



การพัฒนาชุดเครื่องมือการประเมินความสามารถด้านการสะท้อนคิดเพื่อพัฒนาระดับการสะท้อนคิดของนิสิตครู
Development of a Reflective Ability Assessment Package to Enhance Pre-service Teachers'
Level of Reflection

พรสวรรค์ ศุภศรี¹ และ สุมาลี ชีโนกุล^{2*}

Ponsawan Suphasri¹ and Sumalee Chinokul^{2*}

บทคัดย่อ

ทักษะสำคัญสำหรับครูในยุคปัจจุบันนี้ คือ ทักษะการสะท้อนความคิดเพื่อพัฒนาการสอนได้ด้วยตนเอง ด้วยเล็งเห็นถึงความสำคัญในพัฒนาและเสริมสร้างนิสิตครูให้มีทักษะนี้ ผู้วิจัยจึงจัดทำงานวิจัยนี้ขึ้นโดยมีจุดประสงค์เพื่อ 1) เพื่อสร้างและพัฒนาชุดเครื่องมือการประเมินความสามารถด้านการสะท้อนคิด และ 2) เพื่อศึกษาผลของการใช้ชุดเครื่องมือที่มีต่อระดับการสะท้อนคิดของนิสิตครู ผู้วิจัยใช้ระเบียบวิธีวิจัยแบบการวิจัยและพัฒนาทางการศึกษาในการพัฒนาชุดเครื่องมือการประเมินความสามารถด้านการคิดไตร่ตรอง กลุ่มตัวอย่างคือนิสิตครูเอกภาษาอังกฤษที่กำลังฝึกประสบการณ์วิชาชีพครูในภาคปลายปีการศึกษา 2555 จำนวน 4 คน การวิเคราะห์เชิงคุณภาพและเชิงปริมาณถูกใช้เพื่อวิเคราะห์ข้อมูลที่ได้จากการทดลองใช้ชุดเครื่องมือการประเมินความสามารถด้านการคิดไตร่ตรอง ผลการวิจัย พบว่า 1) ชุดเครื่องมือการประเมินความสามารถด้านการสะท้อนคิดประกอบด้วยองค์ประกอบสำคัญ 3 อย่าง คือ (1) ตัวกระตุ้นความคิด ซึ่งอยู่ในรูปแบบวิดีโอการสอนของนิสิตครูแต่ละคน (2) ตัวเสริมศักยภาพความคิด ซึ่งอยู่ในรูปแบบคำถามเพื่อสะท้อนความคิด และ (3) แบบประเมินคุณภาพความคิด 2) การพัฒนาระดับความคิดไตร่ตรองของนิสิตครูสามารถแบ่งออกได้เป็นสองกลุ่ม คือ กลุ่มที่มีการพัฒนาด้านบวก และกลุ่มที่ระดับความคิดคงเดิม

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¹ นิสิตศึกษบัณฑิตสาขาวิชาภาษาอังกฤษเป็นภาษานานาชาติ (สหสาขาวิชา) บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย อีเมล : p.suphasri@gmail.com

Ph.D. Candidate in English as an International Language Program, Graduate School, Chulalongkorn University Email: p.suphasri@gmail.com

² อาจารย์ประจำสาขาวิชาการสอนภาษาต่างประเทศ ภาควิชาหลักสูตรและการสอน คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย อีเมล : csumalee@gmail.com

Ph.D. Division of Foreign Language Teaching, Department of Curriculum and Instruction, Faculty of Education, Chulalongkorn University

Email: csumalee@gmail.com

* Corresponding Author

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Abstract

Nowadays, teachers should be equipped with reflective thinking ability; the ability to contemplate one past actions to improve one's teaching practice. With this consideration in mind, this study was conducted with two purposes, 1) to develop a reflective ability assessment tool and 2) to investigate the effectiveness of the assessment package on pre-service teachers' level of reflection. Educational research and development design was employed to develop the reflective ability assessment package. The participants of this study included four English-majored pre-service teachers who were attending the 2nd-semester teaching practicum of the academic year 2011. Data received from implementing the reflective ability assessment was analyzed qualitatively and quantitatively. The findings revealed that 1) reflective ability assessment package consisted of three main components; teaching video clips as a trigger, guiding questions as an idea potential reinforcement or scaffold, and quality assessment; and 2) the improvement of pre-service teachers' level of reflection was divided into two groups; positive development group and neutral development group.

