

## **CHAPTER IV**

### **FINDINGS AND DISCUSSIONS**

This chapter reveals the finding from the data analysis to answer the question which has been formulated in chapter one. The presentation of the research is showed in the form of data description, data analysis and finding and discussion.

#### **4.1. What metacognitive reading strategies types do the students frequently employ in reading comprehension?**

##### **4.1.1. Data Description**

In relation to answer the research question, Metacognitive Awareness Reading Strategy Inventory (MARSİ) questionnaires were administered to the 42 students in grade XI. Coding of students is given in each questionnaire in order to help researcher gain the data. The numeric coding presents the name of students by the arrangement of absence list. MARSİ questionnaire has thirty statements which are categorized into three sections. Global reading type is written in thirteen statements. Problem solving type is presented in eight statements. Support reading is showed in nine statements. The students' response is described in the number scale range of 1 to 5. There are 42 data from students' questionnaires which were calculated and interpreted by using MARSİ scoring rubrics. The key to average in the range of 3.5 or more indicates high metacognitive reading strategies used. In the number of 2.5 to 3.4 indicates the medium metacognitive reading strategies used. The lower metacognitive reading strategies used is portrayed in 2.4 or lower. The global-reading strategies average is interpreted as the high, middle and low readers. The complete data questionnaire can be seen in appendix 3. The global-reading average levels indicate how often the students use the generalized reading strategies before their reading processes. Problem-solving strategies average levels show the use of strategies of students to overcome the problem during reading the text. The support reading strategies average level presents the students' practical strategies use in supporting their reading comprehension. Based on the data gained through questionnaire, the data can be described as the following table.

<b>CODING</b>	<b>GLOB Mean</b>	<b>PROB Mean</b>	<b>SUP Mean</b>
S001	3.53	4.00	3.22
S002	3.23	3.50	2.55
S003	2.92	3.37	3.66
S004	4.07	4.50	3.66
S005	3.92	4.50	4.33
S006	3.23	3.75	3.66
S007	2.38	1.50	2.44
S008	2.69	3.75	3.55
S009	3.07	4.00	3.55
S010	3.30	4.12	4.11
S011	3.69	4.25	4.00
S012	2.69	3.62	3.33
S013	2.07	3.50	2.55
S014	3.23	3.62	3.55
S015	3.07	3.87	3.11
S016	4.03	4.50	4.22
S017	3.07	3.37	3.44
S018	3.92	4.00	3.88
S019	3.76	4.37	4.22
S020	3.15	3.50	3.44
S021	3.61	4.87	4.33
S022	2.69	3.75	2.77
S023	3.69	4.25	3.11
S024	2.84	4.25	3.44
S025	3.84	4.62	4.55
S026	3.00	3.75	3.88
S027	3.46	4.25	3.22
S028	2.97	3.75	3.22
S029	2.00	2.87	2.44
S030	3.69	4.75	4.77
S031	3.69	4.25	4.66
S032	3.30	4.25	3.77
S033	3.92	4.12	3.77
S034	3.23	3.25	3.11
S035	3.30	4.50	3.77
S036	2.92	4.12	3.44
S037	3.69	4.00	4.22
S038	3.69	4.50	4.00
S039	3.15	3.50	3.77
S040	2.61	3.00	3.55
S041	3.46	4.12	3.44
S042	3.76	4.75	3.00

Table 4.1.1. Data Description of Students' Metacognitive Reading Strategy Types

#### 4.1.2. Data Analysis

The data firstly categorized into the three types of metacognitive reading strategies. All response in MARSII questionnaire are categorized and calculated. Referring to the response in questionnaire of global reading strategies statements, the all scores is calculated and divided by thirteen to get the average. After that, the total scores of problem solving category is calculated and divided by eight. Then, the data of support reading strategy is analysed by calculating the all scores and divided by nine. The following calculation for mean score of each metacognitive reading strategy types can be seen as follows:

$$\bar{x} = \frac{\sum fx}{n}$$

Notes:

$\bar{x}$  : Mean of metacognitive reading types

$\sum fx$  : The sum of all score of metacognitive reading types

$n$  : The number of statements in each metacognitive types

To show the average result of each metacognitive reading type the researcher writes out the students' table score as follow:

