

## **FACILITATING THE DEVELOPMENT OF STUDENTS' METACOGNITIVE AWARENESS IN SPEAKING THROUGH SELF-ASSESSMENT**

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### **Abstract**

The need of developing metacognitive ability-knowing students' cognitive capacity, the difficulties they meet in learning, and strategies to resolve the difficulties – must be highlighted. In accordance with this need, this research aims to find out the extent of which the implementation of students' reflection, as a self-assessment, can facilitate students' metacognitive awareness in a speaking class. This two-cycle action research involved 25 freshmen majoring in Dentistry whose placement test scores ranged between 453 and 617. This study took place in a Free Conversation class in a Language Training Center of a private university in Yogyakarta, Indonesia. For data collection, a 52-items questionnaire entitled "Metacognitive Awareness Inventory" (MAI) adopted from Schraw and Dennison (1994) was distributed as the instrument to measure students' metacognitive awareness before and after the action, and the participants were required to write reflections. Teacher's journals and class discussion were taken to triangulate the findings. The findings showed that in the first cycle, the students haven't been able to describe their experiences including the difficulties they met during the learning as well as the strategies must be applied to overcome the difficulties. In the second cycle, most of the students have grown their metacognitive awareness as they were able to express their difficulties and the strategies in handling them. Briefly, the reflection written by the students has initiated the growth of students' metacognitive awareness regardless some constraints appear. Thus, requiring students to reflect on their own learning and harness their metacognitive awareness may result in better learning.

**Keywords:** *Metacognitive awareness, speaking performance, students' reflection*

### **INTRODUCTION.**

An issue of speaking performance as one of the indicators of a successful learning grabs much attention among students. To

achieve certain standards, there have been many ways taken by both teachers and students including by developing students' metacognitive awareness. Students are encouraged to be able to be aware of their own cognitive ability in learning *English*, the tasks they should perform, and the strategies effective for them in achieving the learning goals. Therefore, the importance of harnessing students' metacognitive awareness is essential in learning English as a foreign language (EFL). To this end, one instrument providing a reflection on what they have done, what they have achieved, what difficulties they met, and which strategies they need to take are considered beneficial.

The ability to speak, as a productive skill of English, has garnered much attention from both teachers and students as it is considered as an indicator of one's success in his/ her learning and of their communicative skills. Ariyanti (2016) stated that students' performance in speaking is not only influenced by students' proficiency in the respective skill but also the students' psychological aspects regarding their confidence and anxiety level. In order to deal with the issues in speaking, it is essential for the students to consciously address their ability in speaking, what difficulties they face, and how to solve them so that they can achieve the learning objectives successfully.

With respect to the ability of realizing one's mental processes, the role of metacognition, which is simply defined as "thinking about thinking" (Zulkiply et al., 2008), is necessary. It is understood in that the students' consciousness of their actual ability on particular skills. Zulkiply et al. (2008) also agree that the students aware of their own learning process are more potential to be successful learners. This ability also requires one's ability to be self-reflective on what he/ she thinks and knows.

To harness the metacognitive awareness of the students, effective instruments to facilitate the learnersto develop their self-reflection ability are needed. In this paper, writing students' reflection on their learning is considered as one of the ways to assist students in harnessing their metacognitive awareness.

However, the researcher's observations during her teaching made her conclude that there are not many students aware of the

importance of the metacognitive awareness for students in their learning. Thus, this research applied action research as it attempts for changes. The researcher herself would like to find out the changes may occur in the students after they are given reflections on their learning.

Ghapanci, Z. and Taheryan, A. (2012) studying linguistic knowledge, metacognitive knowledge, and metacognitive strategy found that these three variables have significant role in speaking and listening proficiency. Hmelo, et al (1997), metacognition can be initiated from problem-based learning requiring self-directed learning. In doing self-directed learning, the students must be aware and able to evaluate their own knowledge regarding the difficulties they met during the learning. Therefore, harnessing students' ability in doing the aforementioned learning is a vital step. One way to harness this ability is through reflective learning including through self-reflection resulting in students' awareness in the learning process (Colomer, J. et al, 2013). However, there are still few studies researching on how much writing reflections will help students in growing their metacognitive awareness on their own learning in speaking classes particularly in higher education setting.

