

Investigating the Use of Student Portfolios to Develop Students' Metacognition in English as a Foreign Language Learning

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Abstract—In this research, it is proposed that student portfolios should be used as a mediated tool in English as a foreign language (EFL) education. It aimed to study to what extent student portfolios could assess and develop students' metacognition in language learning. A total of 53 Thai secondary students of English were divided into a control and an experimental group. Their attitudes toward language learning were assessed through pre- and post-intervention questionnaires. The students in the experimental group were asked to participate in keeping reflective portfolios, and some of them were chosen to participate in an open-ended interview. The data reveal that the student's metacognitive beliefs and strategies can be accessed through a written portfolio, though evidence of change in their beliefs and strategies is only limited. The results contribute to the understanding of metacognition development through a mediated tool in language learning, and suggest EFL teachers and language educators to be aware of the importance of metacognition and reflective skills training in order to reach the full potential of the portfolio approach in language learning to be realized.

Index Terms—metacognitive knowledge, metacognitive strategies, learner autonomy, portfolio

I. INTRODUCTION

Metacognition in English as a foreign language (EFL) encompasses the learner's *metacognitive knowledge*, or beliefs about the cognition and learning, and the use of this knowledge to regulate his/her learning behaviors. The latter skill is called *metacognitive strategies*. There have been a number of studies which suggest that metacognition, as same as other kinds of knowledge and skill can be enhanced through a well-planned education. As a result of metacognition development, the learners are expected to acquire positive beliefs about English language and its learning process; and to gradually develop autonomy or the readiness to take care of their own learning inside and outside the language classroom.

Developing metacognition, and also learner autonomy, is believed to be especially significant to the context where the opportunities to learn and to use English language are scarce. This is because it is difficult for the learner in such context to acknowledge values of a foreign language since they rarely use it in daily life. This theory applies to the EFL learning in Thailand where the learners tend to learn English for the sake of external forces rather than to serve their own interests.

Most students only learn English to succeed in a structural-based examination which is the most widely used method to assess language learning achievement in Thailand. This leads to the other limitation which is the traditional way of language teaching that emphasizes explanation of grammar rules and rote learning, which is still believed to be effective in helping learners to achieve good scores in the examinations.

That is to say, Thai learners of English seem to be embedded with false beliefs (or false metacognitive knowledge) about language learning, and thus they seem to show ineffective behaviors (or ineffective learning strategies) towards language learning. From the report of Jantrasakul (2004), most English learners in Thailand, from the kindergarten to the university level, are preoccupied with examinations and scores. They tend to believe that the teacher is the one who knows best about how to achieve this aim. As a consequence, it is believed that the Thai EFL learners prefer to act as receivers, rather than providers, of information in the classroom.

The negative or limited beliefs about language learning, which the Thai learners tend to have, are potentially impeding their learning and their potential for skills development. In order to uncover these impeded beliefs and to replace them with productive beliefs, this research proposes a systematic use of student portfolios to assess and develop metacognition in English language learning among the Thai learners.

Student portfolios are generally designed as a collection of learners' choices of their own work, attached with their reflections on the learning process and their attitudes or beliefs about language learning. It is a tool which was proven to effectively prepare the learners who have had teacher-centered experiences, to accept the new role as owners of their learning processes in a more learner-centered approach to learning. Therefore, this research attempts to explore the

implementation of student portfolios, with regard to the assessment and development of metacognition among the Thai EFL learners.

The present research is developed based on sociocultural theories when seeking to explore the benefits of social, self, and artifact mediations for metacognition development. The portfolio, as an artifact mediator, is planned to be used as an awareness raising task. The learners, as self-mediators, are expected to reflect on and gradually develop their metacognition. The teacher, as a social mediator, will be asked to provide feedback based on the information in the portfolios. The learners will have opportunities to share beliefs and learning strategies with their teacher. The learners are expected to develop the knowledge about language learning and the use of metacognitive strategies through these mediated activities. The research results will contribute to: (1) understanding the use of student portfolios to assess metacognition of the Thai EFL learners; and (2) an alternative approach to develop the learners' attitudes and behaviors toward EFL learning.

II. LITERATURE REVIEW

A. *Metacognition*

There are many authors who define the term *metacognition* in slightly different ways. In education psychology, Schraw and Moshman (1995) describe metacognition as learners' theories of their own cognition. This theoretical knowledge about cognition is believed to affect learners' cognitive and social performances, and develop slowly through personal experience.