Coding: S001					
Global Reading Strategies (GLOB Subscale)		Problem-Solving Strategies (PROB Subscale)		Support Reading Strategies (SUP Subscale)	
No	Score	No	Score	No	Score
1	4	8.	4	2.	4
3.	5	11.	4	5.	1
4.	4	13.	4	6.	3
7.	4	16.	5	9.	4
10.	1	18.	4	12.	4
14.	3	21.	4	15.	1
17.	4	27.	4	20.	4
19.	4	30.	3	24.	4
22.	4			28.	4
23.	4				
25.	4				
26.	1				
29.	4				
n=13	$\sum fx$ 46	n=8	$\sum fx$ 32	n=9	$\sum fx$ 29
$\bar{X} = 3.53$		$\bar{X} = 4$		$\bar{X} = 3.22$	

4.1.2. Table Analysis of Students Scoring Metacognitive Reading Types

The result of each student metacognitive reading strategy types then classified into the coding to create the individual profiles. The data is focused on the categorization of the language learning strategies usage: high (mean of 3.5 or higher), medium (mean of 2.5 to 3.4), and low (2.4 or lower). The data uncovered that the frequently students employed the metacognitive reading strategies types based on its high level usage than the other two strategies. The complete data analysis of this table score can be found in the appendix 4.

#### 4.1.3. Finding and Discussion

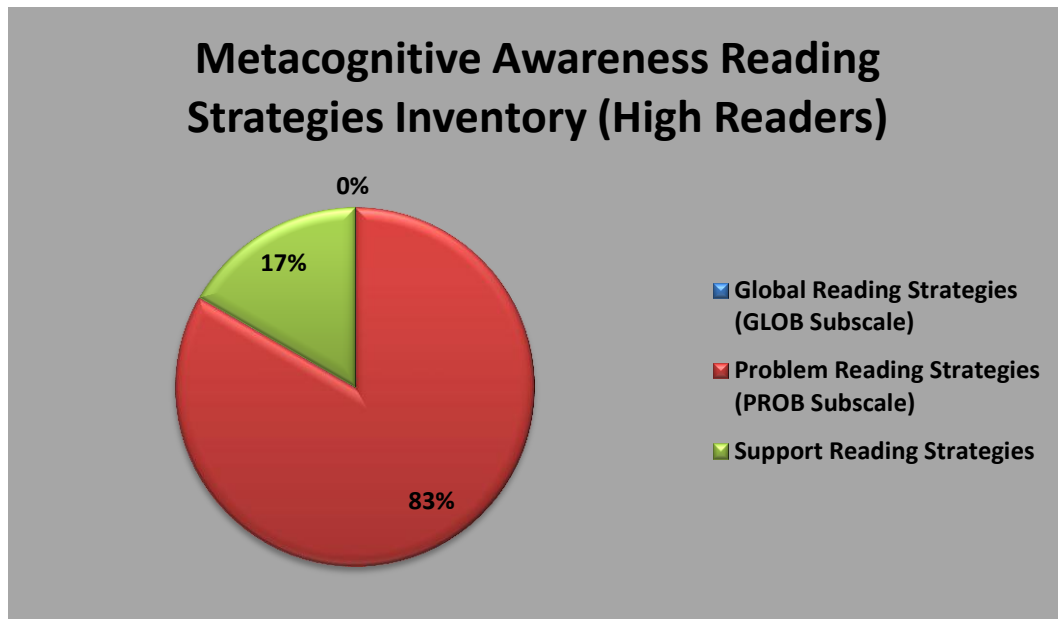


Chart 4.1.3. Percentage of Students' Metacognitive Reading Strategy Types

The result showed that the students employed each metacognitive reading strategy. The result presented that the global reading strategies is not dominantly employed by students while reading the text. The average score of global reading strategy employed by students is the smallest of all. The support reading strategies is frequently used by 7 students rather than the other two strategies. The 35 students are frequently employed problem-solving reading strategies rather than the global reading and support reading in their reading academic text. Therefore, it can be seen that the participants of this study are metacognitively aware to employ problem-solving strategy frequently in their reading.

As mentioned in chapter 2, Mokhtari and Reichard (2002, p. 252) noted that the problem-solving reading strategy can be seen when the students found difficulties in comprehending the text. This strategy is described in the eight statements in questionnaire. Furthermore, Karbalaei (2010, p.171) stated that the characteristics of problem-solving strategy can be perceived as the implementation of the strategies during learning activities. The findings showed that the problem solving strategy is employed by most of students in classroom.