Keywords: reflective practice, pre-service teacher, assessing level of reflective thinking

Introduction

Reflective practice has become the foundation and the indicator for professional development in many teacher education programs. The concept has been widely utilized to cultivate pre-service teachers to become reflective practitioners. As reflective practitioners, pre-service teachers become aware of themselves as prospect teachers (Lee, 2007); are capable of clarifying and evaluating ideas about their own teaching experience, as well as capable of reconstructing those ideas to improve their teaching practices (Freese, 2006). Reflection, on the other hand, echoes the complex attributes of being a reflective practitioner. It entails the process of careful self-observation, self-evaluation, and problem-solving towards one's experience in the hope of gaining a new understanding and improving future practice.

Reflective practice and teaching practicum

Teaching practicum is a crucial aspect of teacher education. It provides pre-service teachers the opportunity to apply theoretical knowledge learned from their coursework to real-world classroom contexts (Hillman et al., 2000). Teaching practicum does not only serve as a bridge closing the gap between theory and practice but also as 'built-in sessions' for reflective practice encouraging pre-service teachers to develop their ability to see reality. According to several scholars such as Dewey (1933) and Lee (2007), reflection begins when their pre-service teachers encounter disturbance. Thus, pre-service teachers engage in the reflection process as means to analyze the situation using data gathered from different sources to solve the problem; furthermore, they also learn to revisit their personal beliefs and knowledge, to reconstruct them, and to contribute to the renewed understanding back to teaching practice.

According to Chinokul (2015), the main opportunity for pre-service teachers to engage in their reflection lies within the process of supervision. The supervisor's feedback and interaction are crucial element motivating pre-service teachers to relate relevant educational theory to practical practice to solve problems and improve their teaching practice

Reflective practice and reflective journal writing

Several approaches have been introduced to facilitate pre-service teachers' reflective practice during teaching practicum, one of which is journal writing. Journals are considered to be a useful tool for promoting reflective practice since they provide space for pre-service teachers to record the connections between their prior knowledge and new understandings (Lee, 2007), and allow them to repeatedly read the reflection which fosters deep commitment. Pre-service teachers may also find new useful ideas emerged.

Although the notion of reflective practice seems very promising, pre-service teachers who have inexperience in reflection, as well as teaching, may find the process very intimidating (Cavanagh & Prescott, 2011). They usually protest when being asked to reflect upon their performance. Lee (2007) mentions that some of her pre-service teachers also encounter a lack of ideas when they first started reflecting. Pre-service teachers in the study of Hobbs (2007) tend to 'fake' their reflective journal by writing content that is not meant for themselves. Another problem with reflective journal writing lies in the process of assessing qualities of reflection. Although many scholars have discussed different levels of reflection which are employed as an assessment tool (see, for example, Hatton & Smith, 1995; Kember et al., 2008), they are designed to describe a process rather than designed to identify the quality of reflection. For some, their criteria are ambiguous and impractical which is difficult to follow.

According to the missing links mentioned above, the researcher developed a reflective ability assessment package to assist inexperienced pre-service teachers in the journal writing process as well as to assess the qualities of their reflections. The reflection model of Gibbs (1988) divided the process of reflection into six stages, including description; feeling; evaluation; analysis; conclusion, and action plan along with the reflective journaling process proposed by Smyth (1993) consisting of four writing stages: describing; informing; confronting, and reconstruction was adapted as a framework to develop the assessment package.

Objectives

This study served two purposes; 1) to develop the reflective ability assessment package, and 2) to investigate the effectiveness of the assessment package on pre-service teachers' level of reflection.

Research Methodology

The research design employed in this study was educational research and development. The researcher followed five stages of the Addie model proposed by Clark (2003) to develop and assess the

effectiveness of the reflective ability assessment package. The research procedure was divided into two phases; the preparation phase and the data collection phase.

Phase1: Preparation

This phase was conducted during May-August 2011 or one semester before the data collection phase with the purpose to develop the reflective ability assessment package before implementing the tool with the research participant group. There were three stages included in this phase as follows:

Stage1: Analysis

The purpose of this stage was to explore possible reflective practice problems that pre-service teachers might have during the supervision process. Classroom observation and questionnaires were conducted with a group of 35 pre-service teachers who shared similar attributes with the research participants. The distinguish problem found was insufficient opportunity for pre-service teachers to practice their reflection. The results from questionnaires revealed pre-service teachers' consistent indifferent opinions when being asked if they received enough reflection practice before the practicum and if they usually kept reflecting on teaching during the practicum. The finding from classroom observation also indicated similar results. Pre-service teachers had a very short time to reflect on their teaching with the supervisor at the post-observation conference; as a result, their reflection was brief and usually focused on superficial issues.

