METACOGNITIVE AWARENESS OF UNIVERSITY STUDENT: A

SURVEY STUDY

A Thesis

Presented to department of English language education partial fullfillment of

requirements to obtain the sarjana pendidikan degree in English language education



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SURVEY STUDY

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STATEMENT OF WORK ORIGINALITY

I honestly declare that this thesis, which I wrote, does not contain the work of others, except for those cited in quotations and references, as a scientific paper should.



Yogyakarta, 20 February 2021

ΜΟΤΤΟ

- * Make your past as a trigger for great changes in your life
- Make the faces of your parents as a reminder to you to work harder and achieve success
- * The outside world is harsh, prepare your mental as strong as steel
- * Crying, complaining, giving up then here we go again



DEDICATION

I dedicate this thesis to all the people who love and care for me until now. I have a lot of shortcomings and this thesis is far from perfect, but I am proud that I can finally be at this point



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Alhamdulillahirobbil'alamin. All good praise belongs to Allah SWT the Most Gracious and Most Merciful for Health and Wellness to finish this thesis as a partial completion to obtain the Sarjana Pendidikan degree in English Language Education. The completion of this thesis could not be separated from the support of many circles.

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> Yogyakarta, 11 Januari 2021

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ABSTRACT

The purpose of this study is to identify the student metacognitive awareness in English language education department in Islamic private university. The population of this research is 90 students from batch 2017. In order to accomplish the objective, this study used quantitative research in the form of survey study. The original questionnaire used in this study is from Schraw and Dennison (1994), which consists 52 statements. Data analysis of this study describes metacognitive awareness employed by university students in English language education department batch 2017 in Islamic private university. The data were classified into metacognitive awareness inventory from Schraw and Dennison (1994): monitoring ($\overline{X} = 3.91$), declarative knowledge ($\overline{X} = 3.87$), procedural knowledge (3.99), conditional knowledge ($\overline{X} = 3.81$), planning ($\overline{X} = 4.02$), information management strategies ($\overline{X} = 3.88$), debugging strategies ($\overline{X} = 3.83$), evaluation ($\overline{X} = 4.02$), while the lowest strategies are conditional knowledge ($\overline{X} = 3.81$). It indicates that the students make more strategies for efficient results.

Keywords: Metacognitive Awareness, Metacognition.

CHAPTER 1

INTRODUCTION

The introduction of the study is presented in this chapter. It covers the background of the study, the identification of the problem, the limitation of the problem and the objectives of the study, as well as the importance of the study as the conclusion of this chapter.

1.1 Background of the Study

The students are unable to self-assess to achieve the highest goals, and students need to be able to understand personal knowledge and strategies, because personal knowledge includes judgments on a person's learning ability and knowledge of internal and external factors that affect success or learning process failure (Vandergrift et al., 2006). It is possible to produce better strategy and thinking with metacognitive awareness in learning process (Heath, 1983). Recent studies have shown that students with metacognitive awareness are better critical thinkers, problem-solvers, or decision makers than students who are not (Bransford et al., 1986). Students also needs self-regulation or self-awareness to reach high rated metacognitive in learning (Pressley & Ghatala, 1990). Self-awareness is important for students to achieve high personal assessment and the highest goals in learning process (Hascher & Oser, 1995).

However, there are still many students who lack self-awareness, are unable to conduct self-assessment for personal assessment, and lack the ability to achieve the highest goals in the learning process (Vandergrift et al, 2006). Recent studies have shown that learners with metacognitive awareness are more strategic and perform better than unconscious learners, Garner & Alexander (1989) and Pressley & Ghatala (1990) suggest. Metacognitive understanding can shift the thinking of students and can allow schedules, sequences and tracking for each individual student to reach the highest goals in the learning process. This research focuses on the metacognitive memory of students at one of the Yogyakarta Islamic Universities. College students tend to develop their own knowledge in the learning process, so it is necessary to map their metacognitive awareness to explain their independent intellectual ability and academic performance (Swanson, 1990); (Pressley & Ghatala, 1990).

1.2 Identification of the Problem

In identification of the problem, problems that potentially appear from the contextualized background are identified and elaborated. Problems like what factor that influence the learning process of the students, and the researcher find the highest problems of the students is lack of self-awareness or self-regulation. As Pressley and Ghatala (1990) states that self-awareness is first important component before cognitive thinking, academic performance, and metacognitive knowledge, so it requires full attention therefore the researcher conducted a small informal interview with few students from English language department. Based on the interview, students assume that what has been prepared and thought carefully is afraid of ending up with mistakes.

1.3 Purpose of the study

The purpose of this study is to identify the student metacognitive awareness of university student.

1.4 Research Question

The researcher would like to formulate the problem as follows, based on the above description:

How are the mapping students of metacognitive awareness?

1.5 Significance of the Study

The study's significance is to make a contribution, particularly in terms of awareness of one's own thinking and strategies. It helps students be more aware of what they're doing and why they're doing it, as well as how the skills they're learning can be applied differently in different situations. This study is expected to be beneficial in terms of providing information for future research on metacognitive awareness.



CHAPTER II

LITERATURE REVIEW

This chapter discusses the study's theories. It covers metacognitive awareness theories and students in an Islamic Private University's 2017 University student batch.