Based on the analysis, the result showed that the 35 eleventh graders frequently employ problem-solving strategy. The average score of problem-solving strategies was higher than the other two strategies. It was similar to the

study Martinez (2008, p.86) that showed problem-solving strategies used higher among Spanish ESP students. Otherwise, the study Martinez found that the global-reading is the second dominantly strategies used by students. It seems to be different, since this study revealed that the global reading strategies is less used by all students. The different result seems to be caused by the different reading habit among students. Regarding to the data from teachers' interview –see appendix 7– the students is directed to explore the text content through questioning given by teacher and the other students. Thus, the discussion conducted during learning processes in order to solve the topic problem. The teacher also noted that the topics of hortatory exposition text is given randomly to the group of students. It can be perceived that students is more likely employ problem solving strategies and support reading strategies in the process of learning.

In line with previous findings on strategy used by EFL students and ESL students, Karbalaei (2011, p. 174-175) found that the types of metacognitive strategies used by the students largely belong to the group of problem-solving strategies. The students likely encounter other strategy types as well for instance Indian and Iranian students reported using the support reading strategies as the second most strategies used. The findings is similar with this study that researcher found support reading is in the second dominantly strategy used. In addition, the teacher emphasized that students tend to choose reference materials in order to make better understanding about the text. Moreover, the teacher pointed out that students are likely restating ideas about the text in their own words to comprehend better.

In relation to the other previous study, Nam and Page (2014, p. 195) study found that problem-reading strategy was the Korean students' most preferred strategies. Nam and Page (2014, p. 213) reported that students who employed problem-solving strategies is skillful to choose strategies when find the difficulties their reading. Students will be able to select which strategies that support their reading goals. In line with this study, the teacher stated that the students could comprehend better when they were given the case to be solved in their reading activity.

Additionally, Dohra (2015, p. 24) study among 272 students in five government secondary school in Indonesia uncovered that the problem solving

strategy was the highest compared to global reading strategy and support reading strategy. The similarity seems to be associated with the sameness of students' learning environment when English has taught as the foreign language in Indonesia.

## 4.2 What metacognitive reading strategies level do the students employ in reading comprehension?

### 4.2.1. Data Description

To portray the metacognitive reading strategies level, the data from MARSII questionnaires is used. The 42 questionnaire is calculated and interpreted for this research question same as with the data description in 4.1.1. The difference is placed in the formulation of the overall average. The data is focused on overall average that indicates how often the participants used the metacognitive reading strategies during learning processes. The overall average data is gained from the overall score from each metacognitive reading strategy types. The data can be seen as the following:

<b>Coding</b>	<b>Overall Mean</b>	<b>Coding</b>	<b>Overall Mean</b>
S001	3.56	S022	3.00
S002	3.10	S023	3.66
S003	3.26	S024	3.40
S004	4.06	S025	4.26
S005	4.20	S026	3.46
S006	3.50	S027	3.60
S007	2.16	S028	3.23
S008	3.23	S029	2.36
S009	3.46	S030	4.30
S010	3.76	S031	4.13
S011	3.93	S032	3.70
S012	3.13	S033	3.93
S013	2.60	S034	3.20
S014	3.43	S035	3.76
S015	3.30	S036	3.40
S016	4.23	S037	3.93
S017	3.26	S038	4.00
S018	3.93	S039	3.43
S019	4.06	S040	3.00
S020	3.33	S041	3.63
S021	4.16	S042	3.80

Table 4.2.1. Data Description of Students' Metacognitive Reading Strategy Levels

#### 4.2.2. Data Analysis

The data from the research question one is continued to be calculated and interpreted. Each response in questionnaire is calculated as overall score metacognitive reading strategies. To get the result of metacognitive reading level employed by student, the overall score is divided by 30. It indicates the amount of statements in MARSII questionnaire. The following formulation for overall strategies average metacognitive reading strategies can be seen as follows:

$$\bar{x} = \frac{\text{The overall score}}{\text{The total statements}}$$

To show the average result of each metacognitive reading type the researcher writes out the students' table score as below:

Coding: S001						
Global Reading Strategies (GLOB Subscale)		Problem-Solving Strategies (PROB Subscale)		Support Reading Strategies (SUP Subscale)		Overall Reading Strategies
No	Score	No	Score	No	Score	
1	4	8.	4	2.	4	GLOB: 3.53
3.	5	11.	4	5.	1	
4.	4	13.	4	6.	3	
7.	4	16.	5	9.	4	PROB: 4
10.	1	18.	4	12.	4	
14.	3	21.	4	15.	1	
17.	4	27.	4	20.	4	
19.	4	30.	3	24.	4	
22.	4			28.	4	SUP: 3.22
23.	4					
25.	4					
26.	1					
29.	4					
n=13	∑fx 46	n=8	∑fx 32	n=9	∑fx 29	Overall score: 107
$\bar{x} = 3.53$		$\bar{x} = 4$		$\bar{x} = 3.22$		Overall Mean: 3.56

