constraints makes the system to find out the suitable method for teachers' in-service professional development. Reflective teaching has been regarded as a valuable, convenient and effective practice for in-service teachers. In this regard, it is needed to explore which reflective teaching practices are useful for teachers in current practice and ultimately improve students' academic achievement and learning. To give implications to policy makers in education field for in-service professional development of the teachers in Myanmar, this study investigated the reflective teaching practices which have effects on students' academic achievement and therefore can be advantageous for the teachers by applying them in classroom context. This study set up the model and conducted a survey to verify the model. Regression analysis was carried out to find out the effective reflective practices. The findings presented reflective teaching practices of teachers currently in practice which have positive impacts on students' academic achievement and observable academic competencies. Policy implications have been provided based on the research results, for further development and nurturing teachers' reflective teaching and also some recommendations for future research limitations to improve.

Key words: Reflective Teaching Practices, Academic Achievement, Academic Competencies, In-service Professional Development

# A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

## **I. Introduction**

According to United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015), the adult literacy rate (15-24 years) in Myanmar has declined in recent years, from approximately 90 percent in 2014 to 84 percent in 2016, while during the same period the net enrolment ratio has increased from, 48.72% in 2014 to 56.32% in 2016. This inversely related rate of literacy and enrolment ratio suggests that the Myanmar schooling system may be failing to provide quality education to the students. The main aim of every educational activity to enhance students' development and for them to become valuable and useful persons in society. For this process to succeed, schools must create a learning context that will prepare the students for a better future in real life.

The overall goal of the current education reforms in Myanmar is student achievement through quality teaching and learning. This is to be achieved through various channels such as equitable, inclusive and quality access to education, a new curriculum and an improved examination system in the area of basic education. Therefore, in this journey towards education reform and further steps for a better education system, we need to identify the most important factors which are necessary for student achievement.

For measuring the outcomes of schooling, students' academic achievement is one of the most important tangible variables and so it is justly regarded as a major aim of education in the world. (Rastogi, 2012). Every education system goal involves scholastic success as one of the competencies of students to attain and every educator constantly endeavors to find the reasons that cause variation in students' academic performance.

At the center of any education reforms, teachers are the ultimate implementors of educational policies and so clearly have a direct profound influence on students. The National Education Law (2014) states that "a motivated quality teaching workforce" is essential for education in Myanmar because

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

teachers' teaching practices is the single most important factor for students' desirable learning outcomes so the design of in-service professional development should be emphasized on its quality and suitability. (National Education Strategic Plan, 2016-2021).

Various teacher-related factors increased student achievement. They are teachers' cognitive ability, subject matter knowledge, knowledge of teaching and learning, professional training, and teaching behaviors in the classroom (Fong-Yee & Normore, 2013). Among these various factors, Rivkin, Hanushek, and Kain (1998) point out that teacher quality makes the most significant difference in student academic achievement when compared to other factors such as class size, and subjects, students' socio-economic background and home environment. King and Newman (2000) claim, teachers' capacity, knowledge and dispositions should be in first priority because teachers have the direct contact and major influence over students in their learning process and learning environment, thus it is needless to say they are human resources to nurture for students' academic achievement. This implies that we need to put more emphasis on teacher learning in order to improve their skills in teaching and ultimately student outcomes.

Learning to teach is a difficult task and, one needs the set of skills and dispositions enhanced by both education and experience. While teachers can learn through experience, experience alone does not necessarily enhance professional growth. The 'routine demands of teaching' such as paperwork, and other activities in the daily classroom situation and in the school can make teachers unable to 'achieve a higher level of awareness of how they teach' (Richards, 1995). To avoid this, the teachers need to develop the habit of constant evaluation of their capacity and use this metacognition skill for their further professional development (K. G., 2018).

To become an effective teacher, one must be 'a good observer, an effective communicator, and expert in subject matter' and develop his or her professional skills based on the combination of factual and theoretical knowledge, personal experiences and preferences (Cephe, 2009). Therefore, teachers are

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

encouraged to know not only the scientific knowledge of how to teach but also to have the practices which is considered as effective for their students. To achieve this very end, the teachers must be capable to solve the issues in the teaching and learning situations by examining critically and analytically from different perspectives and reach to a rational decision, not by plain guessing, random suggestions and generally accepted solutions (K. G., 2018).

Teacher education is a prioritized area and of critical importance for current education reforms in Myanmar. Looking at the history of teacher education in Myanmar, teacher education has traditionally emphasized on transfer of factual knowledge. The pedagogic practices used by Myanmar teachers especially in basic education area are somewhat limited. Therefore, the nature of teacher education in Myanmar may negatively affects the students' critical thinking and learning skills with much use of "closed questions, cued elicitations, and choral responses (Hardman, Aung & Myint, 2012, p. 9)."

To address these issues, and as part of the education reforms, the Teacher Competency Standards Framework (TCSF) was developed in 2016. The framework has four pillars for the necessary capacities of a teacher which are 'professional knowledge and understanding, professional skills and practice, professional values and dispositions, and professional growth (Aye Aye Myint, 2016, ).'

To implement this framework, current programs or training for in-service teachers' professional development have so far proven largely insufficient as they are mainly imparting knowledge about how to teach the content of the textbooks rather than solving the instructional problems in the classrooms. This approach lacks continuity, teacher engagement, and practicability. It is reported that teacher training type in Myanmar context is what frequently found type in developing countries with limited resources. The training courses are conducted in short period of time with randomly selected teachers from schools who has to teach his or her colleagues back in their schools and as a result, the information distributed is not fully delivered to all teachers (Hardman, Aung & Myint, 2012) which leads to deficiency in teachers' capacity and subsequently to student learning.

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

The new curriculum introduced to Myanmar education system centered at a sequential practice which is 'learn, apply and reflect' for teachers. It has been recommended that reflective practice should be incorporated into teacher education to allow the teacher to better integrate theoretical knowledge into the daily practice of decision-making in the classroom (Hardman, Aung & Myint, 2012). So, Myanmar classrooms need reflective teachers who are committed to their professional development. They should examine, frame, and attempt to solve the dilemmas of classroom practice, are aware of and questions the assumptions and values he or she brings to teaching, and are attentive to the institutional and cultural contexts in which he or she teaches (Zeichner & Liston, 2013).

Student learn best when they have effective teachers. According to Kheirzadeh & Sistani (2018), reflective teaching has paramount importance in developing novice teachers into effective teachers. Their study pointed out that students taught by effective teachers are more likely to have better learning outcomes. Although it is commonly claimed that reflective teaching supports student academic achievement, there is no precise research about how reflective teaching practices affects the students' academic achievement, especially in the Myanmar Education context.

Therefore, this study is intended to give suggestions and some evidence regarding the effectiveness of-reflective teaching for student learning so that the policymakers can consider how to best incorporate this practice in schools.

This paper will investigate the effects of reflective teaching practices on student academic achievement in Myanmar. The purpose is to suggest policy implications for decision-makers and program developers for in-service teachers' training and education. It will do this by exploring to what extent reflective teaching practices of teachers in Myanmar affect academic skills in three competency areas (cognitive, affective and behavioral) of the students and so influence academic achievement.

This study proposes the following research questions:

1. How do teachers' reflective teaching practices affect academic achievement of the students?

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

2. How do teachers' reflective teaching practices affect cognitive competencies for the academic achievement of the students?
3. How do teachers' reflective teaching practices affect affective competencies for the academic achievement of the students?
4. How do teachers' reflective teaching practices affect behavioral competencies for the academic achievement of the students?

### II. Literature Review

#### 2.1 Reflective Teaching Practice and its benefits in Teacher Education

Reflective Teaching Practices (RTP) facilitate the process of teaching and learning by engaging the learners in a thoughtful process of examining their own experiences in practical performance. It is the process of self-examination of the educators who want to be effective in their profession. These practices applied in teaching are intended for teachers to become lifelong, self-regulated and self-motivated learning professionals, who question about presumptions and daily activities accepted traditionally. In the long run, these practices are found to be disadvantageous for teaching process and in the professional life of the teacher (Shandomo, n.d.). RTP is a process in which teachers reflect over their instructional practices by analyzing their teaching styles, methods and student's learning and outcomes, constraints and mistakes so that they can find better and improved practices in the future. This is done by researching the activities in the classroom, critically observing and evaluating the acquired information of the students' and the teachers' themselves. This process includes analyzing and identifying what practices and underlying presumptions of the teachers in their instructional performance in the classroom need improvement (Mathew, Mathew, Prince, & Peechattu, 2017).