2.1 Metacognitive Awareness

Metacognitive awareness is the understanding of one's own process of thinking and the knowledge of one's own thinking (Flavell, 1979). Flavell (1979) introduced the term metacognition, which is "thinking thought". Currently, most researchers insist on the following point of view: Mechanisms for tracking and improving the efficacy of cognitive programs are required for metacognition (Akturk and Sahin, 2011; Bonner, 1998; Van Zile-Tamsen, 1996). In other words, metacognition involves the knowledge of one's own learning and understanding, the ability to identify the task requirements and then choose the best task to complete the strategy, and the ability to track the progress of the goal to the goal and change the use of strategy. Metacognition has therefore been shown to improve academic performance in learning and teaching metacognitive skills (eg Brown 1978; Bryce et al. 2015; Flavell 1979).

Metacognition is usually used to refer many different cognitive processes. As an umbrella term, all of these basically include a person's own mental state and/or the representation of cognitive processes (Flavell, 1979). Some studies speak about metacognition in the sense of academic achievement. The actual use of techniques to track, regulate, and assess cognitive processes is defined by metacognitive experiences. Knowing research techniques, For example, knowing that the research technique will be metacognitive understanding, a technique will be used to prove metacognitive experience when learning (Flavell, 1979). Flavell (1979) also divided metacognitive knowledge into three domains of knowledge: individual, task, and strategy. Personal awareness is an understanding of one's own learning style and information processing technology, as well as a general understanding of human cognitive processes (Livingston, 1997). Mission awareness and its specifications and requirements are designated as mission knowledge. Finally, strategic awareness means understanding strategies and how each strategy is used (Livingston 1997). The remaining two variables in Flavell's definition of metacognition are goalsintentions and actions when performing cognitive tasks-activities or cognitive functions involved in achieving goals. In newer metacognitive theories, since actions are usually cognitive tasks, this field is rarely discussed because it blurs the necessary gap between cognition and metacognitive practice.

Furthermore, some scholars often explore metacognitive ideas and cognitive activities in the course of learning. According to Pintrich (2000), the goal of success is to focus on displaying skills, gain appreciation for high abilities, protect self-esteem, and focus on comparative expectations in comparison with others, and strive to outperform others. Reverse motivation is related to the objectives of performance, that is, the objective of positive evaluation and the objective of avoiding negative evaluation. Due to these opposite motives, many writers (such as Elliot 1997; Elliot and Church 1997) have proposed a paradigm in which the construction of successful goals is divided into two types: control and prevention. The student is driven by a performance-approach objective to reach higher standards than others and to show high potential. The learner is concerned with preventing the demonstration of poor skill or being dumb with a performance-avoidance purpose.

Ames (1992) found in the study of achievement goal literature that achieving the mastery goal has a significant advantage over the success goal. The presumption that mastery goals are more adaptive than success goals is referred to as a mastery goal, as it means that students are better off focusing solely on mastery in their pursuits of achievement. Recently, Barron and Harackiewicz (2001) found that poorly adaptive learning habits are particularly related to the performance avoidance goals and performance approach goals of successful learning behaviors. Various scholars have also put forward a multi-purpose viewpoint, in which it may be useful to master goals and performance goals.

2.2 Review on Relevant Studies

The first research is conducted by Schraw and Dennison (1994) about metacognitive awareness strategies for college students. They use MAI as an opportunity to recognize students who need intervention in metacognitive strategy and to address implications for future study. The Metacognitive Awareness Inventory (MAI) was developed by Schraw and Dennison (1994) to measure metacognitive knowledge and metacognitive control, referred to as knowledge of the cognition factor and regulation of the cognition factor. In which students use knowledge to coordinate, analyze and assess self-awareness and use of thought. The results indicate that the inventory of metacognitive awareness has a positive effect on the student's test scores. The MAI is made up of 52 questions that tap into these two metacognition components. They found that awareness of cognition and control of cognition components was strongly supported and that, as indicated in the study, these two components were related. The improvement in the metacognitive awareness rate of the student helps them to deal with task knowledge insightfully, prepare for sufficient awareness deliberately and achieve the objectives.

The second study was conducted by Sperling et al. (2004), who studied metacognitive skills and their impact on academic performance indicators. Metacognitive skills are assessed in terms of metacognitive control, metacognitive understanding, or both. They also use metacognitive knowledge (MAI) lists and improve them. Sperling et al. (2004) used MAI to test the metacognitive memory of college students and found that there was an important correlation between understanding cognitive factors and controlling cognitive factors. They are also interested in whether MAI is linked to other academic performance indicators (such as SAT scores and high school averages). They did not find a link between MAI scores and academic performance.

They were shocked to discover a negative correlation between MAI scores and SAT scores. Self-regulation includes individual awareness-raising, time, commitment and assistance. The result shows that there have been variations in MAI scores for experienced graduate learners and less experienced graduate learners using MAI. If a student was a graduate or undergraduate student, the independent variable and the dependent variables were the control of the cognition and perception of the cognition factor. The knowledge of the cognition factor did not differ substantially between the two classes.

2.3 Theoretical Framework

In general, this study contains a choice of metacognitive awareness, metacognitive knowledge, self-regulation, and goal achievement which is used by University students in Islamic Private University batch 2017. In the meantime, this study uses a questionnaire to find out what strategies are used by the students.