4.2.2. Table Analysis of Students Scoring Metacognitive Reading Levels



The overall mean metacognitive reading strategies of each student then interpreted based on the level usage: high, medium and low. After that, the data from each student is classified into the level of the metacognitive reading strategies. The complete data analysis can be seen in appendix 4

#### 4.2.3. Finding and Discussion

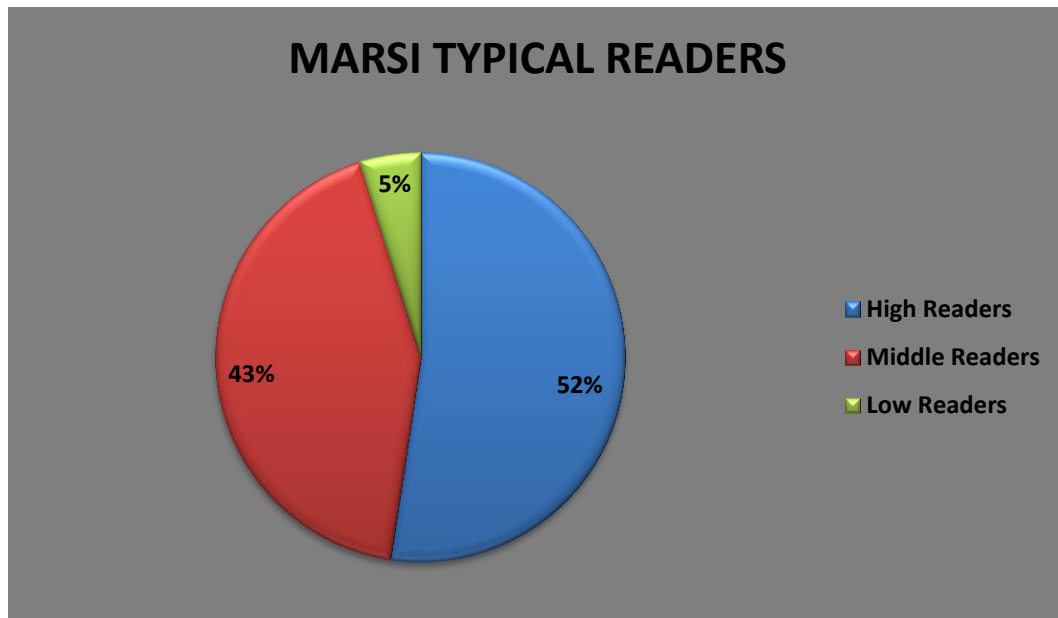


Chart 4.2.3. Percentage of Students' Metacognitive Reading Strategy Levels

The data analysis above revealed that the students employed the metacognitive reading strategies in their learning. The data identified that 22 students are metacognitively high readers. The metacognitive middle readers are in the amount of 18 students and only 2 students who identified as the metacognitive low readers. The data was interpreted that the metacognitive high readers means that the readers who metacognitively aware used the metacognitive reading strategies in their. reading the text.

The interpretation is derived from the students' response on MARSİ questionnaire. The metacognitive reading strategy level is described the overall average of metacognitive reading strategy types used by students. The findings showed that there is a slight different in the amount of high readers between middle readers. It was confirmed by the teacher interview that stated the students of XI Social 1 are in the average level of their reading ability. In addition, the teacher also noted that some students could involve actively in learning activity and explore the text greatly in their performance. However, the teacher

strengthened that most of students could follow the learning as well but still in the average level.

In relation to the previous research, the study of Martinez (2008, p.172) revealed that the ESP Spanish students perceived use of high readers in metacognitive reading strategy level. The study also found that there were differences between male and female student level readers. The result shown that dominantly female students perceived use high readers compared to male students. The previous study seems support the research findings in this study which shows that most of students in the high readers level. However, this study was not intended to find out the difference level strategy used in terms of gender students.