Another researcher defined Reflective Teaching Practice (RTP) as 'an inquiry-based approach to teaching that involves critical thinking and a personal commitment to continuous learning and improvement (York-Barr et al., 2006).' Ideally, all teachers should be lifelong learners engaged in this

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

continuous learning process who become better at teaching over time (Zeichner & Liston, 2013). As teachers devote more time and effort in critical analysis of their teaching and student's learning, it resulted in self-realization of how they grow as a teacher.

Frequently, in-service teachers report the professional knowledge they acquired at pre-service teacher training does not help solve the problems in their daily life as classroom teachers. Due to this fact, many prefer to focus on developing practical techniques skills which they feel will help them in the classroom context. It is clear that any in-service professional development needs to address these issues. Darling-Hammond, Hyler & Gardner (2017) note that it is 'focuses on content, incorporates active learning, supports collaboration, uses models of effective practice, provides coaching and expert supports, is of sustained duration' that in-service teachers prefer to have in their professional development programs. These skills are essential components of reflective teaching as it is focused on day-to-day instructional processes in the classroom.

Reflective teaching is essential to in-service teacher education because it helps the in-service teachers to become reflective practitioners and masters at teaching because teachers learn by practicing to see what works and what is not working for their students. They learn from strengths and weaknesses of other teachers, their students and themselves, then prepare better practices for their next actions in classrooms. It is clear that teachers can learn through reflection and gain expertise in teaching by practicing reflective teaching. Therefore, it is essential to allow the in-service teachers to enhance, what could be referred to as reflection or mindfulness in teaching (Applegate, 1981).

Braun and Crumpler (2004) illustrate the idea of Schon (1983, 1987) that the experienced teachers without reflection as the ones who remained at the same level with novice teachers. The necessary capacities of a professional teacher cannot be taken technically and it requires lots of teachers' intuition, creativity and flexibility which are acquired through reflection of their actions. Teachers without reflective practices cannot guarantee for the success of desirable aims of teaching and learning

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

and for that reason, they became technicians, not professionals in teaching. This results from their inability of taking responsibility for their actions in the classroom as they are unreflective of the outcomes of their decisions.

Yoon and Shapley (2007, p. 4) explained how teacher development by reflective teaching affects students' academic achievement. They explain that effectiveness of professional development largely depends on how teachers apply the knowledge and skills in the classrooms. This research indicates that it is the way the teachers utilize the “content knowledge and pedagogical skills” that they acquire from training programs results in students' achievement.

This research highlights the importance of how we design effective professional development activities for in-service teachers and the role of reflective practice in this. It indicates that the teachers need practical teaching skills and only in that way can the students achieve the intended learning outcomes. To improve the teachers' quality in these aspects, the prioritized task for educators is improving the teaching abilities of the teachers. This can be done by connecting the professional development of the teachers with the clinical experience of the teachers and this ultimately will have an inevitable positive effect on students' achievement (Yoon & Shapley, 2007).

Disu (2017) found out how reflective teaching enables the teachers to become effective teachers. The researcher presented that teachers use reflective teaching to observe for evaluating students' learning improvement, finding more effective teaching methods, and try innovative approach for achieving new insights on classroom instruction. Therefore, it supports teaching effectiveness and improve students' learning.

The main purpose of reflective teaching is to help the teachers to become more effective teachers by engaging them in the critical evaluation of their teaching behaviors, which is field experience of teaching. It can create a space for teachers where their actual teaching behaviors can be observed, measured, and analyzed the learning outcomes they produce. Reflective teaching enables the teacher



## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

researchers to identify the effective teaching manners and what causes them with the evidences of what he or she did in teaching. With the careful examination of the scenarios in the real-life classroom, it provides a more precise decision of the effectiveness of teaching. In many cases, it also strengthens the retention of the teachers, (Cruickshank,1985). From his claims, we can see that reflective teaching builds a connection between personal and professional experiences, between theory and practice by linking concrete events with informed pedagogical decisions, teachers' satisfaction for their profession.

Gradually applying reflective practices, teachers gain control over their teaching and a better understanding of their stance own personal philosophy of teaching. This belief or confidence is called self-efficacy and it is related to a higher level of teachers' job satisfaction by building positive and better interpersonal relationships with the learners (Korthagen and Wubbles, 1991).

Noormohammadi (2014) also declared that reflective teaching increases teachers' job satisfaction this in turn improves teachers' skills for possessing autonomy and being independent. There is a strong relation between teacher reflective practice, teacher self-efficacy, and autonomy which are the critical driven forces for improving teachers' competencies for students' learning.

Therefore, applying reflection in teaching enhances teachers' professional skills, inquiry skills, integrating theories and practice, consciousness in teaching therefore leading to improved change, developing informed action as opposed to routine action (Çimer & Odaba, n.d.).

### **2.2 Strategies for Reflective Teaching for in-service teachers**

Different Strategies for reflective practices are presented by many scholars. Impetigo and Malik (2016) proposes that teachers can reflect in different ways such as reflective journal, videotaped lesson/peer conference, students' input, and lesson evaluations. This includes teachers' research on his or her own classroom context, giving room for feelings and building relations, recording on any significant events regularly, discussing about students learning with peers and other stakeholders in learning community, and study for professional development such as updates in local and global education field,

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

empirical literature of education, attending workshops and conferences. As digital learning becomes prominent in teachers' professional development in this 21st century, using technology can get access to various resources to learners and it is widely used by the teachers for improving their knowledge and skills. As people can get access to any learning resources, the teachers tend to do more self-study for their professional development. As a consequence, it changes teachers' pedagogical repertoire, values, dispositions, and assumptions about education generally.

### **2.2.4 Reflective Journal Writing**

Journal writing serves teachers as a reflective tool that keeps 'a regular account of learning or teaching experiences, recording reflections on what the participant did as well as straightforward descriptions of events, which may be used as a basis for later reflection (Richards, 1995, p. 4).'

A study of the reflective journals for the development of teachers' leadership and teaching skills by Göker (2016) expressed that teachers can use journal writing as a learning tool to critically examine their practices and thus bring awareness what they are good at and what they need to improve. By doing so, they can apply suitable teaching methods and helps them to find out their own teaching styles and thus obtain better solutions for the issues that they encountered in teaching when theories they have learned cannot give an answer to them.

Farrah (2012) presented the features of reflective journals based on a study of the Learning Centre, The University of New South Wales in 2008. The reflective journals include personal thoughts and reactions to experiences, new knowledge, emotional experiences. It can help the writer to develop his or her learning, increase metacognitive knowledge for self-improvement and gain a vivid understanding his or her capacity and provides an opportunity for meaningful way of self-study. For teachers, they can summarize in a freestyle in the reflective journal with 'existing issues that occur in the classroom, thoughts on a lesson, proof of progress from the students, ideas for what you will do next year, materials

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

you may need to make a lesson better ... (ASCD in-service, 2018).' Journal writing is the easiest way among reflective methods in teaching because it is purely personal and cost-effective.

### **2.2.2. Peer Observation**

Peer observation consists of teachers' observation on their partners' practices, and learning from them. This is intended for self-improvement and fulfilling the needs of individual teachers. As a consequence, they can get the chance to build good relationships with other teachers and learn faster from their actions and valuable non-judgmental suggestions. (Victoria & Education and Training, 2018). It is a useful way to reflect on one's teaching by watching another teacher teach. Watching others' teaching can help teachers to observe the way how other teachers deliver the lessons and gain insights to determine ones' teaching methods and style (Richards, 1995). It changes teachers' teaching practice by sharing experiences with others. It can enrich collaboration, mutual trust, and respect which leads to increased student learning (Victoria & Department of Education and Training, 2018). Teachers said that peer observation can inform specific and detailed explanation of student behaviors, different information on students' interaction during instruction, more information on a variety of new teaching techniques, and better collegial relationships with other teachers (Richards, 1995).

The procedure for peer observation includes four steps. First of all, the observation should be reciprocal. There should be partners for teachers who will observe each other's classes. Second, teachers should discuss the procedure and situations of observation such as the context of the classroom, the nature of learning content, teachers' teaching approaches, and any expected issues. Third, the observation process comes and the teachers will visit his or her partners' classroom. Fourth, there should be a discussion and giving critical comments to each other (Richard & Lockhart, 1991 as cited in Richards, 1995).