CHAPTER III

RESEARCH DESIGN

This chapter explains the research methodology. This includes research designs, populations and samples, data collection techniques, data analysis techniques.

3.1 Research Design

The research design of this study is survey study. The definition of the survey is to collect data from a sample through people's answers to questions (Check & Schutt, 2012). Survey research is appropriate for this analysis because metacognitive research is also suitable for assessing the cognitive level of the respondent on a broad scale using the survey research process.

3.2 Population and Sample

The University students in the final semester are the subject of this report. During the writing process of their undergraduate study, they are selected as respondents because they have undergone the metacognitive process. The population of this research is 90 students from batch 2017 who are in the process of writing their research proposal, based on the data. The total number of population in this analysis is below 100. If the population is less than 100, then according to Arikunto (2006), all the population can be interviewed.

3.3 Data Collecting Techniques

This sub-chapter explores data collection techniques that are instrumental, valid and reliable.

3.3.1 Questionnaire

Schraw and Dennison have the initial questionnaire used to collect the data (1994). The MAI uses the Updated MAI likert-scale to calculate 52 statements (Terlecki & McMahon, 2018). By translating it into Bahasa Indonesia, the questionnaire was changed by the author. The Metacognitive Awareness Inventory (MAI) is structured to test overall self-regulated learning skills across disciplines for researchers and teachers. Each questionnaire technique was classified according to the types of approaches. In the questionnaire, there are two parts. The respondent's background information is the first component. The second component is the questionnaire that includes 52 statements on techniques that can be used in learning by learners for self-awareness.

This questionnaire was adapted by translating it into Bahasa Indonesia for the investigator. There are fifty-two main statements that need to be addressed on a Revised MAI likert-scale on the techniques that the learner's awareness in learning to use metacognitive awareness inventory questionnaire. Researchers group the order of questionnaire items by their domain in order to make this questionnaire easier to recognize. The questionnaire, as indicated in the appendix.

This questionnaire was adapted to the researcher by translating it into Bahasa Indonesia. To use metacognitive awareness inventory questionnaire, there are fifty-two key statements that need to be answered on a Revised MAI likert-scale about the strategies that the student's awareness in learning. It is divided into eight domains strategies, such as Declarative Knowledge (statement number 5,10,12,16,17,20,32,46),

Procedural Knowledge (statement number 3,14,27,33), Conditional Knowledge (statement number 15,18,26,29,35,), Planning (statement number 4,6,8,22,42,45), Information Management Strategies (statement number 9,13,30,31,37,39,43,47,48), Monitoring (statement number 1,2,11,21,28,49,), Debugging Strategies (statement number 25,40,44,51,52), and Evaluation (statement number 7,19,24,36).

To make this questionnaire easier to identify, researcher group the questionnaire items order by its domain. The questionnaire as present on appendix.

Structured items asked participants to provide quantitative answers by selecting the options of their choice for the response item. For research, it gathered all the questionnaires. The Metacognitive Knowledge Inventory (MAI) consists of 52 items consisting of a five-point Likert scale, from one (never) to five (never) (Always). All of the goods have optimistic messages. The Likert scale with scoring techniques is the scale of the data used in this questionnaire, as follows:

Likert Scale	Score
Never	1
Infrequently	2
Inconsistently	3
Frequently	4
Always	5

Table3. 1 The Score for Likert scale

The data gathering instrument was designed and used in this analysis. The collection of data was introduced by Schraw and Dennison (1994) and the validity and reliability of the instrument would undoubtedly be calculated.

The questionnaire survey of Metacognitive Awareness Inventory can be administrated and distributed individually through and online Google form. The researcher shares the Google form's link to the participant to fill out the questionnaire. Meanwhile, participant fill data themselves, first background information such as full name, gender, and NIM (Student Number). After that, they continued to fill in each questionnaire item.

3.3.2 Validity

There are four types of validity, according to Widoyoko (2012), there are four types of effectiveness; Logical validity, text validity, construct validity and predictive validity. Validity of content refers to how 16 a calculation instrument correctly taps into the different aspects of the questionnaire's basic argument. By consulting it to receive assessment from an expert opinion, researchers tested the validity of the instrument. The validity decision is based on the value calculated (Pearson Correlation) > R-table of 0.207 (N=90). All of the instrument items are valid. (Show on appendix).

3.3.3 Reliability

Validity and durability are methods that are constant. According to Semin (2001), instruments can be calculated with the same phenomenon of accuracy in the presence of reliability. Which means that, when used on multiple participants, this method is accurate when producing the same data more than once. By using the Google form media as a means of analyzing questionnaire data. The MAI has a (i.e. a = 90) for the reliability score. (Show in the appendix).

3.4 Data Analysis Techniques

According to the explanation of Krossnick and Presser (2010), the average score of each item shows the student's level of metacognitive awareness. These usage levels include convenient criteria that can be used to explain the average score of the respondent. Krossnick and Presser (2010) found that score 1 is low, score 2 is very low, score 3 is average, score 4 is high, and score 5 is very high, which includes a complete labeled response scale that is different from the original MAI response. This study uses the questionnaire of Schraw and Dennison (1994) as the instrument.