Stage2: Design

After the problem was identified, literature related to reflective practice, such as studies about reflection tools, levels of reflection; a process of reflection; and schemes for analyzing reflection were reviewed, then the essential principles and in-depth characteristics of reflection levels were elicited and used as a benchmark to design reflective practice tool, process, and assessment that were appropriate for pre-service teachers who were inexperienced reflective practitioners.

Stage3: Development

At this stage, a reflective ability assessment package was developed then submitted to experts for validation. Finally, it was piloted and revised according to the feedback received. Consequently, the three tools included in the package were 1) journal writing with guidance questions, 2) video clips of pre-service teachers' teaching, and 3) reflection rubric.

Phase2: Data collection

The data collection was conducted from December 2011- March 2012 to investigate the effectiveness of the reflective ability assessment package towards the four research participants. The two stages being followed were:

Stage4: Implementation

Each pre-service teacher's teaching was observed and video recorded four times. After each observation, the pre-service teachers were asked to watch their teaching clips then write journals to reflect on what they had seen. To eliminate any difficulties that might be occurred because of the pre-service

teachers' language barrier, the journals were written in Thai. Then, they were also asked to share their journals in an online group so that their peers and supervisor could give comments.

Stage5: Evaluation

To investigate the effectiveness of the reflective ability assessment package, the pre-service teachers' journal entries were analyzed quantitatively and qualitatively. Quantitatively, the pre-service teachers' reflective ability was categorized into four levels regarding the rubric developed. Qualitative analysis was done following five reflection domains concentrated by the researcher.

Participants and data source of the study

Data of this study were collected for 14 weeks, during December 2011– March 2012, from four pre-service teachers, majoring in English. They were purposively selected as research participants. The group comprised of three dual majored pre-service teachers and one advanced English pre-service teacher doing their teaching practicum at a public co-educational school located in Bangkok in the second semester of the academic year 2011 and were supervised under the same university supervisor. All of them were informed about this study and agreed to participate. The researcher followed the university supervisor to observe each participant's classrooms four times; each time with a video camera to record their teaching. Data of this study was mainly elicited from the participants' reflective journals and was further triangulated with the evidence observed from their teaching videos.

Research Findings

1. Components of the reflective ability assessment package

The reflective ability assessment package consisted of three components as clarified below:

1.1 Trigger

Inexperienced reflective practitioners sometimes find the process of thinking back very challenging due to several factors. Thus, instead of relying solely on pre-service teachers' memory, teaching videos recorded from their observations were provided as reflection triggers. Their teaching videos were either uploaded online or burned onto DVD so that the pre-service teachers could watch them at home or some other convenient locations before started writing reflective journals. The evidence confirming that using teaching videos helped trigger pre-service teachers' reflections was found in their journal entries. As pre-service teacher#3 wrote:

“The teaching clips put me in the audience seat. I didn't realize about my performance while teaching, but I noticed my strengths and weaknesses from observing my teaching videos”.

Pre-service teacher#1 also wrote:

“When I was teaching, I could not imagine how well I performed; however, I could watch myself teaching in motion picture and see how I performed in class”.

1.2 Scaffold

Reflection does not come naturally; it requires critical awareness and engagement of an individual to examine their experience and identify the problem which leads to his/her knowledge reconstruction as well as change in practice. However, asking inexperienced reflective practitioners similar to the four pre-service teachers in this study to reflect upon their teaching routine by themselves was too ambitious. They needed some prompts to help them achieve this task. Since the journal was assigned as a tool used for recording the pre-service teachers' reflections, the scaffold which helped provoke their awareness and stimulate their ideas was five guiding questions. Each question represented a domain of reflection that the pre-service teachers were asked to reflect.

1) Focusing: What is the description of your classroom challenge?

This question aroused the pre-service teachers' curiosity about the 'surprise' or 'messy' situation found in their classes.

2) Questioning: Why do things happen this way?

With this question, the pre-service teachers were required to further their analysis by exploring possible explanations for the problems.

3) Confronting: How did you solve the challenge?

How effective was your decision? Pre-service teachers were asked to confront their past decision and evaluate the result if it was effective.

4) Supporting belief: Why did you decide to solve the challenge that way?