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

### **2.2.3 Using Students' Feedback for Reflective Teaching**

Teaching process became active when teachers collect students' opinions and thoughts. At the time of teachers giving attention to students, they are building rapport with them (Iqbal, Ramzan & Arain, 2016). To collect students' feedback, the teachers can use four different ways – interview with the students, learning logs, students' observation schedules and survey of students' and teachers' perceptions (Hoban & Hastings, 2006). From the findings of this study, interview with the students is the most effective method among the techniques of reflection.

Students' comments include their classroom experiences with teachers' instruction and their learning styles. To understand the complex nature teaching and learning, the flexible conditions for the convenience of the students should be included in their instruction by teachers from assessing students' classroom experiences. This will contribute to stronger and better relationships between students and teachers. It is also mentioned that if the teachers ask for students' feedback on teaching and learning, both parties will engage in the process of learning and this has effects not only on their learning but also their emotional relations (Hoban & Hastings, 2006).

### **2.3 The Effectiveness of Reflective Teaching on Students' Academic Achievement**

#### **2.3.1 Academic Achievement and Competencies Needed to Attain it**

Crow and Crow (1969), define academic achievement as 'the extent to which a learner is profiting from instructions in a given area of learning i.e., the achievement is reflected by the extent to which skill or knowledge has been imparted to him.' Therefore, Ickovics et al. (2014) express that academic achievement pertains to the demonstration of knowledge or learning through scores on tests. Students' academic achievement is the outcome measure of student academic performance.

DiPerna and Elliott (1999) define academic achievement is as being related to a set of academic competency skills including 'academic skills, interpersonal skills, academic motivation, academic self-

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

concept and study skills.' This set of skills reflects the skills, attitudes, and behaviors needed for the academic achievement of the students. Academic competence skills contain the standards of the students' achievement described in the curriculum at a certain grade or level. Study skills are skills that facilitate the students' learning (e.g. prepares for tests, take notes, keeps desk organized) and they are generally regarded as necessary skills for learning new material (Gettinger & Knopik, 1987). Academic motivation refers to 'a students' approach, persistence, and level of interest regarding academic subjects' and it has a strong relation to academic test scores. Interpersonal skills include 'the communication and cooperation behaviors necessary to interact with peers and adults.' Wentzel (1993) found that academic self-concept has a direct influence on students' grades and scores. Academic self-concept is 'a students' perception of self-efficacy in academic subjects.' It also has a direct link to achievement outcomes.

### **2.3.2 Studies of the Effects of Reflective Teaching Practices on Student Academic Achievement**

Reflective teaching aims at the effectiveness of teaching and students' learning improvement (McAlpine, Weston, Berthiaume, Fairbank-Roch, & Owen, 2004) by comprising reflective teaching into two phases. Firstly, effectiveness of teaching for students' learning is evaluated for the action of advancing teachers' instruction. This is followed by making decisions and setting goals for improvement of students' learning which is directed at enhancing the progress of students' learning and thus changing the structure of teachers' instruction if it is necessary.

Mathew (2012) argues that the main purpose of reflective teaching is to create conducive and meaningful learning environments for students. In this aspect, reflective teaching gives rooms for teachers' professional growth and innovative teaching practices. He asserts that reflective teaching generates the self-awareness of teachers in their teaching process that rather than teaching, making students to be self-directed learners who have accountability and commitment. This process is the most difficult yet it is most advantageous thing for the students. For doing so, the classroom issues and teachers' pedagogical skills are necessary to be evaluated and reflected rationally and honestly.

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

The reflective process undertaken in the classroom by the teachers with a curiosity regarding their actions and consequences can have a considerable impact on teaching and learning that is, the context created for the learners in the schools as a bridge to gain the necessary competencies for their future. The focus has been on teachers. Being a self-empowering process for their professional development, the reflective practice changes teachers' attitudes, perceptions, emotions and feelings that push them to perform various activities for students' engagement and motivation for learning, the must-be condition for student achievement.

Mathew (2012) identifies the effectiveness of reflective teaching for students' academic achievement in English Language Teaching. It is said that teachers can make a connection with low academic achievers and can motivate them to learn and improve on their weaknesses. By incorporating an honest critical examination of teaching, the teachers can implement the true purpose of teaching activity which engages the learners to achieve the intended learning outcomes that lead to learning achievement.

Posthuma (2012) conducted qualitative research to enquire about the effectiveness of three levels of reflective practice in mathematics teaching, namely, 'recall, rationalization and reflective'. In this research study, the researcher found out that those teachers who engage in these three levels of reflective practice promote students' learning of mathematics.

Blazar (2015) and Akiba & Liang (2016) also highlighted the effectiveness of reflective teaching practice on student academic achievement. This study revealed that teachers who make an inquiry into their teaching practices, engage in collaboration and communication with their colleagues and research-based activities are capable of increasing students' achievement. The activities which are focused on field experience of teaching, in other words, in-classroom contexts have positively related to increased students' achievement.

Another study showed that teachers who perform continuous assessment into their students and pay attention to the weaknesses of the students improve individualized learning by reflecting on their

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

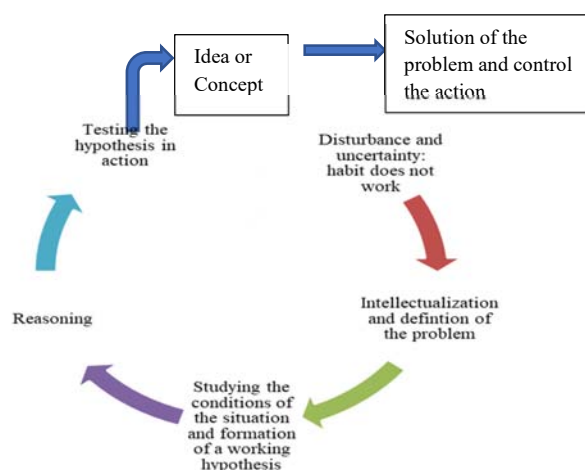
classroom practices (Kimani, Kara, & Njagi, 2013). Teachers' group work, conversations, and learning activities focused on classroom-contextualized practices such as collective teacher reflection can be accounted for teachers' learning and lead to students' academic achievement (Horn & Little, 2010; Meissel & Timperley, 2016; Akiba & Liang, 2016). In other words, those teachers' specific actions and behaviors of reflection for communicating his critical examination of teaching to the learning of the students can make students be able to achieve in their academic endeavors.

These mentioned empirical pieces of evidence indicated that the teachers' capability to enable students' academic achievement is not concerned with the teachers' degree or qualification, one-time training courses or workshops and years of teaching experiences. It is the continuous reflective teaching practices that have a compelling impact on student academic achievement.

### III. Theoretical Framework

#### 3.1 Dewey's Theory on Experience and Reflective Thought and Action (Miettinen, 2000)

In Dewey's Theory of reflection, it is explained that people form habits or routine actions to adapt and adjust to the environment. If there are conditions when routine actions do not work, a problem or a crisis appears. If this happens, people engage in the reflective process and find solutions or answers to these problematic situations. The stages in Dewey's reflective process are as follows.



**Figure 1. Dewey's model of reflective thought and action**

Source: Miettinen, 2000

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

### *Stage 1: Disturbance and Uncertainty (habit does not work)*

This stage is a necessary precondition of reflection to occur. When a routine action does not work due to the emergence of disturbances, we cannot predict the results. This situation makes the professionals brainstorm every possible solution to achieve the desirable results in terms of given situations.

### *Stage 2: Intellectualization and definition of the problem*

This stage is started with the examination of the obstacles in the context. Then, the problems are identified by the actors with a perceived level of difficulty.

### *Stage 3: Studying the conditions of the situation and the formation of a working hypothesis*

In this stage, the actor diagnoses the circumstances, ways and means of the problem to be solved. A thorough analysis of the problem is operated to propose a possible solution or a working hypothesis.

### *Stage 4: Reasoning*

During this stage, the actor examines the rationality and logical consequences of the ideas to evaluate the reliability of the proposed hypothesis which is called thought experiments. These thought experiments lead the actor the possibility of the success of the practical implementation of the working hypothesis.

### *Stage 5: Testing the hypothesis in action*

This is the stage of practical testing of the hypothesis in material activity makes it possible to conclude its validity. It is the process of testing the practical usefulness of the hypothesis and refining it in line with the available resources and requirements and predicts the after affects the actions.