3.4.1 Step of Data Analysis Technique

- 1. The questionnaire was translated into Bahasa Indonesia
- 2. After translating the questionnaire, the process continues to validity and reliability checking.
- 3. All valid and reliable items were distributed to respondent students in English Language Education Department batch 2017.
- 4. Analyze the result by using Microsoft Excel to identify score.
- 5. Interpret the data based on the result.

CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This chapter describes the findings of their data collection, analysis and interpretation. These include findings and discussions on research.

4.1 Research Finding

The questionnaire consists of the personal information of the participants and the factors of metacognitive awareness. The data results of participants' information as followed:

The findings consist of 90 responses from students to the 52 statements on the use of metacognitive knowledge inventory by students based on Schraw and Dennison (1994) questionnaires categorized into gender; responses from men and women. Out of 90 responses, 62 female responses and 28 male responses were split. Based on cumulative results and based on the general batch of 2017, the data results were presented.



Figure 4. 1 Chart of Participants' Gender

A descriptive statistic was carried out to identify factor of Metacognitive Awareness of University Student batch 2017 at Islamic University of Indonesia after filled the questionnaire.



The Factor of Metacognitive Awareness of University Student

Figure 4. 2 The factor of Metacognitive Awareness

Based on data collected via questionnaire to 90 students, it shows that the highest average is 4,02 which is planning categorized, the second highest is procedural knowledge with 3,99, the third highest is monitoring with 3,91. The second lowest is debugging strategies with 3,83, and the lowest average is 3,81 which is conditional knowledge. Based on the overall data, this is good condition for learner because with first, second, and third highest domain including planning, procedural knowledge, and monitoring can make themselves more strategic with person ability to performing specific task. Also, procedural knowledge and conditional knowledge complement each other, because these two domains are included in a sub-component of metacognitive awareness along with declarative knowledge and here the shortcomings of conditional knowledge can be covered by procedural knowledge.



Figure 4.3 Table of Questionnaire Items

The data results from 8 categorized from the questionnaire including; monitoring, declarative knowledge, procedural knowledge, conditional knowledge, planning, information management strategies, debugging strategies and evaluation, the highest score mean is from planning categorized with scored 4,41 and which is statement "I read instructions carefully before I begin a task". And the lowest score mean is from information management strategies categorized with scored 3,18 and which is statement "I draw pictures or diagrams to help me understand while training". And for standard deviation (SD), the highest score is from planning categorized with score 1,03 which is consist statement "I think of several ways to solve a problem and choose the best one". The lowest score is from Information management strategies categorized with score 0,64 which is statement "I consciously focus my attention on important information".

Moreover, all questionnaire items was analyzed and ordered for each factor. The first is monitoring strategies, followed with declarative knowledge, procedural knowledge, conditional knowledge, planning, information management strategies, debugging Strategies, evaluation.



Figure 4.4 Chart of Monitoring Factor

Based on the above chart, the result for Metacognitive Awareness Monitoring Factor: the most significant factor was found in MON-7 with mean score (M = 4.06) and standard deviation (SD = 0.88). In the meantime, the least affecting factor was found in item MON-6 with mean score (M = 3.67) and standard deviation (SD = 0.79). This means that students have good job performance skills and are best designed through the process of performing a specific task and how well it is controlled at regular intervals to check whether or not learning is taking place.





Figure 4.5 Chart of Declarative Knowledge Factor

Based on the chart above, the result for Declarative knowledge factor of Metacognitive Awareness: the most affecting factor were found in item DECKNO-15 with mean score (M= 4.40) and standard deviation (SD = 0.74). In the meantime, the least affecting factor was found in item DECKNO-10 (I find myself paused regularly to check my comprehension.) with mean score (M = 3.66) and standard deviation (SD = 0.87). It means that students believe in their cognitive goals, performance, and personal abilities.



Figure 4.6 Chart of Procedural Knowledge Factor

Based on the chart above, the result for Procedural knowledge factor of Metacognitive Awareness: the most affecting factor were found in item PROKNO-17 with mean score (M= 3.88) and standard deviation (SD= 0.87). In the meantime, the least affecting factor was found in item PROKNO-20 with mean score (M=3.73) and standard deviation (SD=0.87). It means that students know how to execute procedural things in learning.



Figure 4.7 Chart of Conditional Knowledge Factor

Based on the chart above, the result for Conditional knowledge factor of Metacognitive Awareness: the most affecting factor were found in item CONKNO-21 with mean score (M= 4.23) and standard deviation (SD= 0.75). In the meantime, the least affecting factor was found in item CONKNO-25 with mean score (M=3.74) and standard deviation (SD=0.82). It means that students know when and why to apply different learning strategies.





Figure 4.8 Chart of Planning Factor

Based on the chart above, the result for Planning factor of Metacognitive Awareness: the most affecting factor were found in item PLAN-31 with mean score (M=4.41) and standard deviation (SD= 0.66). In the meantime, the least affecting factor was found in item PLAN-29 with mean score (M=3.55) and standard deviation (SD=0.98). This means that students studied the preparations that had been trained before and the planning that had been prepared long before they took part in the lesson.



Figure 4.9 Chart of Information Management Strategies Factor Based on the chart above, the result for Information management strategies factor of Metacognitive Awareness: the most affecting factor were found in item IMS-38 with mean score (M= 4.26) and standard deviation (SD= 0.84). In the meantime, the least affecting factor was found in item IMS-37 with mean score (M=3.18) and standard deviation (SD=1.06). This means that students have the skills and strategy sequences used to process information more efficiently.