In language learning, however, Wenden (1998) conceptualizes metacognition as knowledge about: (1) self as a learner; (2) learning task; and (3) learning strategies. He also believes that this knowledge is storable. In other words, it can be articulated. In the contrary, Schraw and Moshman (1995) argue that metacognition is not always storable, yet it can only be made storable through the kind of consciousness raising activities.

Numerous authors in the field of second and foreign language learning also refer to the term metacognitive knowledge as one component of metacognition. Metacognitive knowledge is learners' beliefs about their own cognition or mental processes, and language learning processes. This knowledge can be acquired through formal instructions or learning experiences. Metacognitive knowledge includes, for example, recognizing which kinds of learning tasks cause difficulty, which approaches to remembering information work better than others, and how to solve different kinds of problems (Richards, Platt, & Platt, 1992). It is also thought to influence the kinds of learning strategies that learners choose.

Metacognitive strategies in language learning, as the other component of metacognition, involve planning and monitoring the learning process while it is taking place, and evaluating the learning after it has occurred (Richards, Platt, & Platt, 1992). In summary, metacognition is an integration of metacognitive knowledge and metacognitive strategies into a systematic framework of cognitive learning and learning behaviors. It is the learners' knowledge or beliefs about cognition and learning, and the ability to use this knowledge to plan, monitor, and evaluate their language learning. The learners' metacognition influences the degree of autonomous behaviors toward learning.

B. *Approaches to Metacognition Development*

Previous studies propose three different theoretical approaches to develop metacognition, which are: (1) the cognitive theory of instruction (Chamot, & O'Malley, 1994); (2) the humanistic theory of self-directed language learning (Wenden, 2001); and (3) the sociocultural theory of social-interaction and mediation (Donato, & McCormick, 1994; Lantolf, 2000; 2006).

According to the cognitive theories, learners are active participants and their cognition can be restructured. Instruction, based on cognitive theories, is an explicit instruction of learning strategies of the successful language learners to the less successful language learners. The self-directed language learning, according to humanistic theories, emphasizes the importance of human thought, feeling, and emotion. The main aim of the instruction is to develop learner autonomy through self-directed language learning and metacognitive strategies training. The context of language learning is a self-access center where learners take full responsibilities for their learning and the teacher has the role as a counselor.

Both approaches of metacognition development have an emphasis on individual learner development. However, they overlook the significance of social environment in language learning where metacognition development could occur. The other disadvantage of the two approaches is that they neglect the importance of metacognitive knowledge development. Improved metacognitive knowledge seems to be a consequence of learning strategies and metacognitive strategies training.

Sociocultural perspectives on second language learning, on the other hand, aim to develop both metacognitive knowledge and strategies at the same time. Sociocultural theories encompass cognitive views of active learners and cognitive reconstruction, and humanistic views of developing the whole person in language learning. However, sociocultural theorists argue that learners construct and re-construct knowledge within a social interactional framework. In other words, they believe that learning occurs through interactions in the sociocultural activities. Therefore, "the focus of study and development is shifted from individual to activities and settings, and the learning that inevitably accompanies social practices" (Norton, & Toohey, 2001).

Metacognition, according to sociocultural theories, should be developed in a learning supportive context through collaborative works. The teacher has a role as mediator who helps mediate learners' learning attitudes and skills within their *zone of proximal development*. The teacher, as mediator, can provide learners with mediated learning experiences through the use of either symbolic or physical tools. Portfolio is believed to be one of the tools that help develop metacognition in second language learning through social, self, and artifact mediations.

C. Portfolios and Second Language Learning

Danielson and Abrutyn (1997; as cited in Ikeda, & Takeuchi, 2006), based on their review of various definitions of portfolios, find that most definitions share the following three characteristics: (1) they are purposeful; (2) they are collections of learner's work; and (3) they include learner's reflections on each work. However, teachers should be aware that student portfolios are not a mere collection of random pieces of work, but they require a systematic plan.

Sa Chares (1997; as cited in Nunes, 2004) suggests that "the portfolio may be conceived as a long letter written to one's self and to others, and always returned. However, when it gets back to the student, it is enriched by a new perspectives, new information, new insights, advice and support". Hence, Nunes (2004) adds the other principle of portfolios, that they should facilitate ongoing interaction between teachers and learners. The portfolios to develop students' metacognition tend to follow Nunes' (ibid) principles of developing portfolios: (1) it should document reflective thought of the learner; and (2) it should facilitate on-going interaction between the teacher and the student.