# A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

## 3.2 Schon's Approach to Reflection (1983)

Schon (1983) explains the relationship between theory and practice (Quinn and Hughes, 2007 as cited in Wain, 2017). He explains two types of reflection, reflection-in-action (thinking during the action) and reflection-on-action (thinking after-action). Reflection-in-action refers to the process of observing thoughts and actions as they occur to make adjustments at the moment. It takes place during the process of teaching, which is the tacit knowledge of the teachers which the teachers apply in teaching practice. He argues that the technical rationality of the teachers fails to represent teachers' creativity. It is obvious that rather than following a set of procedures, the job of a professional is to combine practical experiences and intuition of their own.

Reflection-on-action occurs after teaching. It is the process of looking back and learning from experiences to affect future action. In this type of reflection, teachers need to 'consciously to review, describe, analyze and evaluate their past practice to gain insight to improve future practice. With reflection-in-action, professionals are seen as examining their experiences and responses as they occur (Finlay, 2008).'



**Figure 2: Schon's Model of Reflection**

Source: Wain, 2017

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

### 3.3 Bloom's Taxonomy of Learning (1956)

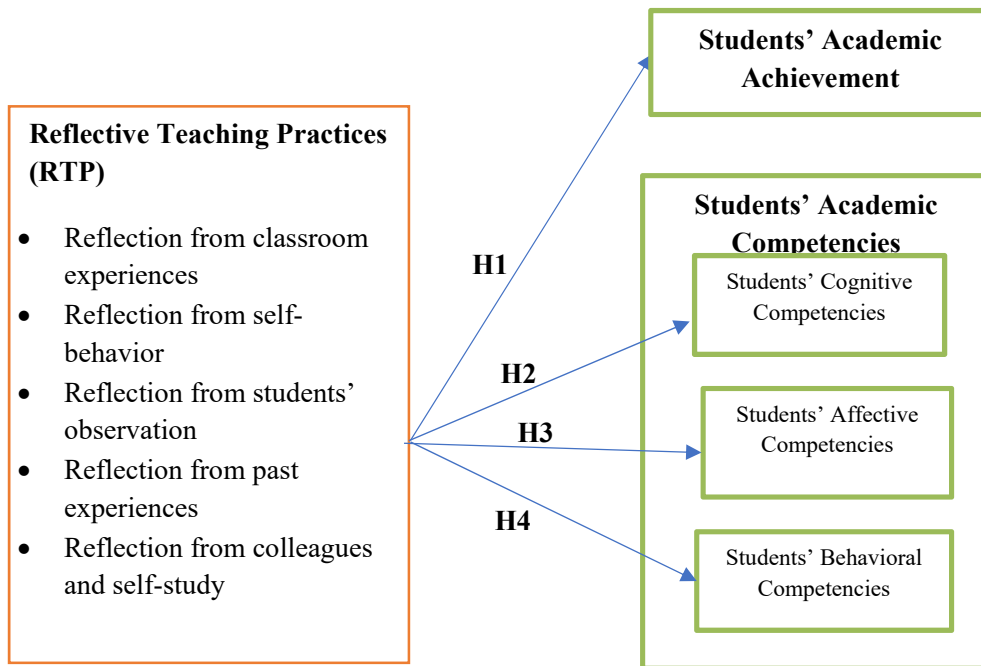
Learning is not an event but it is a process of gaining a set of skills, attitudes, and behaviors necessary to make changes and development patterns in our brain (Hoque, 2017). Bloom's Taxonomy of learning includes three domains which are cognitive (knowledge), affective (attitudes) and psychomotor (behavioral). The first domain which is called the cognitive domain includes six dimensions which are 'knowledge, comprehension, application, analysis, synthesis, and evaluation.' This domain is concerned with the development of skills required for knowledge acquisition. The second domain consists of five dimensions named as affective domain contains six dimensions of attitudes necessary for learning. They are 'receiving, responding, valuing, organization and characterization.' The third domain is associated with natural and autonomic behaviors necessary for learning which is comprised of five dimensions which are 'imitation, manipulation, precision, articulation and naturalization, Dave (1975).' To summarize, learning can be differentiated into three perspectives, cognitive, affective and behavioral.

### IV. Hypothesis Development

The hypotheses in this paper are developed based on the review of the previous studies concerning the reflective teaching practices of the in-service teachers and foundational theories. The teachers' reflective teaching practices are categorized into five groups – *reflection from classroom experiences, reflection on self-behavior, reflection from students' observation, reflection from past experiences and reflection from colleagues and self-study*. So, this study finds out the effects of teachers' reflective teaching practices on students' academic achievement.

Previous researchers described that students' academic achievement is determined by the students' academic competency skills. Therefore, this study also observes effects of reflective teaching practices of teachers on students' academic competencies. These academic competency skills are grouped into three – cognitive, affective and behavioral factors.

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR



**Figure 3. Model of Teachers' Reflective Teaching Practices on Students' Academic Achievement**

- H1a. Teachers' reflection from classroom experiences on students' academic achievement
- H1b. Teachers' reflection from self-behavior on students' academic achievement
- H1c. Teachers' reflection from students' observation on students' academic achievement
- H1d. Teachers' reflection from past experiences on students' academic achievement
- H1e. Teachers' reflection from colleagues and self-study on students' academic achievement
- H2a. Teachers' reflection from classroom experiences on students' cognitive competencies for academic achievement
- H2b. Teachers' reflection from self-behavior on students' cognitive competencies for academic achievement
- H2c. Teachers' reflection from students' observation on students' cognitive competencies for academic achievement
- H2d. Teachers' reflection from past experiences on students' cognitive competencies for academic achievement

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

- H2e. Teachers' reflection from colleagues and self-study on students' cognitive competencies for academic achievement
- H3a. Teachers' reflection from classroom experiences on students' affective competencies for academic achievement
- H3b. Teachers' reflection from self-behavior on students' affective competencies for academic achievement
- H3c. Teachers' reflection from students' observation students' affective competencies for academic achievement
- H3d. Teachers' reflection from past experiences on students' affective competencies for academic achievement
- H3e. Teachers' reflection from colleagues and self-study on students' affective competencies for academic achievement
- H4a. Teachers' reflection from classroom experiences on students' behavioral competencies for academic achievement
- H4b. Teachers' reflection from self-behavior on students' behavioral competencies for academic achievement
- H4c. Teachers' reflection from students' observation on students' behavioral competencies for academic achievement
- H4d. Teachers' reflection from past experiences on students' students' behavioral competencies for academic achievement
- H4e. Teachers' reflection from colleagues and self-study on students' behavioral competencies for academic achievement

### **V. Methodology**

This study analyzes the effects of reflective teaching practices on students' academic achievement. For this purpose, teachers' perceptions on their application of reflective teaching practices

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

and its effects on students' academic achievement and their students' observable academic competency skills are needed to be investigated. Hence, this study applied the survey method as survey is one of the most effective ways to collect data about the perceptions.

This study conducted both online and offline channels for collecting the teachers' perceptions of their application of reflective teaching practices, students' academic competency skills and students' academic achievement. For the online channel of data collection, Qualtrics, an online platform was used to create and distribute the questionnaire. The offline data collection was done through the mail. The survey was conducted in Myanmar in 2019. The questionnaire was distributed to 258 school teachers in Myanmar via SNS and mail to their schools and 141 respondents completed the survey; the response rate is 54.65 %.

The questionnaire consisted of 38 questions about the teachers' perceptions of their reflective teaching practices that were expected to have effects on students' academic competency skills and on students' academic achievement and demographic data. The questionnaire was divided into five parts; warm-up questions, teachers' reflective teaching practices, students' academic competency skills, students' academic achievement, and demographic questions. The respondents were asked to answer the level of the students, the subjects that they are teaching, and their level of education in part 1. Part 2 to 4 were composed of the questions on teachers' perceptions of their reflective teaching practices, students' academic competency skills and students' academic achievement. The last part of the survey consisted of demographic questions such as gender and age.

This survey adopted a 5-point Likert scale which ranges from 'strongly disagree' to 'strongly agree' for the teachers' perceptions of their practices for reflection, the progress of their students' academic competency skills and academic achievement.