Figure 4.10 Chart of Debugging Strategies Factor

Based on the chart above, the result for Debugging strategies factor of Metacognitive Awareness: the most affecting factor were found in item DEBSTRA-46 with mean score (M= 4.07) and standard deviation (SD= 0.98). In the meantime, the least affecting factor was found in item DEBSTRA-45 with mean score (M=3.77) and standard deviation (SD=0.91). This means that students have a variety of learning strategies to correct the performance of error in the following lessons.





Factor 4.11 Chart of Evaluation Factor

Based on the chart above, the result for evaluation factor of Metacognitive Awareness: the most affecting factor were found in item EVA-51 with mean score (M=3.91) and standard deviation (SD=0.79). In the meantime, the least affecting factor was found in item EVA-49 with mean score (M=3.64) and standard deviation (SD=1.02). This means that students do an evaluation after learning to identify existing deficiencies.



4.2 Discussions

The data obtained from the questionnaire was linked to the previous, theories, and concept from literature. Student data results are calculated in 2 steps. The first step is overall data. Based on the graph discussed above, planning is the most frequently used strategies (\overline{X} = 4.41) while the lowest strategies are conditional knowledge (\overline{X} = 3.10).

The second step is elaborated each category of the questionnaire. There are 8 categories, which are monitoring, evaluation, debugging strategies, conditional knowledge, procedural knowledge, declarative knowledge, planning, and information management strategies. Monitoring consists of 7 statements with average $\overline{X} = 4.06$. Evaluation consists of 6 statements with average $\overline{X} = 3.91$. Debugging strategies consists of 5 statements with average $\overline{X} = 4.07$. Conditional knowledge consists of 5 statements with average $\overline{X} = 4.23$. Procedural knowledge consists of 8 statements with average $\overline{X} = 4.40$. Planning consists of 7 statements with average $\overline{X} = 4.41$. Information management strategies consists of 9 statements with average $\overline{X} = 3.10$.

Among the 8 categories of metacognitive awareness in MAI, the "planning" strategies is the most frequently used. According to Schraw and Moshman (1995), metacognitive awareness, such as monitoring and planning, are used by the student when they organize themselves and selecting appropriate strategies to get efficient results. The second strategy awareness is the "procedural knowledge" which is the type of strategy that people use to implement courses using a series of previously learned technique. This strategy reflects the successful methods of achieving specific learning objectives and applying specific cognitive skills in learning. (Backer et al., 2011).

The third highest strategies awareness was for "monitoring" which indicate strategies which learners to recognize when they do not understand and avoid doing anything to it, which can be reflected by cognitive monitoring (Anderson, 1995). The second realization of the lowest strategies is "debugging strategies" which includes strategies that learners used to correct the understanding and errors of performance (Schraw & Dennison, 1994). The first low-key strategies is the "conditional knowledge" which contains effectiveness certain strategies as a challenge (Backer et al., 2011). In other words, it can be said that learners must be try different strategies in different situation to find understanding in learning (Larkin, 2009).

The results of this study are close to that of Aljaberi & Gheith (2015) because the analysis also shows that the highest area is planning strategy. The setting of the researchers was carried out at the Iranian University. However, the results are different from Alkan and Erdem (2014) because the results show that program information, conditional knowledge, and declarative knowledge are the lowest to highest areas.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

This study describes the type of metacognitive awareness used by students in the university. There were 90 students who participated as respondents from the questionnaire on the Metacognitive Awareness Inventory. The results of the study show planning strategies (X = 4.41) is the dominant categorized. It indicates that the students studied with preparations that have been trained before and planning that have been prepared long before participating in the lesson. And the lowest average is information management strategies with score (X=3.10). It indicates that students should have the skills and strategy sequences used to process information more efficiently. There are also 6 categorized, monitoring categorized with score (X=3.91). It indicates that students have good job performance skills and are best conceptualized through the process of performing a specific task and how well it is controlled at regular intervals to check whether or not learning is taking place. Next categorized is declarative knowledge (X=3.87). It indicates that students believe in their cognitive goals, performance, and their own personal abilities. The next category is procedural knowledge (X=3.99). It indicates that students knowing when execution of procedural things in learning. The next category is conditional knowledge (X=3.81). It indicates that students knowing when and why to apply various strategies in learning. The next category is debugging strategies (X=3.83). It means that students have a variety of strategies in learning to fix error performance in following lessons. And the last category is evaluation (X=3.85). It means that students do evaluation after learning to find out existing deficiencies.

There are recommendation from the writer, as followed: The lecturer provides input to students about what the learning is going to be like, both in the method and in the application of the learning. So that students can have varied plans and careful preparation to take part in the learning.