There are several advantages of using portfolios in language learning as mentioned by Ioannou and Pavlou (2003). Firstly, portfolios offer a way of individualizing the learning and assessment process, as they are not uniform for the whole class. Secondly, portfolios enhance children's overall involvement both in the learning and assessment processes. Thirdly, the children are also empowered, and thus they develop a feeling of trust and respect for their teachers. The main disadvantage of using portfolios in the classroom is that it requires training for both the teacher and learner on the reflection and assessment processes, and it requires time for them to become familiar with this non-traditional approach.

D. Research Studies on Metacognition and Application of Portfolios in Language Learning

There have been many research studies conducted on metacognitive knowledge in second language learning (Howitz, 1985; Cotterall, 1995; 1999; Kern, 1995; Sakui & Gaies, 1999; Yang, 1999). Recently, there have been an increasing number of research studies which use portfolios either as a research tool, or a tool for learner development in second language learning. Ikeda and Takeuchi (2006) use the portfolio as a research tool in analyzing and comparing reading strategies used by high-proficiency and low-proficiency students. They found the portfolio was useful for revealing the processes of learning and using reading strategies.

Rea (2001) studies the implementation of the portfolio as a tool for reflection in a process writing course. The results show that, for students who have not been trained to reflect on their learning, the activities like writing reformulation, journal writing, and portfolios can encourage them to reflect on learning process and to see their own strengths and weaknesses. Nunes (2004) also studies portfolios as a tool to develop reflective learning among the high-school students and lists two major benefits of portfolios which are: portfolios as a dialogic interactional tool; and portfolios as a basis for reflection.

Cotterall (1995) studies learner beliefs and readiness for autonomy in language learning. These studies provide insights into EFL learners' metacognitive knowledge and its influences on learners' regulation of language learning. They also provide useful tools to investigate metacognitive knowledge and learning strategies. However, they did not show in detail how metacognitive knowledge and metacognitive strategies, or metacognition in short, could be enhanced among the language learners.

III. METHODOLOGY

A. Research Objectives

Three main research aims are: (1) to explore how the students reveal their metacognition in language learning through the portfolios; (2) to examine, through the portfolios-based interview, the usefulness and practicality of the portfolio for EFL learning/teaching from the students' point of view; and (3) to study how the portfolios help develop metacognition of the Thai EFL learner.

B. Research Design

1) Experimental methodology

This research was conducted as an experiment and questionnaires were used to provide quantitative results. The experiment involves, first, having the participants divided into two groups of: (1) control group; and (2) experimental group. On the first day of the English class, the students in both groups were asked to complete the questionnaire adapted from Cotterall's (1995) assessment of the learners' beliefs about language learning. The questionnaire composed of 40 questions which assess the learners' level of metacognition or their awareness of issues related to language learning (Appendix 1).

Then, the researcher made an experimental treatment to the experimental group. Throughout the whole term, the experimental group was assigned to complete the portfolios in addition to their homework, whereas the control group

only had to complete their homework. Following the experiment, the questionnaires were administered with both groups. Comparing differences between the pre- and the post-test scores of the experimental and the control groups helps determine whether change in the test scores was effected significantly by the experimental treatment.

2) *Student Portfolio*

Students in the experimental group were required to keep reflective record of their learning in the portfolio on a weekly basis. The design of the portfolio activities follows the guidelines and principles of developing portfolios proposed by Ioannou and Parlou (2003), and Nunes (2004). The portfolio was divided into two main parts, which are: My English Biography; and My English Dossier. The teacher was asked to provide general guidelines for keeping the student portfolio on the first week of the English lesson. The teacher was also asked to provide feedback on the students' record.

3) *Interview*

The semi-structured interview was conducted to investigate specific issues related to some of their answers in the questionnaire and comments about the portfolios. Four students, whose portfolios showed more detailed information of their ideas compared to the other students, were chosen from the experimental group. The main aim of using the interview is to probe further into some points in order to find clarification in detail and to be able to answer the research questions more accurately. The questions are opened-ended in their design.

C. *Participants*

The students were high school students at the public school selected on the basis of purposive sampling and availability. Class 1 served as an experimental group, and class 2 as a control group. In total, there are 53 male and female students; all around 14-15 years old (Table 1). These students can be assumed to have an equal level of English proficiency. Although the students had been learning English since they were five years old, their English proficiency was still very low. The students in both classes have the same English teacher. The teacher is a female Thai teacher of English. She has continually modified her teaching methods to meet the needs of the national curriculum and at the same time to develop communicative skills and also thinking and learning skills.