### **VI. Data Analysis**

#### **6.1 Demographics**

Among the 141 respondents, 10.34% are male teachers and 89.66% are female teachers. The respondents' age distributes as 2.76% are <20 years old, 20.69% are 21-25 years old, 37.24% are 26-30 years old, 13.10% are 31-35 years old, 10.34% are 36-40 years old and 15.86 % are <40 years old. With

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

regards to teachers' level of education, 33.55% received teachers' training certificates, 38.83% received B.Ed. (Bachelor of Education), 19.08% received M.Ed. (Master of Education) and 8.55% received other degrees including B.A (Bachelor of Arts) and B.Sc. (Bachelor of Science). Regarding school data, 17.24% are primary teachers, 24.83% are lower secondary teachers and 57.93% are upper secondary teachers. Concerning the academic subjects, 45.24% are language teachers, 20.24% are mathematics teachers, 25.60% are science teachers, and 8.93% teach co-curricular subjects. 42.76% of the respondents are working in urban areas and 57.2% in rural areas. All of the teachers are public school teachers.

**Table 1. Demographic Variables**

Variables		Percentage
Gender	Male	10.34%
	Female	89.66%
Age	<20 years old	2.76%
	21-25 years old	20.69%
	26-30 years old	37.24%
	31-35 years old	13.10%
	36-40 years old	10.34%
	<40 years old	15.86 %
Level of Education	Teaching Certificate	33.55%
	B.Ed.	38.83%
	M.Ed.	19.08%
	Other Degree (B.A and B.Sc.)	8.55%
Level of Position	Primary	17.24%
	Lower Secondary	24.83%
	Upper Secondary	57.93%
Subject	Language	45.24%
	Mathematics	20.24%
	Science	25.60%
	Co-curricular	8.93%

**6.2 Hypotheses Testing**

Regression analysis was conducted to test hypotheses of this study. Table 2 shows the regression results for the effect of Reflective Teaching Practices (RTP) on students' academic achievement. The results expressed that the model is statistically significant at the .000 level with  $F= 5.364$  (r-square =

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

0.162), indicating that reflective teaching practices of teachers affects students' academic achievement.

To be specific, teachers' practices of reflection 'reflection from classroom experiences', 'reflection from students' observation', 'reflection from past experiences', and 'reflection from colleagues and self-study' except reflection on self-behavior are found to be statistically significant on students' academic achievement.

**Table 2. Effects of Teachers' Reflective Teaching Practices (RTP) on Students' Academic Achievement**

Factor	B (Std. Error)	$\beta$	t	Sig. (p)
Reflection from classroom experiences	.194 (.089)	.194	2.170	.032**
Reflection on self-behavior	.039 (.092)	.039	.420	.675
Reflection from students' observation	.255 (.080)	.255	3.176	.002***
Reflection from past experiences	-.175 (.084)	-.175	-2.097	.038**
Reflection from colleagues and self-study	.199 (.080)	.199	2.488	.014**
R-squared		.150		
R-squared adjusted		.199		

Dependent Variable: Students' Academic Achievement

Standard errors are in parentheses.

\*Significant at  $p < 0.1$ ; \*\*Significant at  $p < 0.05$ , \*\*\*Significant at  $p < 0.01$

For the effects of Reflective Teaching Practices (RTP) on students' affective competencies for academic achievement, the results of regression analysis were shown in Table 3. The result demonstrates that the model is statistically significant at .000 level with  $F = 4.897$  (r-square = 0.15), indicating that teachers' reflective teaching practices affects students' cognitive competencies. Specifically, 'peer discussion and reflective writing', 'reflection from students' observation', 'learning from colleagues and

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

self-study' are found to be significant factors on students' cognitive competencies for academic achievement.

**Table 3. Effects of Teachers' Reflective Teaching Practices (RTP) on Students' Cognitive Competencies**

Factor	B (Std. Error)	$\beta$	t	Sig. (p)
Reflection from classroom experiences	.264 (.090)	.264	2.935	.004***
Reflection on self-behavior	-.043 (.093)	-.043	-.467	.641
Reflection from students' observation	.242 (.081)	.242	3.001	.003***
Reflection from past experiences	-.097 (.084)	-.097	-1.154	.251
Reflection from colleagues and self-study	.143 (.080)	.143	1.780	.077*
R-squared		.150		
R-squared adjusted		.199		

Dependent Variable: Students' Academic Competency Factor

Standard errors are in parentheses.

\*Significant at  $p < 0.1$ ; \*\*Significant at  $p < 0.05$ , \*\*\*Significant at  $p < 0.01$

For the effects of Reflective Teaching Practices (RTP) on students' affective competencies for academic achievement, the results of regression analysis were shown in Table 4. This result shows the model significant at .05 level with  $F = 3.144$  (r-square = .010) which indicates that only reflection from students' observations is found to be significantly related to students' affective competencies for academic achievement whereas 'Peer discussion and reflective writing', 'Reflection on self-behavior', 'Learning from experiences, colleagues and self-study' are not significantly related to students' affective competencies.



A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

**Table 4. Effects of Teachers' Reflective Teaching Practices (RTP) on Students' Affective Competencies**

Factor	B (Std. Error)	$\beta$	t	Sig. (p)
Reflection from classroom experiences	.152 (.092)	.152	1.641	.103
Reflection on self-behavior	.107 (.095)	.107	1.125	.263
Reflection from students' observation	.224 (.083)	.224	2.695	.008**
Reflection from past experiences	-.093 (.086)	-.093	-1.007	.283
Reflection from colleagues and self-study	.037 (.083)	.037	.451	.653
R-squared		.102		
R-squared adjusted		.069		

Dependent Variable: Students' Effective Competency Factor

Standard errors are in parentheses.

\*Significant at  $p < 0.1$ ; \*\*Significant at  $p < 0.05$ , \*\*\*Significant at  $p < 0.01$

For the effects of Reflective Teaching Practices (RTP) on students' behavioral competencies for academic achievement, the results of regression analysis were shown in Table 5. This result pointed out that the significance of the model at .000 level with  $F = 7.358$  (r-square = .209) which indicates that RTP has significant impact on students' behavioral competencies. Based on this analysis, all of Reflective Teaching Practices are found to be significantly related to students' behavioral competencies for academic achievement.

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

**Table 5. Effects of Teachers' Reflective Teaching Practices (RTP) on Students' Behavioral**

**Competencies**

Factor	B (Std. Error)	$\beta$	t	Sig. (p)
Reflection from classroom experiences	.247 (.087)	.247	2.843	.005***
Reflection on self-behavior	.177 (.089)	.177	1.985	.049**
Reflection from students' observation	.267 (.078)	.267	3.431	.001***
Reflection from past experiences	-.149 (.081)	-.149	-1.840	.068*
Reflection from colleagues and self-study	.074 (.078)	.074	.956	.341
R-squared		.209		
R-squared adjusted		.181		

Dependent Variable: Students' Effective Competency Factor

Standard errors are in parentheses.

\*Significant at  $p < 0.1$ ; \*\*Significant at  $p < 0.05$ , \*\*\*Significant at  $p < 0.01$

The results of the hypotheses testing on the effect of reflective teaching practices on students' academic achievement and academic competencies can be summarized as following.

**Table 6. Summary of hypothesis testing results**

Hypothesis Tested		Result
<b>H1 - Students' Academic Achievement</b>		
H1a	Teachers' reflection from classroom experiences on students' academic achievement	Accepted
H1b	Teachers' reflection from self-behavior on students' academic achievement	Rejected
H1c	Teachers' reflection from students' observation on students' academic achievement	Accepted
H1d	Teachers' reflection from past experiences on students' academic achievement	Accepted

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

H1e	Teachers' reflection from colleagues and self-study on students' academic achievement	<b>Accepted</b>
<b>H2 – Students' Cognitive Competencies</b>		
H2a	Teachers' reflection from classroom experiences on students' cognitive competencies for academic achievement	<b>Accepted</b>
H2b	Teachers' reflection from self-behavior on students' cognitive competencies for academic achievement	Rejected
H2c	Teachers' reflection from students' observation on students' cognitive competencies for academic achievement	<b>Accepted</b>
H2d	Teachers' reflection from past experiences on students' cognitive competencies for academic achievement	Rejected
H2e	Teachers' reflection from colleagues and self-study on students' cognitive competencies for academic achievement	<b>Accepted</b>
<b>H3 – Students' Affective Competencies</b>		
H3a.	Teachers' reflection from classroom experiences on students' affective competencies for academic achievement	Rejected
H3b.	Teachers' reflection from self-behavior on students' affective competencies for academic achievement	Rejected
H3c.	Teachers' reflection from students' observation students' affective competencies for academic achievement	<b>Accepted</b>
H3d.	Teachers' reflection from past experiences on students' affective competencies for academic achievement	Rejected
H3e.	Teachers' reflection from colleagues and self-study on students' affective competencies for academic achievement	Rejected
<b>H4 - Students' Behavioral Competencies</b>		
H4a.	Teachers' reflection from classroom experiences on students' behavioral competencies for academic achievement	<b>Accepted</b>
H4b.	Teachers' reflection from self-behavior on students' behavioral competencies for academic achievement	<b>Accepted</b>
H4c.	Teachers' reflection from students' observation on students' behavioral competencies for academic achievement	<b>Accepted</b>
H4d.	Teachers' reflection from past experiences on students' students' behavioral competencies for academic achievement	<b>Accepted</b>
H4e.	Teachers' reflection from colleagues and self-study on students' behavioral competencies for academic achievement	Rejected