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APPENDIX

APPENDIX 1

APPENDIX	1	
Items	Statement	Domain Strategies
MON-1	I ask myself periodically if I am meeting my goals	Monitoring
MON-2	I consider several alternatives to a problem before answer	Monitoring
MON-3	I ask myself if I have considered all options when solving a problem.	Monitoring
MON-4	I periodically review to help me understand important relationships.	Monitoring
MON-5	I find myself analyzing the usefulness of strategies while I study	Monitoring
MON-6	I find myself pausing regularly to check my comprehension.	Monitoring
MON-7	I ask myself questions about how well I am doing while I am learning something new.	Monitoring
DECKNO-8	I understand my intellectual strengths and weaknesses	Declarative Knowledge
DECKNO-9	I know what kind of information is most important to learn.	Declarative Knowledge
DECKNO-10	I am good at organizing information.	Declarative Knowledge

DECKNO-11	I know what the teacher expects me to learn.	Declarative Knowledge
DECKNO-12	I am good at remembering information.	Declarative Knowledge
DECKNO-13	I have control over how well I learn.	Declarative Knowledge
DECKNO-14	I am a good judge of how well I understand something.	Declarative Knowledge
DECKNO-15	I learn more when I am interested in the topic.	Declarative Knowledge
PROKNO-16	I try to use strategies that have worked in the past.	Procedural Knowledge
PROKNO-17	I have a specific purpose for each strategy I use.	Procedural Knowledge
PROKNO-18	I am aware of what strategies I use when I study.	Procedural Knowledge
PROKNO-19	I find myself using helpful learning strategies automatically.	Procedural Knowledge
PROKNO-20	I use the organizational structure of the text to help me learn.	Procedural Knowledge
CONKNO- 21	I learn best when I know something about the topic.	Conditional Knowledge
CONKNO- 22	I use different learning strategies depending on the situation.	Conditional Knowledge
CONKNO- 23	I can motivate myself to learn when I need to.	Conditional Knowledge

CONKNO- 24	I use my intellectual strengths to compensate for my weaknesses.	Conditional Knowledge
CONKNO- 25	I know when each strategy I use will be most effective.	Conditional Knowledge
PLAN-26	I pace myself while learning in order to have enough time.	Planning
PLAN-27	I think about what I really need to learn before I begin a task.	Planning
PLAN-28	I set specific goals before I begin a task.	Planning
PLAN-29	I ask myself questions about the material before I begin.	Planning
PLAN-30	I think of several ways to solve a problem and choose the best one.	Planning
PLAN-31	I read the instructions carefully before I begin a task.	Planning
PLAN-32	I organize my time to best accomplish my goals.	Planning
IMS-33	I slow down when I encounter important information.	Information Management Strategies
IMS-34	I consciously focus my attention on important information.	Information Management Strategies
IMS-35	I focus on the meaning and significance of new information.	Information Management Strategies
IMS-36	I create my own examples to make information more meaningful.	Information Management Strategies
IMS-37	I draw pictures or diagrams to help me understand while learning.	Information Management Strategies
IMS-38	I try to translate new information into my own words.	Information Management Strategies

IMS-39	I ask myself if what I'm reading is related to what I already know.	Information Management Strategies
IMS-40	I try to break studying down into smaller steps.	Information Management Strategies
IMS-41	I focus on overall meaning rather than specifics.	Information Management Strategies
DEBSTRA- 42	I ask others for help when I don't understand something.	Debugging Strategies
DEBSTRA- 43	I change strategies when I fail to understand.	Debugging Strategies
DEBSTRA- 44	I reevaluate my assumptions when I get confused.	Debugging Strategies
DEBSTRA- 45	I stop and go back over new information that is not clear.	Debugging Strategies
DEBSTRA- 46	I stop and reread when I get confused.	Debugging Strategies
EVA-47	I know how well I did once I finish a test.	Evaluation
EVA-48	I ask myself if there was an easier way to do things after I finish a task.	Evaluation
EVA-49	I summarize what I've learned after I finish.	Evaluation
EVA-50	I ask myself how well I accomplish my goals once I'm finished.	Evaluation
EVA-51	I ask myself if I have considered all options after I solve a problem.	Evaluation
EVA-52	I ask myself if I learned as much as I could have once I finish a task.	Evaluation

APPENDIX 2

Items	Pearson Correlation	R-Table (N=90)	Criteria
MON-1	0.487	0,207	Valid
MON-2	0.445	0,207	Valid
MON-3	0.540	0,207	Valid
MON-4	0.432	0,207	Valid
MON-5	0.418	0,207	Valid
MON-6	0.340	0,207	Valid
MON-7	0.508	0,207	Valid
DECKNO-8	0.457	0,207	Valid
DECKNO-9	0.627	0,207	Valid
DECKNO-10	0.447	0,207	Valid
DECKNO-11	0.413	0,207	Valid
DECKNO-12	0.403	0,207	Valid
DECKNO-13	0.530	0,207	Valid
DECKNO-14	0.333	0,207	Valid
DECKNO-15	0.451	0,207	Valid
PROKNO-16	0.508	0,207	Valid
PROKNO-17	0.596	0,207	Valid
PROKNO-18	0.488	0,207	Valid
PROKNO-19	0.495	0,207	Valid