This question gave the pre-service teachers a chance to rationalize their decision in the light of past knowledge, belief, or previous experience.

5) Promising change: How would you do things differently if the same challenge happens again?

The last question prompted the pre-service teachers to reframe their decision and propose a new plan for future action.

1.3 Quality assessment

The journal entries collected from pre-service teachers contained ideas regarding beliefs, assumptions, and expectations which were very abstract and difficult to assess. Providing a concrete process for assessing the quality of reflection then helps the supervisor and the pre-service teacher target key attitude, belief, or behavior that needs improvement to promote their higher reflective ability. The reflective ability rubric used in this study was developed to fulfill this void. Pre-service teachers' ability to reflect was divided into four levels as described below:

Level 1 Non-reflection

At this level, it is obvious that the reflection is done just to fulfill the requirement. Pre-service teachers interpret classroom situations with ignorance, believing that the situations are beyond their control.

Level 2: Descriptive reflection

At this level, pre-service teachers demonstrate a general understanding of classroom situations concerning teaching methods, teaching activities, and other tactical issues. The reflection is written based on their perspective as a teacher and solely supported with evidence from their personal belief or previous teaching experience.

Level 3: Pedagogical reflection

At this level, pre-service teachers demonstrate deeper analysis about classroom situations which is not only focused upon the teaching method but also bring in other issues, such as how teaching practice affects students' learning and how to enhance the learning experience. Their analysis is also supported with evidence elicited from multiple viewpoints.

Level 4: Critical reflection

At this level, the pre-service teachers are engaged in ongoing reflection and critical inquiry. They carefully validate and challenge their own belief about teaching, and consciously consider how their personal belief and other social factors may impact students' learning.

2. Pre-service teachers' reflective ability as a result of using reflective ability assessment package

After practicing reflection using the reflective ability assessment package, some of the pre-service teachers showed development in their level of reflection. Table1 indicates the improvement of their reflective ability which was resulted from reflective journal writing.

Table1

Levels of reflection emerging from reflection journals

Pre-service teachers	Reflection level		
	Reflection1	Reflection2	Reflection4
1	2	2	2
2	2	2	3
3	2	2	3
4	2	2	2

From the result illustrated above, the improvement of pre-service teachers' reflective ability was divided into two groups: positive development and neutral development. Although all of them started at level 2, there were two pre-service teachers (PT#2 and PT#3) who were categorized into the positive development since they were able to reach reflection level 3 at the end of the study. On the other hand, the neutral development group included PT#1, and PT#4 remained at reflection level2 or descriptive reflection. This suggested that the reflection of PT#2 and PT#3 indicated deep reflection in which they attempted to interpret and explain various classroom situations through multiple perspectives rather than

from a personal viewpoint only. Reflection excerpts illustrated below show an example of different reflection aspects that the two groups reflected:

Example 1: Teaching techniques VS Students' learning focus

Excerpt 1: Focusing on teaching tactics and other related issues

"I taught students by demonstrating them how to pronounce the vocabs first then having them repeated after me. That was the reason why most of my students were demotivated"

Excerpt from PT#1's 2nd reflection

Excerpt 2: Focusing on students' learning

"The reason why my class did not go smoothly today was that I overly used too many teaching materials during my teaching. It disturbed my students' learning and also distracted their attention; thus, they were bored and drifted away from today lesson. If I were the students who had to be in this kind of classroom, I would be very frustrated."

Excerpt from PT#3's 2nd reflection

According to the two excerpts presented above, it is seen that PT#2 who was at reflection level2 stated that it was because of her ineffective teaching strategies that caused her classroom to be lifeless. This reflection was made through her perspective as a teacher without considering it from other viewpoints. Excerpt of PT#3, on the other hand, showed that the focus of her reflection was not only on teaching tactics but also on how those tactics affected the learning process of her students. The phrase "If I were the students...." showed her attempt to view the situation from the student's viewpoint.

Discussion

The findings from the analysis stage indicated that pre-service teachers lacked experience in practicing reflective practice which became considerable if they were asked to reflect upon their teaching when practicum started. Several studies recommended using various aids to facilitate inexperienced pre-service teachers' reflective thinking (Good & Whang, 2002; Mason, 2012; Schweiker-Marra et al., 2003). In this study, pre-service teachers were introduced to the reflective ability assessment package containing tools carefully crafted to help them engage in their reflection.