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

**Table 7. Component Matrix: Teachers' Reflective Teaching Practices**

Items		Components				
Factors	Scale Items	1	2	3	4	5
Reflection from past experiences	I learn strengths and weaknesses of my teachers who taught me during my student life to improve my instruction.	.809				
	I learn to improve my teaching strategies from my students' comments.	.732				
Reflection from colleagues and self-study	I learn from books, articles, conferences and workshops for improving my teaching.		.864			
	I learn new teaching methods from my colleagues for improving my teaching.		.637			
Reflection from classroom experiences	I prefer discussing classroom experiences with my colleagues.			.720		
	I reflect my teaching experiences by writing down as forms of dialogues.			.720		
Reflection on self-behavior	I record my teaching on audio recorder and listen to it after teaching.				.904	
	I record my classroom practices by taking videos and watch it after class.				.885	
	After teaching, I write down classroom experiences in a descriptive way.				.826	
	After teaching, I write down strengths and weaknesses of my teaching.				.636	
Reflection from students' observation	I ask my students to write down what they learned.					.778
	I talk with my students in order to know their classroom experiences in my class.					.718
	I ask my students to write down how they learned.					.651

**Table 8. Component Matrix: Students' Academic Competencies for Academic Achievement**

Items		Components		
Factors	Scale Items	1	2	3
Cognitive Competencies	I know that my students' skills (reading, writing and arithmetic) have progressed.	.911		
	I know that my students' critical thinking skills have improved.	.911		
Affective Competencies	I feel that students have enjoyed more in learning.		.925	
	I feel that students' motivation in learning has improved.		.923	
	I feel that students' level of confidence in learning has increased.		.877	
	I found that students' concentration has increased during study.			.870

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

Behavioral Competencies	I found that students' interaction with me during class has developed.			.827
	I found that students ask more questions in my class.			.813
	I found that students volunteer for answers more than before in my class.			.756
	I found that students more participate in school academic activities.			.744
	I found that students' time management skills for studying are improved.			.734

**Table 9. Component Matrix: Students' Academic Achievement**

Items		Component
Factors	Scale Items	1
Academic Achievement	Overall, I am satisfied with my students' progress in academic achievement.	.904
	Overall, my students' test scores have increased.	.904

### 6.3 Findings

This study gained the results of the reflective teaching practices of the teachers which affect students' academic achievement and academic competencies. Most of the reflective teaching practices affect students' academic achievement but some of the practices does not affect on students' academic competencies.

First of all, this study found that teachers' reflection from classroom experiences such as discussing with colleagues and reflective writing, reflection from students' observation on teachers' classroom actions, reflection on past experiences of themselves concerning with instructional activities, reflection by observing their peers, and improving their self-capacity have significant impact on students' academic achievement. However, reflection on self-behavior such as recording their classroom behaviors by video and audio recording, journal writing does not have effects on students' academic achievement. This is due to the fact that these practices are not applied in schools and the teachers are not familiar with the Myanmar. Because of certain rules and regulations of some schools, the use of mobile phones is not

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

allowed in the classrooms. This may be one of the reasons for teachers do not perform video and audio recording. Systematic journal writing is also rarely applied in the classrooms in Myanmar. This practice is now only introducing in pre-service teacher education starting from this year so the teachers do not have the profound knowledge of it.

In terms of students' cognitive competencies such as reading, writing, arithmetic and critical thinking skills are affected by teachers' reflection from classroom experiences, teachers' reflection from students' learning and observation of teaching, reflection by learning new teaching methods from colleagues and reading books, attending conferences and workshops. On the other side, they are not affected by teachers' reflection on self-behaviors and reflection from their own past learning experiences. As mentioned above, some of the practices of reflection on self-behaviors are in practice by only a small number of teachers, this does not affect students' cognitive competencies. Reflection from past experiences consists of the practices such asking for students' comments which is less likely to be carried out by the teachers as it is considered inappropriate asking students' comments as the teachers are regarded as superior to students. In addition to that, for the reflection from the past learning experiences of Myanmar teachers who are encountered with teachers' centered teaching approach seems to be inappropriate for applying current changing context of classroom. Due to these actors, those mentioned reflective practices are not in relation with students' competency skills.

An interesting factor that is revealed in this study is that this teachers' reflection from past experiences and students' comments have negative factors on students' academic achievement and all students' academic competencies. This vividly indicates that we have to transform traditional teaching style of disseminating information and knowledge by the teachers solely and focus on constant checking of the reliability of teaching performances and upgrading them in accordance with the students' needs.

Regarding the effects of reflective teaching on students' affective competency skills, the finding presented that students' affective competency skills such as enjoyment in learning, motivation and self-

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

confidence are significantly related to reflection from students' observations of teachers' teaching process and teachers' making them to check on the progress of their learning. As teachers have to make conclusions from students' reflections, this in turn have greater impacts on effects of students' affective learning competencies rather than any other factors.

Finally, this study hypothesized that there are effects of reflective teaching practices on students' behavioral competencies. The regression analysis data showed that reflective teaching practices (reflection from classroom experiences, reflection on self-behavior, reflection from students' observation, reflection from past experiences) except reflection from colleagues and self-study are positively correlated to students' behaviors such as concentration, interaction, students' initiatives for study and time management skills. As for the reflection from colleagues and self-study mainly focus on teachers' attempting to improve themselves, therefore, it is not correlated with students' observable behaviors.

### **6.4. Additional Findings**

As this study focus is on teachers' practices effects on students' academic achievement, it also presents the teachers' factors that are related to reflective teaching practices. The teachers' related factors that this study examined are gender, age, level of education and the academic subjects they taught.

First of all, this study found that teachers' reflective practices are not related to gender or there is no difference in reflective teaching practices between male and female teachers. Using independent samples t-test, the researcher examined the relationship between reflective teaching and teachers' gender. This finding contradicts the previous study by Bawaneh, Moumene & Aldalalah (2020) that teachers' reflective teaching practices are differed according to their gender.

Also, this study investigated a relationship between teachers' reflective teaching practices and their age with One-way ANOVA by using SPSS software and found out that there is no difference in the means of teachers' practices according to the age group of the teachers. This finding can be related to the

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

years of experiences of teachers as the older teachers have more teaching experiences than younger people.

Besides, this study also analyzed the relationship between teachers' reflective teaching practices and their level of education by using One-Way ANOVA. Unlike the previous study by Bawaneh, Moumene & Aldalalah (2020), this study found that teacher reflection from experiences, collaboration with colleagues, diary writing and reflection on their behaviors in the classroom significantly related to the teachers' level of education, especially in the educational studies. This implies that teachers should pursue further education for their professional development.

Lastly, the ANOVA results show that the level of teachers' reflective practices are not affected by the nature of the academic subjects that they teach and the level of their children whether they are primary, middle or secondary. This indicates that teachers at all levels of education need reflective teaching practices.

## **VII. Conclusion**

### **7.1 Summary**

This study explored the effects of the reflective teaching practices of in-service teachers in Myanmar on students' academic achievement. As the curriculum of basic education in Myanmar is currently on the track of reform, the classroom practices of teachers need to be upgraded in line with the new curriculum. Despite having upgraded the curriculum, the academic qualities of students are declining. One of the reasons is the low quality of teachers' instruction who are currently employed in schools in Myanmar. So, teachers' in-service education and training have become an important topic to cover and necessary for exploring what kinds of practices are advantageous for students' learning in the Myanmar Education Context.



## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

The previous research studies showed that reflective practices enhance the professional development of the teachers especially in in-service contexts where people want to learn from real-life experiences. Teachers who are critically examining their classrooms and find solutions and learn from this process have a large impact on improved students' learning and their academic achievement. In this aspect, this study explored the effects of reflective teaching practices on student's academic achievement. There are many practices that teachers perform to improve their cognitive, affective and behavioral reflective activities for classroom teaching. Students' academic achievement is a construct that is hard to identify for teachers. However, it can be predicted with the academic competencies of students (cognitive, affective and behavioral skills) for achieving their academic excellence. This study aims to determine what kinds of factors of teachers' reflective practices affect student's academic competencies so ultimately these competencies (cognitive, affective and behavioral) affect academic achievement.

For this purpose, this study set up an analytical model based on previous studies and theoretical foundations. This model presents how the reflective teaching practices performed by teachers affects students' cognitive, affective and behavioral competencies for students' academic achievement respectively and directly on students' academic achievement.

To prove this model, this study surveyed teachers in Myanmar. Regression analysis showed that the academic achievement of the students is affected by teachers' reflective teaching practices and then a on students' observable academic competencies. Teachers' reflective practices which are teachers' reflection from classroom experiences, teachers' activities for students' reflection, reflective journal writing are major effects on students' academic achievement. It was also identified that reflection from classroom experiences, reflection from students' observation, reflection from past experiences, reflection by learning from colleagues and self-study are found to have positive impacts on students' cognitive competencies and students' reflections the progress of their learning also has effects on students' affective competencies. Students' behavioral competencies are improved by teachers' reflection from classroom

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

experiences, reflection on self-behavior, reflection from students' observation, reflection from past experiences.

To sum up, reflection from classroom experiences, reflection on self-behavior, reflection from students' observation, reflection from past experiences and reflection from colleagues and self-study affect students' academic achievement and observable competencies for them.

### **7.2 Policy Implications**

As reflective practices are currently using in in-service education by teachers in Myanmar and these practices have found to have effects on students' academic achievement, the ministry of education should pay attention how to systematically incorporate those practices in the professional development programs of the teachers. Also, the teachers should train how to do these practices systematically so that it will be more effective in their classroom instruction. Moreover, the current in-service teachers are not familiar with the upgraded practices in current pre-service teacher education which will be implemented in long-term period (over four years), the best way for them to catch up with it with on-job training and learning from their classroom with reflective practices so that they can distinguish whether their instructional practices are effective for the students or not. The conditions necessary for teachers to perform reflective teaching in the classroom need the aid of skilled coaches, the favorable community not sensitive to critics and sustain teachers' commitment and motivation to perform reflective practices.

It is also necessary for the academic deans and instructional leaders with the help of experts in teacher education field to perform as the mentors of the teachers in performing these practices. More emphasis should be given to the capacity building program of these leaders so that they can connect with the implementers and policymakers at the macro level with the teachers at the micro-level in schools.

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

### 7.3 Further Research and Limitation

While some prominent results are found in this study, there also exists limitations. First of all, the sample size is small with 145 teachers compared to the entire population of 340,955 (Ministry of Education, Myanmar, MOE, 2016) as it used a convenient sampling method and the respondents are particularly from one state in Myanmar. This is due to the difficulty in communication with all teachers during a short time. Also, by applying an online survey, some teachers cannot get access to the survey questionnaire as the Myanmar font system in Myanmar is currently changing so the response rate is reduced due to this factor. In addition to this, most of the respondents did not know how to answer survey questions so, in some of the questions, they give two responses so that these responses are rejected. Thus, in future research, more sample size from more schools is suggested so that more accurate results will be revealed.

Another limitation is that this research study is only conducted from teachers' perceptions so that it should also be carried out from the perspective of students to provide more accurate results. Not only quantitative but also qualitative research such as observation and focus group interview should be combined in this study for teachers to provide which practices are more suitable for their students in each school context. To carry out this, small action researches would be suitable.

### REFERENCES

- Akiba, M., & Liang, G. (2016). Effects of teacher professional learning activities on student achievement growth. *The Journal of Educational Research*, 109(1), 99-110.
- Akbari, R., & Allvar, N. K. (2010). L2 Teacher Characteristics as Predictors of Students' Academic Achievement. *Tesl-Ej*, 13(4), n4.
- Applegate, J. (1982). Reflective teaching and staff development: A partnership for professional growth. *The Developer*, (4), 24.

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

ASCD IN SERVICE (2016, April 26). Three Reflective Practices for Effectiveness. Retrieved from

<https://inservice.ascd.org/three-reflective-practices-for-effectiveness/>

AYE AYE MYINT, M. W. (2016). The implementation of the Myanmar teacher competency standards framework. *Global new light of Myanmar*.

Bawaneh, A. K., Moumene, A. B. H., & Aldalalah, O. (2020). Gauging the Level of Reflective Teaching Practices among Science Teachers. *International Journal of Instruction*, 13(1).

Blazar, D. (2015). Effective teaching in elementary mathematics: Identifying classroom practices that support student achievement. *Economics of Education Review*, 48, 16-29.

Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). Taxonomy of educational objectives: The classification of educational goals. Handbook 1: Cognitive domain. New York: David McKay.

Braun Jr, J. A., & Crumpler, T. P. (2004). The social memoir: An analysis of developing reflective ability in a pre-service methods course. *Teaching and Teacher Education*, 20(1), 59-75.

Cephe, P. T. (2009). An analysis of the impact of reflective teaching on the beliefs of teacher trainees. *Egitim ve Bilim*, 34(152), 182.

Çimer, A., Çimer, S. O., & Vekli, G. S. (2013). How does reflection help teachers to become effective teachers? *International Journal of Educational Research*, 1(4), 133-149.

Crow, L.D. & Crow, (1969). Adolescent development and adjustment. United States: McGraw-Hill company.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective teacher professional development.

Dave, R.H. (1975). Developing and writing behavioral objectives. (R J Armstrong, ed.) Educational Innovators Press.

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

- DiPerna, J. C., & Elliott, S. N. (1999). Development and validation of the academic competence evaluation scales. *Journal of Psychoeducational Assessment*, 17(3), 207-225.
- Erginel, S. Ş. (2006). *Developing reflective teachers: A study on perception and improvement of reflection in pre-service teacher education* (Doctoral dissertation). Middle East Technical University, Ankara, Turkey.
- Finlay, L. (2008). Reflecting on reflective practice. *PBPL paper*, 52, 1-27.
- Fong-Yee, D., & Normore, A. H. (2013). The impact of quality teachers on student achievement.
- Gettinger, M., & Knopik, S. N. (1987). Children and study skills. *Children's needs: Psychological perspectives*, 594-602.
- Göker, S. D. (2016). Use of Reflective Journals in Development of Teachers' Leadership and Teaching Skills. *Universal Journal of Educational Research*, 4(n12A), 63-70.
- Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (1998). Does special education raise academic achievement for students with disabilities? (No. w6690). National Bureau of Economic Research.
- Hardman, F., Aung, W., & Myint, A. A. (2012). Development of a teacher education strategy framework linked to pre- and in-service teacher training in Myanmar. *Myanmar: UNICEF*.
- Hoban, G., & Hastings, G. (2006). Developing different forms of student feedback to promote teacher reflection: A 10-year collaboration. *Teaching and Teacher Education*, 22(8), 1006-1019.
- Horn, I. S., & Little, J. W. (2010). Attending to problems of practice: Routines and resources for professional learning in teachers' workplace interactions. *American Educational Research Journal*, 47, 181-217.
- Ickovics, J. R., Carroll-Scott, A., Peters, S. M., Schwartz, M., Gilstad-Hayden, K., & McCaslin, C. (2014). Health and Academic Achievement: Cumulative Effects of Health Assets on Standardized

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT  
ACHIEVEMENT IN MYANMAR

- Test Scores Among Urban Youth in the United States. *The Journal of School Health*, 84(1), 40–48. <https://doi.org/10.1111/josh.12117>
- Impedovo, M. A., & Malik, S. K. (2016). Becoming a Reflective In-Service Teacher: Role of Research Attitude. *Australian Journal of Teacher Education*, 41(1), 6.
- Iqbal, Muhammad & Ramzan, Muhammad & Arain, Amjad. (2016). Students' Feedback: A Stimulus Reflective Practice for Professional Development of the Prospective Teachers.
- K. G., Ambady. (2018). Reflective Practices in Teaching: Profession and Professionalism.
- Kheirzadeh, S., & Sistani, N. (2018). The Effect of reflective teaching on Iranian EFL students' achievement: The case of teaching experience and level of education. *Australian Journal of Teacher Education*, 43(2), 8.
- Kimani, G. N., Kara, A. M., & Njagi, L. W. (2013). TEACHER FACTORS INFLUENCING STUDENTS' ACADEMIC ACHIEVEMENT IN SECONDARY SCHOOLS IN NYANDARUA COUNTY, KENYA.
- King, M. B., & Newmann, F. M. (2001). Building school capacity through professional development: Conceptual and empirical considerations. *International journal of educational management*.
- Korthagen, F. A., & Wubbels, T. (1991). Characteristics of Reflective Practitioners: Towards an Operationalization of the Concept of Reflection.
- Mathew, D. P., Mathew, D. P., Prince, M., & Peechattu, J. (2017). REFLECTIVE PRACTICES: A MEANS TO TEACHER DEVELOPMENT. *Asia Pacific Journal of Contemporary Education and Communication Technology*, 3(1), 6.
- Mathew, N. G. (2012). Reflective Classroom Practice for Effective Classroom Instruction. *International Education Studies*, 5(3), 205-211.