In this study, Free Conversation class is considered appropriate to be researched as it is a subject requiring students to speak English a lot. Even, all of the scoring components determining the students' final score in the end of the semester are all spoken tasks requiring students to speak sufficiently and adequately in English. Only by doing so, the students of this Free Conversation class can pass the subject as expected.

In order to make improvement based on the existing problem, action research is considered the most suitable approach to conduct this research. Based on the issues discussed, the following research question is formulated:

**1. To what extent does students' reflection facilitate their metacognitive awareness in speaking?**

Hence, this study aims to find out how much students' reflection contribute to growth of metacognitive awareness as well as finding

out which aspects of speaking are facilitated in the learning process, particularly in a speaking class.

## **LITERATURE REVIEW**

There is much attention given to speaking in English learning. Students have various reasons of pursuing such ability. The benchmark of performance reflecting students' proficiency is based on certain standards such as CEFR. It seems like something that needs much effort. Moreover, as a foreign language, Indonesian students have very little exposures of using English outside the classrooms. English is merely considered as a compulsory subject they have to learn to meet the expectations of the curriculum set. Therefore, to achieve the standards, students need to have their own strategies in learning English as a foreign language (Sanchez et al., 2015). Seifoori (2015) emphasized that particular planning on learning will result in the improvement of the students' performance on their productive skills including speaking skills.

Many studies have researched on metacognitive awareness and its impacts on performance and achievements. According to Flavell (1976) as cited in Rahimi and Katal (2011), metacognition covers three aspects that is people's knowledge on their own cognitive ability, task knowledge (what they know necessary to complete a task), and strategy knowledge (effective strategies taken to achieve goals). Therefore, the awareness of students on these three aspects of knowledge in metacognition will likely facilitate them to improve their performance particularly in speaking. Seifoori (2015) found that metacognitive awareness covering the ability to apply appropriate learning strategies will likely contribute to speaking fluency.

To facilitate them developing this ability, reflection is considered as an effective instrument as it allows the students to reflect on what they have done, what they have achieved, the difficulties they met, and the strategies they need to take. To be reflective means to mentally wander through where we have been and to try to make some sense out of it. Most classrooms are oriented more to the present and the future than to the past. Such an orientation means that students (and teachers) find it easier to

discard what has happened and to move on without taking stock of the seemingly isolated experiences of the past. Teachers use many strategies to guide students through a period of reflection (Costa & Kallick, 2008). Renandya and Widodo (2016) strengthened that reflective practice is not only about recalling the experience, but also collecting evidence to support the experience. Similar to Renandya, Richard (2005) defined reflective practice as a critical reflection representing “an activity or process in which an experience is recalled, considered, and evaluated”. Thus, writing reflection likely involves students’ ability to recall and assess the experiences during learning reflecting their metacognitive awareness ability.

## **RESEARCH METHOD**

This research was a participatory classroom action research employing both qualitative and quantitative instruments in collecting the data to answer the aforementioned research question. The participants were 25 students of a Free Conversation class in a Language Training Center of a private Islamic University in Yogyakarta, Indonesia. They were all freshmen from Dentistry Department in this university. In this institution, all freshmen must take a placement test to divide the level. All of the participants in this class started their first English class in their first semester meaning that all of them have relatively high placement test score (ranging from 453-617). One reason why the researcher chose a Free Conversation class was its scoring components. All components of this subject dealt with speaking abilities of the students. Being failed in performing well in each component, the students would result in poor, or even failed score in the end of the semester. Thus, the researcher was interested to implement the action of using students’ reflection to facilitate their metacognitive awareness. Then, the students having high metacognitive awareness would be able to perform better in the class.

As it was a classroom action research, there were cycles taken. The cycle was adapted from a cycle from Kemmis and McTaggart (1988) consisting of Plan, Act and Observe, and Reflection. In this research, there were two cycles consisting of 3 meetings for each

cycle. The researcher decided to do so as she must deal with the limited number of meetings in this semester. The meeting plan of the two cycles had been arranged before conducting the research (see Appendix 1).