PROKNO-20	0.502	0,207	Valid
CONKNO-21	0.594	0,207	Valid
CONKNO-22	0.589	0,207	Valid
CONKNO-23	0.414	0,207	Valid
CONKNO-24	0.512	0,207	Valid
CONKNO-25	0.528	0,207	Valid
PLAN-26	0.512	0,207	Valid
PLAN-27	0.521	0,207	Valid
PLAN-28	0.648	0,207	Valid
PLAN-29	0.611	0,207	Valid
PLAN-30	0.567	0,207	Valid
PLAN-31	0.644	0,207	Valid
PLAN-32	0.511	0,207	Valid
IMS-33	0.510	0,207	Valid
IMS-34	0.297	0,207	Valid
IMS-35	0.569	0,207	Valid
IMS-36	0.680	0,207	Valid
IMS-37	0.471	0,207	Valid
IMS-38	0.324	0,207	Valid
IMS-39	0.559	0,207	Valid

IMS-40	0.534	0,207	Valid
IMS-41	0.481	0,207	Valid
DEBSTRA-42	0.551	0,207	Valid
DEBSTRA-43	0.388	0,207	Valid
DEBSTRA-44	0.572	0,207	Valid
DEBSTRA-45	0.600	0,207	Valid
DEBSTRA-46	0.433	0,207	Valid
EVA-47	0.611	0,207	Valid
EVA-48	0.600	0,207	Valid
EVA-49	0.564	0,207	Valid
EVA-50	0.664	0,207	Valid
EVA-51	0,616	0,207	Valid
EVA-52	0.547	0,207	Valid

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APPENDIX 3

Case Processing Summary

		Ν	%
Cases	Valid	90	100.0
	Excluded ^a	0	.0
	Total	90	100.0

a. Listwise deletion based on all variables in the _procedure.

Reliability Statistics

Cronbach's	
Alpha	N of Items
.941	52

APPENDIX 4

Statement	Neve r	Infre quent ly	Incon sisten tly	Frequ ently	Alwa ys
I ask myself periodically if I am meeting my goals			Z		
I consider several alternatives to a problem before I answer			Л Л		
I ask myself if I have considered all options when solving a problem.					
I periodically review to help me understand important relationships.					
I find myself analyzing the usefulness of strategies while I study	12	5	う		
I find myself pausing regularly to check my comprehension.					
I ask myself questions about how well I am doing while I am learning something new.					
I understand my intellectual strengths and weaknesses					

I know what kind of information is most important to learn.	
I am good at organizing information.	
I know what the teacher expects me to learn.	
I am good at remembering information.	
I have control over how well I learn.	
I am a good judge of how well I understand something.	
I learn more when I am interested in the topic.	
I try to use strategies that have worked in the past.	
I have a specific purpose for each strategy I use.	
I am aware of what strategies I use when I study.	
I find myself using helpful learning strategies automatically.	
I use the organizational structure of the text to help me learn.	
I learn best when I know something about the topic.	

I use different learning strategies depending on the situation.			
I can motivate myself to learn when I need to.			
I use my intellectual strengths to compensate for my weaknesses.			
I know when each strategy I use will be most effective.			
I pace myself while learning in order to have enough time.		2	
I think about what I really need to learn before I begin a task.		D	
I set specific goals before I begin a task.			
I ask myself questions about the material before I begin.		П	
I think of several ways to solve a problem and choose the best one.		SI	
I read the instructions carefully before I begin a task.		\geq	
I organize my time to best accomplish my goals.	i t	24	
I slow down when I encounter important information.			
I consciously focus my attention on important information.			
I focus on the meaning and significance of new information.			

I create my own examples to make information more meaningful.					
I draw pictures or diagrams to help me understand while learning.					
I try to translate new information into my own words.					
I ask myself if what I'm reading is related to what I already know.	٨				
I try to break studying down into smaller steps.			11		
I focus on overall meaning rather than specifics.		í			
I ask others for help when I don't understand something.			\mathbf{D}		
I change strategies when I fail to understand.			NF		
I reevaluate my assumptions when I get confused.		- (2		
I stop and go back over new information that is not clear.			$ \wedge$		
I stop and reread when I get confused.				7	
I know how well I did once I finish a test.	ł		2		
I ask myself if there was an easier way to do things after I finish a task.					
I summarize what I've learned after I finish.					
I ask myself how well I accomplish my goals once I'm finished.					

I ask myself if I have considered all options after I solve a problem.			
I ask myself if I learned as much as I could have once I finish a task.			

Appendix 5

Items	Statement	Domain Strategies
MON-1	Saya bertanya pada diri sendiri secara berkala apakah saya mencapai tujuan saya	Monitoring
MON-2	Saya mempertimbangkan beberapa alternatif untuk suatu masalah sebelum saya menjawab	Monitoring
MON-3	Saya bertanya pada diri sendiri apakah saya telah mempertimbangkan semua opsi saat memecahkan masalah.	Monitoring
MON-4	Saya meninjau secara berkala untuk membantu saya memahami hubungan penting.	Monitoring
MON-5	Saya mendapati diri saya menganalisis kegunaan strategi saat saya belajar	Monitoring
MON-6	Saya mendapati diri saya berhenti secara teratur untuk memeriksa pemahaman saya.	Monitoring
MON-7	Saya bertanya pada diri sendiri pertanyaan tentang seberapa baik saya lakukan saat saya belajar sesuatu yang baru.	Monitoring
DECKNO-8	Saya memahami kekuatan dan kelemahan intelektual saya	Declarative Knowledge
DECKNO-9	Saya tahu jenis informasi apa yang paling penting untuk dipelajari.	Declarative Knowledge
DECKNO-10	Saya pandai mengatur informasi.	Declarative Knowledge
DECKNO-11	Saya tahu apa yang guru harapkan untuk saya pelajari.	Declarative Knowledge