Video triggers self-reflection

If a picture is worth a thousand words, watching oneself from a video will be an effective way to look back into one's memory. In this study, having pre-service teachers watch their teaching videos requires them to challenge any comfortable ideas they hold about their teaching. The pre-service teachers mention that they view themselves as 'outsider' while watching their videos. The sense of detachment allows them to see their teaching from a different point of view. Furthermore, they can pause, rewind, and replay their videos repeatedly until they can detect elements in teaching practice; either strengths or weaknesses, they

once failed to notice. Once problems are identified, the pre-service teachers can further their reflection by considering other ways of acting when confronted with similar problems. Work by Rich and Hannafin (2009) mention that video tools can assist pre-service teachers to examine the connection between theory and their practice in actions. Furthermore, those who have the opportunity to use video tend to write longer, more evidence-based, and more pedagogically driven reflections on their teaching practices rather than those who did not have access to video (Bryan & Recesso, 2006; Calandra et al., 2009).

Structured reflective journal scaffold self-reflection

In this study, journal writing with guiding questions was another tool that provided opportunities for the pre-service teachers to develop critical reflection. Since the pre-service teachers of this study were inexperienced reflective practitioners, a sequenced of guiding questions helps them through each stage of reflection and encourages them to consistently demonstrate analytical reflection on teaching by describing, justifying, and critiquing meaningful events that occurred in their teaching practice. They are allowed to gradually explore the roots of their feeling, thought, or actions (Perez, 2011). As one of the pre-service teachers admitted that he lacked ideas of what to write in his journal since he has never pushed himself to reflect before. However, the five guiding questions served as ‘stepping stones’ helping him to know where to begin and directing his reflection to areas that need to be improved. Although explicit help, such as guiding questions, is beneficial for those who are inexperienced reflective practitioners, they are not always needed. Lee (2007) reminds that some pre-service teachers, especially the inexperienced ones may like to have greater freedom in reflecting; thus, teacher educators or researchers should make a careful judgment as to when to provide detailed guidelines, when to withhold them, and how to build in flexibility in writing reflections to suit individual pre-service teacher to help sustain their interest in journal writing.

The assessment ensures the quality of reflection

Asking the pre-service teachers to reflect on their teaching practice without introducing them to features of good reflection may discourage them from engaging in the process. According to the finding, the reflective ability rubric of this study provides a means for assessing the quality of pre-service teachers’ reflections. This reveals two important reasons. First, it gives formative feedback to the pre-service teachers for their reflective journal writing during this study. Pre-service teachers are aware of reflection areas that need improvement. The finding agrees with the study of Khayankij (2015) whose participants were engaged in self-reflection for one semester and reported that they had become more aware of themselves and also the areas of teaching which needed to be improved. Second, the descriptive indicators convey clear expectations; therefore, the researcher can assist the pre-service teachers to reach higher levels of reflection based on these criteria.

Level of pre-service teachers’ reflection

Regarding the result illustrated in table1, the reflective ability of some pre-service teachers is limited to descriptive reflection. The result is consistent with several studies that discover that pre-service teachers’ reflection is primarily descriptive or technical rather than critical, such as those of Hatton and Smith (1995) and Lai and Calandra (2007). Since the pre-service teachers of this study lack experience in

either reflection or teaching, they are considered to be in a 'survival' stage where self-focus and self-referential are the hallmark (Chong et al., 2011). Although there were two pre-service teachers whose reflection level increase to pedagogical level, it is not promising that they will be able to maintain at that level. Ward and McCotter (2004) argue that the reflections of pre-service teachers are usually unstable; thus, the goal of engaging pre-service teachers in reflective practice should not be driven by the urge for attaining the highest reflection level quickly. Instead, they should be encouraged to gradually and consistently practice self-reflecting their teaching practice for personal growth.

Recommendations

1. This study resulted in an assessment package for promoting and measuring the extent to which pre-service teachers engage in reflective thinking while doing teaching practicum. Although the participant of this study was English-majored pre-service teachers, the wording of the item is not specific to a particular discipline. Thus, the assessment package may be useful for the assessment of the reflective ability of pre-service teachers in other disciplines.

2. The preliminary analysis of this study revealed pre-service teachers' lack of reflective practice which results in difficulty to critically reflect upon teaching experience when practicum starts. Thus, teacher educators must help develop pre-service teachers' reflective thinking as soon as the teacher learning process begins. There is no need to wait until the practicum so that pre-service teachers can experience success both as teachers and as reflective practitioners.

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