For the pre-survey and post-survey, the researcher distributed a 52-items questionnaire entitled “Metacognitive Awareness Inventory” (MAI) adopted from Schraw and Dennison (1994). This questionnaire was used to find out the previous awareness level of students before the research and to find out the latter awareness level as the results of the actions implemented during the research.

During the research, the researcher observed the class and the students to find out the changes may occur as the results of the implemented action. The reflections written by the students were also used as the data to find changes in their metacognitive awareness ability. Besides, the researcher also wrote journals on her teachings. To triangulate the data, the researcher conducted a class discussion with the students to dig and validate more information.

## **FINDINGS AND DISCUSSION**

### **First Cycle**

In the first cycle, from the class discussion, the students admitted that they had never been informed about metacognition. The topic of metacognition and its significance to their learning had been a new thing they know. Even though they had not known metacognition before, some of them declared that they had realized their weaknesses and strengths in speaking English. However, they had not implemented many actions regarding their weaknesses in speaking English.

When asked to fill in the first reflection consisting of 3 questions, the students seemed quite reluctant. Thus, most of the students only answered very briefly and did not elaborate their answers. Their answers for the first question asking how good their speaking performance was in that meeting had shown that they had already been able to assess their own performance on that day even though in a very brief description.

In the next meeting, the researcher found that there were some students having high placement test scores speaking fluently

and confidently during the meeting. They had a wide range of vocabularies, native-like pronunciation, and high confidence. However, the accuracy had not been fully achieved. These proficient and fluent students are the high achievers in this class. They like to speak much in front of the class. Unfortunately, instead of encouraging the other classmates to speak more, they are considered intimidating the others. The other classmates, not necessarily those having lower proficiency, feel intimidated.

In the end of the meeting, a class discussion was held to reflect and evaluate the first 3-questions reflection. It is revealed that most of the students had not been able to express their experiences including the difficulties and strategies they selected to overcome the difficulties met.

Based on this evaluation, the researcher revised the reflection having 11 questions. The researcher expected that the revised reflection may facilitate the students to understand and analyze the learning situations and circumstances they had experienced.

## **Second Cycle**

In the second cycle, the students were asked to fill in the reflections twice. From their answers in responding the questions, they elaborated more compared to their responses on the reflection from the first cycle.

They had a clearer description on their own experiences during the learning. More students were able to identify their weaknesses during each meeting. They could describe their difficulties in speaking English. The difficulties met by the students were the accuracy, vocabularies, and the confidence to speak more in front of others. They were also able to describe the strategies they implemented to face the difficulties. The strategies applied were consulting to online dictionaries or asking the classmates to find the vocabularies, speaking slowly while thinking the accurate structure when speaking, and encouraging themselves to speak more in English. However, there were still students having no idea about the strategies they could apply to handle the difficulties or students feeling that they had not met any difficulties at all in speaking English. The latter group of students were overconfident with their

own proficiency supporting the finding from Schraw and Dennison (1994). However, they actually still had weakness particularly in the accuracy which they did not realize.

### **Pre and Post-Survey Questionnaire Result and Discussions**

The 52 items-questionnaires distributed covers two main factors of metacognitive awareness ability; knowledge about cognition and regulation of cognition. The following table describes the distribution of the questionnaire items.

Table 1.

*Questionnaire Items Distribution*

Factors	Questionnaire items
<b>Knowledge about cognition</b>	—
1. Procedural Knowledge	3, 14, 27, 33
2. Declarative knowledge	5, 10, 12, 16, 17, 20, 32, 46
3. Conditional Knowledge	15, 18, 26, 29, 35
<b>Regulation of cognition</b>	
1. Planning	4, 6, 8, 22, 23, 42, 45
2. Comprehension Monitoring	1, 2, 11, 21, 28, 34, 49
3. Information Management Strategies	9, 13, 30, 31, 37, 39, 41, 43, 47, 48
4. Debugging Strategies	25, 40, 44, 51, 52
5. Evaluation	7, 19, 24, 36, 38, 50

The analysis processed has categorized the items according to the factors each item represents. As the questionnaire was distributed twice, before and after the research indicating some changes in students' metacognitive awareness ability, the results of the aforementioned pre-survey and post-survey are compared.