DECKNO-12	Saya pandai mengingat informasi.	Declarative Knowledge
DECKNO-13	Saya memiliki kendali atas seberapa baik saya belajar.	Declarative Knowledge
DECKNO-14	Saya adalah penilai yang baik tentang seberapa baik saya memahami sesuatu.	Declarative Knowledge
DECKNO-15	Saya belajar lebih banyak ketika saya tertarik dengan topik tersebut.	Declarative Knowledge
PROKNO-16	Saya mencoba menggunakan strategi yang berhasil di masa lalu.	Procedural Knowledge
PROKNO-17	Saya memiliki tujuan khusus untuk setiap strategi yang saya gunakan.	Procedural Knowledge
PROKNO-18	Saya menyadari strategi apa yang saya gunakan ketika saya belajar.	Procedural Knowledge
PROKNO-19	Saya menemukan diri saya menggunakan strategi pembelajaran yang membantu secara otomatis.	Procedural Knowledge
PROKNO-20	Saya menggunakan struktur organisasi teks untuk membantu saya belajar.	Procedural Knowledge
CONKNO- 21	Saya belajar paling baik ketika saya mengetahui sesuatu tentang topik tersebut.	Conditional Knowledge
CONKNO- 22	Saya menggunakan strategi belajar yang berbeda tergantung pada situasinya.	Conditional Knowledge
CONKNO- 23	Saya dapat memotivasi diri saya sendiri untuk belajar ketika saya membutuhkannya.	Conditional Knowledge
CONKNO- 24	Saya menggunakan kekuatan intelektual saya untuk mengimbangi kelemahan saya.	Conditional Knowledge

CONKNO- 25	Saya tahu kapan setiap strategi yang saya gunakan akan menjadi yang paling efektif.	Conditional Knowledge
PLAN-26	Saya mengatur kecepatan diri saya sendiri sambil belajar agar punya cukup waktu.	Planning
PLAN-27	Saya memikirkan tentang apa yang benar-benar perlu saya pelajari sebelum memulai tugas.	Planning
PLAN-28	Saya menetapkan tujuan spesifik sebelum saya memulai tugas.	Planning
PLAN-29	Saya bertanya pada diri sendiri pertanyaan tentang materi sebelum saya mulai.	Planning
PLAN-30	Saya memikirkan beberapa cara untuk memecahkan masalah dan memilih yang terbaik.	Planning
PLAN-31	Saya membaca instruksi dengan seksama sebelum saya memulai tugas.	Planning
PLAN-32	Saya mengatur waktu saya untuk mencapai tujuan saya dengan sebaik-baiknya.	Planning
IMS-33	Saya melambat ketika saya menemukan informasi penting.	Information Management Strategies
IMS-34	Saya secara sadar memusatkan perhatian saya pada informasi penting.	Information Management Strategies
IMS-35	Saya fokus pada arti dan pentingnya informasi baru.	Information Management Strategies
IMS-36	Saya membuat contoh saya sendiri untuk membuat informasi lebih bermakna.	Information Management Strategies
IMS-37	Saya membuat gambar atau diagram untuk membantu saya memahami sambil belajar.	Information Management Strategies
IMS-38	Saya mencoba menerjemahkan informasi baru ke dalam kata-kata saya sendiri.	Information Management Strategies
IMS-39	Saya bertanya pada diri sendiri apakah yang saya baca terkait dengan apa yang sudah saya ketahui.	Information Management Strategies

IMS-40	Saya mencoba memecah belajar menjadi langkah- langkah yang lebih kecil.	Information Management Strategies
IMS-41	Saya fokus pada arti keseluruhan daripada spesifik.	Information Management Strategies
DEBSTRA- 42	Saya meminta bantuan orang lain ketika saya tidak memahami sesuatu.	Debugging Strategies
DEBSTRA- 43	Saya mengubah strategi ketika saya gagal untuk mengerti.	Debugging Strategies
DEBSTRA- 44	Saya mengevaluasi kembali asumsi saya ketika saya bingung.	Debugging Strategies
DEBSTRA- 45	Saya berhenti dan melihat kembali informasi baru yang tidak jelas.	Debugging Strategies
DEBSTRA- 46	Saya berhenti dan membaca ulang ketika saya bingung.	Debugging Strategies
EVA-47	Saya tahu seberapa baik saya melakukannya setelah saya menyelesaikan ujian.	Evaluation
EVA-48	Saya bertanya pada diri sendiri apakah ada cara yang lebih mudah untuk melakukan sesuatu setelah saya menyelesaikan tugas.	Evaluation
EVA-49	Saya meringkas apa yang telah saya pelajari setelah saya selesai.	Evaluation
EVA-50	Saya bertanya pada diri sendiri seberapa baik saya mencapai tujuan saya setelah saya selesai.	Evaluation
EVA-51	Saya bertanya pada diri sendiri apakah saya telah mempertimbangkan semua opsi setelah saya memecahkan masalah.	Evaluation
EVA-52	Saya bertanya pada diri sendiri apakah saya belajar sebanyak yang saya bisa setelah saya menyelesaikan tugas.	Evaluation