TABLE 1
NUMBER OF PARTICIPANTS

Participants		STAGE	
		Pre Test	Post Test
Class 1: (Experimental Group)	Number of Student	29	29
Class 2: (Control Group)	Number of Student	24	24
Total	Number of Student	53	53

IV. RESULTS

The independent samples *t*-tests were used to find the statistical significance of the students' perceptions of each question item. *f*-tests were then carried out to determine the outcome of the intervention and to test whether the use of student portfolio significantly differentiate metacognition of students in the experimental group from those of students in the control group.

A. *Questionnaires Results*

1) *Comparison of Pre-test and Post-test Scores of Experimental Group Students*

Tables 2-4 show the statistical analysis results which provide descriptive data to determine metacognition factors with significant difference comparing pre- and the post-intervention within the experimental group.

TABLE 2
LEVEL OF ATTITUDE OF THE STUDENTS TOWARD APPROACH TO LANGUAGE LEARNING

		Mean	SD	F	Sig.
Positive praises from the teacher are among most important rewards in successful language learning	Pre Test	3.6207	0.7277	6.4112	0.0142
	Post Test	4.1034	0.7243		
I believe feedback on my language learning from the teacher helps me most	Pre Test	4.1724	0.6017	7.2518	0.0093
	Post Test	4.5862	0.5680		

TABLE 3
LEVEL OF ATTITUDE OF THE STUDENTS TOWARD THE ROLE OF TEACHER IN LANGUAGE LEARNING

		Mean	SD	F	Sig.
I believe that the role of the teacher is to give me regular tests	Pre Test	4.1724	0.7106	5.0118	0.0292
	Post Test	4.5517	0.5724		

TABLE 4
LEVEL OF ATTITUDE OF THE STUDENTS TOWARD THE LEARNER CONFIDENCE IN LANGUAGE LEARNING

		Mean	SD	F	Sig.
I believe that I should find my own opportunities to use the language	Pre Test	3.3448	0.6695	10.5981	0.0019
	Post Test	3.9655	0.7784		

There is no significant difference within the experimental group between pre- and post-intervention in terms of attitude of the students toward the role of learner in language learning.

2) Comparison of Pre-Test and Post-Test Scores of Control Group Students

Tables 5-6 illustrate the metacognition factors with significant difference of the student in the control group.

TABLE 5
LEVEL OF ATTITUDE OF THE STUDENTS TOWARD APPROACH TO LANGUAGE LEARNING

		Mean	SD	F	Sig.
I believe that opportunities to use the language should be provided by the teacher	Pre Test	2.2917	0.6903	4.0636	0.0497
	Post Test	1.8750	0.7409		

TABLE 6
LEVEL OF ATTITUDE OF THE STUDENTS TOWARD THE ROLE OF LEARNER IN LANGUAGE LEARNING

		Mean	SD	F	Sig.
I believe that the role of the learner is to know what difficulties he/she has when learning English	Pre Test	4.1250	0.5367	4.0636	0.0497
	Post Test	3.7083	0.8587		

While the experimental group significantly agrees more that “the role of the teacher is to give regular tests” and “I should find my own opportunities to use the language”, there is no significant difference within the control group between pre- and post-test in terms of attitude of the students toward the role of teacher in language learning, and toward the learner confidence in language learning.

B. Portfolios Results

The analysis of the student portfolios uncovers metacognition of the Thai EFL learners. The first section of the student portfolio results shows metacognitive knowledge with regard to the language teaching and learning, and the second section describes the current use and development of metacognitive strategies in EFL learning.

1) Metacognitive Knowledge

The results reveal that the students’ opinions related to language teaching and learning can be accessed through the portfolios. The opinion can be categorized into four main groups of factors, which are: the teacher and teacher’s role; learners’ role; English language learning; and learner confidence.

(1.1) Attitude toward the teacher and teacher’s role

The students show their high respect for the teacher and her advice on how to learn English. The example of this respective attitude is shown in S2 and S12’s portfolios.