## A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

- McAlpine, L., Weston, C., Berthiaume, D., Fairbank-Roch, G., & Owen, M. (2004). Reflection on teaching: Types and goals of reflection. *Educational Research and Evaluation*, 10(4-6), 337-363.
- Meissel, K., Parr, J. M., & Timperley, H. S. (2016). Can professional development of teachers reduce disparity in student achievement? *Teaching and Teacher Education*, 58, 163-173.
- Miettinen, R. (2000). The concept of experiential learning and John Dewey's theory of reflective thought and action. *International Journal of Lifelong Education*, 19(1), 54-72. K. G., A. (2018, September).
- Noormohammadi, S. (2014). Teacher Reflection and its Relation to Teacher Efficacy and Autonomy. *Procedia - Social and Behavioral Sciences*, 98, 1380–1389.  
<https://doi.org/10.1016/j.sbspro.2014.03.556>
- Posthuma, Anna. (2012). Mathematics teachers' reflective practice and the quality of their instruction. *Suid Afrikaanse tydskrif vir natuurwetenskap en tegnologie*. 31. 10.4102/satnt.v31i1.365.  
<http://inservice.ascd.org/three-reflective-practices-for-effectiveness/>
- Rastogi, M. (2012). Multi variate analysis of anxiety self-concept and level of aspiration with academic achievement for higher secondary students.
- Richards, J. C. (1995). Towards reflective teaching. *ENGLISH TEACHERS JOURNAL-ISRAEL*-, 59-63.
- Shandomo, H. M. (n.d.). The Role of Critical Reflection in Teacher Education. 13.
- Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22.
- Soisangwarn, A., & Wongwanich, S. (2014). Promoting the reflective teacher through peer coaching to improve teaching skills. *Procedia: Social and Behavioral Sciences*, 116, 2504-2511.

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT  
ACHIEVEMENT IN MYANMAR

- TAIBI, H. (2015). Reflective Teaching as a Form of Continuous Professional Development: Case of EFL University Teachers (Doctoral dissertation). Farrah, M. (2012). Reflective Journal Writing as an Effective Technique in the Writing Process. Vol., 26, 29.
- Victoria, & Department of Education and Training. (2018). Peer observation feedback and reflection: A practical guide for teachers.
- Wentzel, K. R. (1993). Does being good make the grade? Social behavior and academic competence in middle school. *Journal of Educational Psychology*, 85(2), 357.
- Wain, Amanda. (2017). Learning through reflection. *British Journal of Midwifery*. 25. 662-666. 10.12968/bjom.2017.25.10.662.
- Yoon, K. S., Duncan, T., Lee, S. W.-Y., Scarloss, B., & Shapley, K. (2007). Reviewing the evidence on how teacher professional development affects student achievement (Issues & Answers Report, REL 2007–No. 033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved from <http://ies.ed.gov/ncee/edlabs>
- York-Barr, J., Sommers, W. A., Ghere, G. S., & Montie, J. (Eds.). (2006). *Reflective practice to improve schools: An action guide for educators*. Thousand Oaks, CA: Corwin Press.
- Zeichner, K. M., & Liston, D. P. (2013). *Reflective teaching: An introduction*. Routledge.



A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

**Appendix A. Questionnaire**

**A Survey on Teachers' Reflective Teaching Practices on Students' Academic Achievement in Myanmar**

Please take only 15 minutes to complete all the questions in this survey. The objective of this survey questionnaire is to collect information about teachers' reflective teaching practices and their effects on students' academic achievement in Myanmar.

Your participation in this survey is voluntary. Your responses will be kept confidential and will not be revealed to anyone other than the researcher.

The findings of this research project will be used for the purpose of policy implications in teachers' professional development in Myanmar. Therefore, your participation will be of much assistance to develop better professional development programs and contribute to teacher education in the long run.

I would really appreciate to your kindly participation in this survey.

**Part I. General (Warm-up questions)**

1. Please check the level or grade of students that you are teaching.

(     ) primary (     ) middle     (     ) high school

2. Please choose the subject that you are teaching.

(     ) Language     (     ) Mathematics     (     ) Science     other (     )

3. Please check your highest education level

(     ) Certificate     (     ) B. Ed     (     ) M. Ed     (     ) Ph.D.

(     ) other

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

**Part II. Teachers' Reflective Teaching Practices**

Please indicate your perceptions of your reflective teaching practices for each of the following statement.

For these statements, you are requested to respond according to:

- 1) *Strongly Disagree*      2) *Disagree*      3) *Neutral*      4) *Agree*      5) *Strongly Agree*

Items	1	2	3	4	5
<b>Cognitive</b>					
I learn from books, articles, workshops and conferences for instructional problems in my classroom.					
I learn new instructional methods from my colleagues' teaching activities.					
I learn to improve my teaching strategies from my students' comments.					
I learn strengths and weaknesses of my teachers who taught me during my student life to improve my instruction.					
<b>Affective</b>					
I reflect my teaching experiences by writing down as forms of dialogues.					
I prefer discussing classroom experiences with my colleagues.					
I prefer to use collaborative problem-solving style in my teaching.					
<b>Behavior</b>					
I record my classroom practices by taking videos and watch it after class.					

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

I record my teaching on audio recorder and listen to it after teaching.					
After teaching, I write down classroom experiences in a descriptive way.					
After teaching, I write down strengths and weaknesses of my teaching.					
I ask my colleagues to observe and give critical comments on my teaching.					
I talk with my students in order to know their classroom experiences in my class.					
I ask my students to write down what they learned.					
I asked my students to write down how they learned.					

**Part III. Students' Academic Competency Skills**

Please indicate your perceptions of your Students Academic Competency Skills for each of the following statement. For these statements, you are requested to respond according to:

- 1) *Strongly Disagree*      2) *Disagree*      3) *Neutral*      4) *Agree*      5) *Strongly Agree*

Items	1	2	3	4	5
<b>Students' cognition</b>					
I know that my students' skills (reading, writing and arithmetic) have progressed.					
I know that my students' critical thinking skills have improved.					
I know that my students' problem-solving skills have developed.					
<b>Students' behaviors</b>					

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT ACHIEVEMENT IN MYANMAR

I found that students ask more questions in my class.					
I found that students volunteer for answers more than before in my class.					
I found that students' concentration has increased during study.					
I found that students more participate in school academic activities.					
I found that students' interaction with me during class has developed.					
I found that students' time management skills for studying are improved.					
<b>Affective</b>					
I feel that students' level of confidence in learning has increased.					
I feel that students have enjoyed more in learning.					
I feel that students' motivation in learning has improved.					

**Part III. Students' Academic Achievement**

Please indicate your perception of your Students' Academic Achievement for each of the following statement. For these statements, you are requested to respond according to:

- 1) Strongly Disagree      2) Disagree      3) Neutral      4) Agree      5) Strongly Agree

Items	1	2	3	4	5
Overall, my students' test scores have increased.					
Overall, I am satisfied with my students' progress in academic achievement.					

**Part IV. Demographic Information (Please select the closet answer for each question.)**

A STUDY OF TEACHERS' REFLECTIVE TEACHING PRACTICES ON STUDENT  
ACHIEVEMENT IN MYANMAR

1. Gender ( ) Male ( ) Female

2. Age

< 20 years old ( )      21-25 years old ( )      26-30 years old ( )

31-35 years old ( )      36-40 years old ( )      <40 years old ( )

The end!

Thank you for your time for survey.