Table 2.  
*Pre and Post-Survey Results*

Factors	Pre-Survey		Post- Survey	
	True (Mean in %)	False (Mean in %)	True (Mean in %)	False (Mean in %)
<b>Knowledge about cognition</b>				
1. Procedural Knowledge	69	31	74	26
2. Declarative knowledge	70	30	78.5	21.5
3. Conditional Knowledge	79.2	18.8	76.8	23.2
<b>Regulation of cognition</b>				
1. Planning	83.42	16.57	77.71	22.29
2. Comprehension Monitoring	81.14	18.86	78.86	21.14
3. Information Management Strategies	84	16	84.44	15.56
4. Debugging Strategies	93.2	6.4	95.2	4.8
5. Evaluation	76.67	23.33	75.33	24.67

From Table 2, it can be seen that two out of the three aspects of the knowledge of cognition (Procedural and Declarative Knowledge) improve after the students were required to write reflections in each meeting. The highest increase is found in the Declarative Knowledge as shown from the mean in pre-survey is 70% and in post-survey is 78.5%. It is followed by the aspect of Procedural Knowledge increasing 5% from 69% to 74%. On the contrary, the results show that the aspect of Conditional Knowledge decreases from 79.2% to 76.8%.

Meanwhile, the Regulation of Cognition covering the aspects of Planning, Comprehension Monitoring, Information Management Strategies, Debugging Strategies, and Evaluation. Unpredictably, there are three aspects of Regulation of Cognition decrease. The most significant decline is found in Planning which is from 83.42% to 77.71%. Comprehension Monitoring also drops off from 81.14% to 78.86%. However, the results of the other two aspects of

Regulation of Cognition, Information Management Strategies and Debugging Strategies, after implementing the reflection, increase compared to the pre-survey results. The aspect of Information Management Strategies has a slight increase from 84% to 84.44% while the aspect of Debugging Strategies is 2% higher than the pre-survey result.

One possible explanation of the decreased aspects is probably due to the inadequate time implementing the reflection. As Mbato (2013) suggested that the implementation of students writing reflection would be the most prolific when implemented for more than one semester. Developing metacognition needs more reflective practices involving the ability of the learners to regulate themselves (Waters and Schneider, 2010).

## **IMPLICATIONS AND CONCLUSION**

To reiterate the discussion, it is concluded that writing reflection is still considered beneficial as the students will likely learn to consider, assess, and evaluate their experiences during their learning. It is also confirmed that most students may evaluate their performance during speaking covering the difficulties they met such as vocabularies and confidence issues. The possible explanation for the not optimal metacognitive awareness is the adequate time for developing the metacognitive awareness ability which is essential for the most fruitful results in students' abilities regarding the aforementioned aspects. It is then obvious that the limitations of the research is time constraint not enabling the researcher to observe more changes may occur when requiring the students to write reflection to facilitate their metacognitive awareness abilities. Thus, it is recommended that other studies should be conducted to find more changes facilitating students' metacognitive awareness ability conducted longer and more cycles.

The results imply that it is crucial for students to develop their metacognitive ability as it may help them evaluating their own learning to achieve the expected improvement in using the language. As an addition, teachers also have vital role in facilitating and guiding their students to develop their metacognitive awareness by providing

tools beneficial in doing so. Thus, not only the students but also the teachers, must develop their metacognitive ability (Only by doing so, particularly for teachers, they will be able to assess and evaluate their own teachings and then implementing particular strategies appropriate for encouraging students' learning success and for facilitating the development of the students' metacognitive ability as well.

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**APPENDICES**

**APPENDIX 1. RESEARCH PLAN**

<b>CYCL E</b>	<b>MEETI NG</b>	<b>PHAS E</b>	<b>ACTION</b>	<b>INSTRUME NTS</b>
<b>1</b>	<b>1</b>	<b>Plan</b>	Problem Identificati on	Observation
			Pre Survey	A 52-items MAI questionnaire
	<b>2</b>	<b>Act and Obser ve</b>	Asking students to write reflection (1)	Guided Reflection in Google Forms
			On-going observatio n	Observation, teacher’s journal
	<b>3</b>	<b>Reflec t</b>	Asking students to write reflection (2)	Guided Reflection in Google Forms
			On-going observatio n	Observation, teacher’s journal
			Evaluating action based on resulted changes	Class Discussion, teacher’s journal
<b>2</b>	<b>1</b>	<b>Revise d Plan</b>	Revising Plan and Action	All collected data