S2: “The teacher always say that if you want to be good at English you have to work hard on studying and practice vocabulary recitation, and I believe her and try to do what she said”

S12: “I used to hate vocabulary recitation when I was young because the teacher punished by beating if we could not do, but the teacher in high school is so kind and understanding so I started to think English is important and we should learn and be able to use it”

Regarding the teacher’s role, most students are able to comment on what the teacher should and should not do in the classroom in relation to language teaching. The results, some of which are shown below, also indicate that the students are teacher-dependent.

S35: “I want the teacher to speak slowly and explain in detail”

S34: “The teacher should give me more practices, lead me to read more again and again”

S20: “I want the teacher to tell 5 new vocabularies every day so we can recite and memorize” and “The teacher should review after the class whether the students understand or not”

In addition to the teacher’s role in the aspect of language teaching and learning, the students also record their attitude toward the role from the humanistic perspective that the teacher plays an important role in making the classroom atmosphere become an encouraging and comfort place to learn the language. Examples are shown in S31 and S30’s portfolios.

S31: “I want the teacher to smile more often, because her smile comfort the students”

S30: “I like the teacher to say more jokes so students will not get bored”

(1.2) Attitude toward learner’s role

The only role that the students seem to believe they have in relation to language learning is ‘learner as follower’. Examples of this attitude are shown as follows:

S34: “I will take advices from the teacher to improve my learning”

S15: “If students want to learn best they should pay attention to what the teacher teach. If we don’t try to understand we don’t have chance in the society”

The students' attitude toward the learner role as follower correlates with the attitude toward the teacher as controller who holds the most responsibilities in language learning.

(1.3) Attitude toward English language learning

The students only have a few ideas on what learning the language should be. The common goals in studying English that the students understand are: (1) to use in daily life; (2) to progress in future career; and (3) to speak English with foreigners. Some students, as shown below, reveal how they see the native speaker as a role model.

S33: "Learning with the native speaker of English gives me courage to speak English in daily life"

S30: "Learning with the native speaker help we know how to pronounce correctly"

S21: "I want to have the native speaker to teach us so we can have courage to speak to foreigners"

These ideas also show how they value the importance of pronunciation in addition to vocabulary knowledge. The results also reveal the students' ideas toward the learning activities which should be variety and interesting to them. However, the goal of these activities is vocabulary learning, which show the belief of these students that learning English is mainly to learn vocabulary.

(1.4) Learner confidence in language learning

Almost all think English is difficult and that is why they do not like learning English.

S35: "I am not good at English, though I have tried to remember I often forgot but I am trying and trying"

S32: "English is difficult so I don't like learning it, I can't remember vocabularies"

S10: "I want to be good at English and know many words but no matter I have tried I can't remember vocabularies and I can only remember some easy words"

2). Metacognitive Strategies

The data from the portfolios also show how the students develop their skills in reflecting on learning; setting their learning goals; planning their own learning; and assessing their own learning.

(2.1) Reflecting on learning

The student can reflect on what they have learnt and what activity they have undertaken in the class more fluently than describing their attitude toward the usefulness and difficulties of the content they have learnt.

(2.2) Setting learning goals

The results show learning goals set by the students when they were asked to do in the "homework" section in the portfolio. The students seem to set the goals in accordance with what the teacher taught in the class and told them to do for homework in that week. For example, for the week that they learn informative and interrogative sentences, the goal is "To learn telling and questioning about things" and "To achieve what the teacher taught". This strategy or skill to set learning goals, did not change from the first to the last week of the research.

(2.3) Planning for learning

The data, as shown below through some examples, reveal that the students are unable to make a plan for their own learning. The results prove that the students can not differentiate how to describe their ways of learning, planning for learning, or process of learning without help from the teacher. The results show the students lack ability to plan their learning from the first to the last week of the research.

(2.4) Assessing learning

Similar to the way they set their learning goal, the students seem to only see the result of their practicing in accordance with the objective that the teacher told them to do the homework. For example, for the week that they learn 'how much' and 'how many', they assess their learning that "I get to know more about using how much and how many".

C. Interview Results

Four students from the experimental group were interviewed and the results reveal two main categories of the perception toward the portfolios from the students' point of view, which are: (1) The Usefulness and Limitation of the Student Portfolios; and (2) The Design of the Portfolio.

Every respondent agrees that doing portfolios gives them chances to express ideas to the teacher. However, while students write their suggestions about teaching to the teacher, the teacher only responds very generally for a few times.

Most students also agree that the portfolios are also useful in terms of: (1) helping them memorize what they studied; (2) helping them review and reflect on things they have studied in the class; (3) helping them see their progress. However, the answers show they do not think their attitudes toward the teacher and learner's roles have changed although the results from the pre- and post-test show that some particular attitudes in language learning of these students have changed after doing the portfolios.

The second issue is the design of the portfolio. As seen from their portfolios, the students prefer drawing much more than writing about English learning. The Thai students are used to asking to choose from the provided choice rather than writing, although they think they can write to explain their opinion related to the class work. Finally, the students agree on one part that they dislike which is 'homework'. They do not like this part because they have to do it by themselves at home while not understanding how to do it.

V. DISCUSSION

These findings with reference to the extent to which the Thai learners' level of metacognition could be revealed through the use of student portfolio show that the portfolios are a good mediated tool to uncover the students' metacognitive knowledge especially the attitude toward the teacher and the teacher's role. Since the students prefer to write their ideas down in the portfolios more than telling the teacher directly, the portfolios help the teacher to understand what the students actually think about the teacher herself and the teaching.

The portfolios also help revealing the students' current level of metacognitive strategies. However, for the ability to reflect on learning process and learning task, the students can only reflect on facts of things they have learnt but not their feeling toward those things. Wenden (1998) differentiates knowledge about fact of the task (domain knowledge) from knowledge about feeling toward the task (task knowledge), and points out that when the students reflect on their feelings, it is more useful for both the students and teacher than reflection on facts.

Furthermore, the students cannot differentiate how to describe their ways of learning, planning for learning, and process of learning without help from the teacher. Tudor (1992) noted that "learners with a dependent attitude are likely to feel less at ease in assuming an active and contributory role in planning their learning". The portfolios in this research, therefore, reveal that the students need supportive training on learning skills and metacognitive strategies.

For the use of student portfolio to develop the Thai learner's level of metacognition, the findings from the questionnaires reveal that the mean scores of attitude toward teacher roles from the students in the control group do not change as much as those of the students in the experimental group. However, the experimental group changes their attitude to depend more on the teacher's feedback. This may be because using portfolios without teacher feedback increases teacher-dependency on the students and triggers the acknowledgment of their potential as active learners at the same time.

Among usefulness of the portfolios, the most important advantage perceived by the students is that it provides a space to express their views to the teacher. However, the results show that though the students see value in expressing their ideas in the portfolios, the teacher did not pay enough attention to the portfolios. These incongruent attitudes toward values of ideas cause the portfolios to be ineffectively used, especially in this classroom where the students depend so much on the teacher. The teacher and the students both need training in reflecting and thinking processes.

DeSautel (2009) suggests that reflection practices and training can only exist in the classroom with support from the school system, for example: (1) the curricula should contain explicit aim of developing learners' self-awareness; and (2) explicit time allotting for developing reflection practices for both teachers and learners should be provided. In addition, the institutional and national examinations should have more orientation on aspects of performance, attitude, and proficiency-based examination. These issues are important for fostering development of multiple skills in language learning including language and metacognitive skills.

VI. CONCLUSION

This research has explored the systematic use of student portfolios to assess and develop metacognition in EFL learning. The results of the explorations so far constructs some useful knowledge about the use of student portfolios as an alternative approach in EFL learning, and as a resource for self, social, and artifact-mediated tool to develop metacognition. The research findings in general have also provided a support to the initial assumptions based on the sociocultural theory that learners need a supportive context and collaborative works to construct and re-construct knowledge. Although the portfolios were proved to effectively document reflective thought of the learners, the thoughts were not developed correctly due to lack of ongoing interaction and support from the teacher. This research result and discussion have indicated how insights yielded can be applied by those EFL teachers who wish to make the student portfolios an integral part of their language instruction and assessment. The conclusion, therefore, will outline suggestions for the more practical and effective implications of the student portfolios in EFL learning.

The suggestion for EFL teachers is that they should gradually integrate thinking skills training into basic language learning activities, but not abruptly changing the whole culture of the teaching and learning. The recommendations for the EFL education policy and the teacher training is that, for the more effective use of the portfolios, both teacher and learners need institutional and national strategic planning to allocate efficient time for metacognition training. Teacher education programs should involve the study of metacognitive awareness and strategies training in their curriculum. The development of teacher training curriculum to incorporate metacognition training is hoped to awaken teachers and education planners' awareness of the importance of metacognitive intelligence.