			Asking students to write reflection (in a revised format) (1)	Guided Reflection in Google Forms
			Asking students to write reflection (in a revised format) (2)	Guided Reflection in Google Forms
	2	<b>Act and Observe</b>	On-going observation	Observation, teacher's journal
			Evaluating action based on resulted changes	Class Discussion, teacher's journal
	3	<b>Reflect</b>	Post Survey	A 52-items MAI questionnaire

## APPENDIX 2. METACOGNITIVE AWARENESS INVENTORY (MAI)

This questionnaire is adopted from Schraw and Dennison's (1994) Metacognitive Awareness Inventory (MAI).

Think of yourself as a **learner**. Read each statement carefully. Consider if the statement is true or false as it generally applies to you when you are in the role of a learner (student, attending classes, university etc.)

Check (☐) True or False as appropriate. When finished all statements, apply your responses to the Scoring Guide.

ITEMS	TRUE	FALSE
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<ol style="list-style-type: none"><li>1. I ask myself periodically if I am meeting my goals.</li><li>2. I consider several alternatives to a problem before I answer.</li><li>3. I try to use strategies that have worked in the past.</li><li>4. I pace myself while learning in order to have enough time.</li><li>5. I understand my intellectual strengths and weaknesses.</li><li>6. I think about what I really need to learn before I begin a task</li><li>7. I know how well I did once I finish a test.</li><li>8. I set specific goals before I begin a task.</li><li>9. I slow down when I encounter important information.</li><li>10. I know what kind of information is most important to learn.</li><li>11. I ask myself if I have considered all options when solving a problem.</li><li>12. I am good at organizing information.</li><li>13. I consciously focus my attention on important information.</li><li>14. I have a specific purpose for each strategy I use.</li><li>15. I learn best when I know something about the topic.</li><li>16. I know what the teacher expects me to learn.</li><li>17. I am good at remembering information.</li><li>18. I use different learning strategies depending on the situation.</li><li>19. I ask myself if there was an easier way to do things after I finish a task.</li><li>20. I have control over how well I learn.</li><li>21. I periodically review to help me understand important relationships.</li><li>22. I ask myself questions about the material before I begin.</li><li>23. I think of several ways to solve a problem and choose the best one.</li><li>24. I summarize what I've learned after I finish.</li><li>25. I ask others for help when I don't understand something.</li><li>26. I can motivate myself to learn when I need to</li><li>27. I am aware of what strategies I use when I study.</li><li>28. I find myself analyzing the usefulness of strategies while I study.</li><li>29. I use my intellectual strengths to compensate for my weaknesses.</li><li>30. I focus on the meaning and significance of new information.</li></ol>		
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<p>31. I create my own examples to make information more meaningful.</p> <p>32. I am a good judge of how well I understand something.</p> <p>33. I find myself using helpful learning strategies automatically.</p> <p>34. I find myself pausing regularly to check my comprehension.</p> <p>35. I know when each strategy I use will be most effective.</p> <p>36. I ask myself how well I accomplish my goals once I'm finished.</p> <p>37. I draw pictures or diagrams to help me understand while learning.</p> <p>38. I ask myself if I have considered all options after I solve a problem.</p> <p>39. I try to translate new information into my own words.</p> <p>40. I change strategies when I fail to understand.</p> <p>41. I use the organizational structure of the text to help me learn.</p> <p>42. I read instructions carefully before I begin a task.</p> <p>43. I ask myself if what I'm reading is related to what I already know.</p> <p>44. I reevaluate my assumptions when I get confused.</p> <p>45. I organize my time to best accomplish my goals.</p> <p>46. I learn more when I am interested in the topic.</p> <p>47. I try to break studying down into smaller steps.</p> <p>48. I focus on overall meaning rather than specifics.</p> <p>49. I ask myself questions about how well I am doing while I am learning something new.</p> <p>50. I ask myself if I learned as much as I could have once I finish a task.</p> <p>51. I stop and go back over new information that is not clear.</p> <p>52. I stop and reread when I get confused.</p>		
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