Future research on mediated language portfolios may be conducted with more mature learners. Mature learners tend to have a wider experience than the young learners in the present research. Thus, they tend to develop more varied reflective ideas in their portfolios. Future research may also be conducted into the experimental study on the use of student portfolios and at the same time provide metacognition training to find out to what extent the training helps develop both teacher and learner's reflective skills.

APPENDIX 1. METACOGNITION: PRE-TEST AND POST-TEST (ADAPTED FROM COTTERALL, 1995)

Please indicate how much you agree or disagree with each of these statements about your language learning by circling the number which matches your answer.

strongly agree **agree** **neutral** **disagree** **strongly disagree**
1 **2** **3** **4** **5**

Section 1 Learner’s perceptions towards language learning

- S1-1 I am willing to find my own way of practicing if I get help from the teacher
1 2 3 4 5
- S1-2 I believe feedback on my language learning from the teacher helps me most
1 2 3 4 5
- S1-3 I believe that opportunities to use the language should be provided by the teacher
1 2 3 4 5
- S1-4 I believe the teacher can teach me the best way to learn a language
1 2 3 4 5
- S1-5 I believe the teacher should be an expert at showing students how to learn
1 2 3 4 5
- S1-6 I believe to learn English is to learn grammar and vocabulary
1 2 3 4 5
- S1-7 I know how to study English well
1 2 3 4 5
- S1-8 I believe my language learning success depends on what the teacher does in the Classroom
1 2 3 4 5
- S1-9 Positive praises from the teacher are among most important rewards in successful language learning
1 2 3 4 5
- S1-10 I believe the teacher’s preparation is very important in successful language learning
1 2 3 4 5

Section 2 Learner’s perceptions towards the teacher roles in language learning

- S2-1 I believe that the role of the teacher is to tell me what to do
1 2 3 4 5
- S2-2 I believe that the role of the teacher is to help me to learn effectively
1 2 3 4 5
- S2-3 I believe that the role of the teacher is to tell me what progress I am making
1 2 3 4 5
- S2-4 I believe that the role of a teacher is to say what my difficulties are
1 2 3 4 5
- S2-5 I believe that the role of the teacher is to create opportunities for me to practice
1 2 3 4 5
- S2-6 I believe that the role of the teacher is to decide how long I spend on activities
1 2 3 4 5
- S2-7 I believe that the role of the teacher is to explain why we are doing an activity
1 2 3 4 5
- S2-8 I believe that the role of teacher is to set my learning goals
1 2 3 4 5
- S2-9 I believe that the role of the teacher is to give me regular tests
1 2 3 4 5
- S2-10 I believe that the role of the teacher is to offer help to me
1 2 3 4 5

Section 3 Learner’s perceptions towards the learner roles in language learning

- S3-1 I believe that the role of the learner is to be able to see the progress he/she makes
1 2 3 4 5
- S3-2 I believe that the role of the learner is to test how much he/she has learned
1 2 3 4 5
- S3-3 I believe that the role of the learner is to try new things out by oneself
1 2 3 4 5
- S3-4 I believe that the role of a learner is to know which aspects of English he/she wants to improve
1 2 3 4 5
- S3-5 I believe that the role of the learner is to find opportunities to practice English
1 2 3 4 5
- S3-6 I believe that the role of the learner is to plan his/her own English learning
1 2 3 4 5
- S2-7 I believe that the role of learner is to set his/her learning goals
1 2 3 4 5
- S2-8 I believe that the role of the learner is to know what difficulties he/she has when learning English

1 2 3 4 5
S2-9 I believe that the role of the learner is to look for solutions to his/her problems

1 2 3 4 5
S2-10 I believe that the role of the learner is to seek help from the teacher

Section 4 Learner's confidence in his or her own language learning ability

S3.1 I am confident about finding my own ways of practicing

1 2 3 4 5
S3.2 I believe that I can communicate in English without knowing the rules

1 2 3 4 5
S3.3 I am confident about checking my work for mistakes

1 2 3 4 5
S3.4 I am confident about explaining what I need English for

1 2 3 4 5
S3.5 I am confident about setting my own learning goals

1 2 3 4 5
S3.6 I am confident about planning my own learning

1 2 3 4 5
S3.7 I believe I know best how well I am learning

1 2 3 4 5
S3.8 I believe feedback on my language learning that I give myself helps me most

1 2 3 4 5
S3.9 I believe that I should find my own opportunities to use the language

1 2 3 4 5
S3.10 My own effort plays an important role in successful language learning

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