In addition, Keshavarz and Assar (2009, p.86) showed the similar result that the most Engineering Iranian students metacognitively high readers. The higher level also perceived use of problem-solving metacognitive reading strategies. It was similar with this study that uncovered the most of students in higher level and perceived problem-solving as the most metacognitive reading strategies types used. Moreover, Keshavarz and Assar (2009, p.86) study also found that the relationship between the level used and the result of comprehension test. The high level readers scored higher in comprehension test compared to the middle and low group students. In contrast, this study was not examined the relationship between the strategies level and result of comprehension test. The focus of this study is to identify the metacognitive reading strategy used by students in learning situation.

Additionally, Nam and Page (2014, p.203) showed that dominantly the Korean college students is in the middle metacognitive readers. In addition, the study also uncovered insignificant result in the high level students as the second perceived strategy level by students. It was contrary with the result of this study which showed that eleventh grader students frequently high metacognitive readers. However, the middle readers can be perceived as the second level most employed by students. Thus, it can be seen that these two studies shared the similarity which the findings of high and middle readers indicate the slight differences. The similarity seems to be caused the EFL learners tend to share the same learning habits. As discussed by Nam and Page (2014, p.209), the Korean

students tends to read course-related English material which requires them considered the reading strategies used in order to achieve the successful academic reading in EFL classroom. In line with this idea, the teacher also pointed out that students are directed to be able to read and comprehend the English text in learning processes. Moreover, the teacher also stated that the students are demanded to share their ideas in terms of exploring the text or related materials. Therefore, it can be seen that the teacher tries to trigger students to be able to use the reading strategies while learning reading.

### **4.3 In what situation, does the problem-solving strategy employed by students during the learning activities?**

#### **4.3.1. Data Description**

In relation to answer the research question, the students' interaction and behaviour during learning activities were identified. The students' interaction and behaviour were selected since the categorization and characteristics of problem-solving in MARSII can be seen through students' interaction and behaviour in overcoming the problem during learning activities. The data were gained through classroom observation which recorded by the researcher. The data is focused on how the students implement the problem-solving metacognitive reading strategy during their learning processes. Since the data was found in the previous research question that the problem-solving strategy is frequently employed by students. Moreover, the findings from related research dominantly shared the similarity that the problem-solving as the most preferred metacognitive reading strategy type used by students. Therefore, the researcher tries to portray the implementation of the problem-solving strategies in learning processes.

The related research from Mokhtari and Reichard (2002) has identified eight statements in MARSII questionnaires to be referred as the categorization of problem-solving reading strategies. Furthermore, Karbalaei (2010) in his research classified the problem-solving metacognitive reading into the seven catergorization: adjusting reading speed, rereading, reading aloud, reflecting, mental visualizing, using contextual clues and checking understanding.

To gain the data of learning situation, the episode teaching for metacognition is written in the transcription. The data is focused on the teachers'

language and activities that require students to become active learner in each process. The five meetings were transcribed and classified based on the episodic. The episodic is given based on the teachers' utterance in learning activity which shows the learning sequence. The coding is given in each utterance in order to help researcher gain the data. The first numeric code represents the meeting, the alphabetic represents the episodes, and the last numeric represents the utterance. Below are the examples of the data obtained through classroom observation.

1D123.T : Ok ok can you give the example how can we make the students or children comfort learning English?

1D124.S018 : (S reflecting) So for the example, umm we as the children we can't make them to learn about the tenses first of course right? So we just talking about there are so many media right now maybe like youtube for the example we can take the video, you know.

1D125.T : Excuse me, but you give maybe the different level. And how about the game? What suitable game for them?

1D126.S018 : (S do mental visualizing) Ya from the youtube, we can see that the parents can open the youtube for the children to watch about the education about English for the example. It's just like songs about the animals, songs about the transportation, and song about the family. So it will umm it will... it will make the children curious about the English. It means they will have the passion to learn about that thing if we talking about the game there are so many games with English with little bit English like the example like ya the mainstream one the point blank. Game point blank there are some words with English so it means like we can't make the English, we can't take the English for children that they will learn from the thing that they are comfortable.

The data from five meetings transcriptions found out that there are 348 teachers' utterances and 505 students' utterances. The complete data of

transcription which obtained from classroom observation can be found in the appendix 5.

#### **4.3.2. Data Analysis**

The data of this study was obtained through classroom observation. Then, the video recording data were transcribed into written text. In the process of transcribing the text, the researcher tries to see and portray the meaning of utterance and the behaviour of students when they got turn. The interpretation is needed in order to attain data easier. Each student's utterance which shows the categorization of problem-solving is marked by the researcher. The problem-solving strategies are marked in bracket with the note of the particular strategies used by students in that situation.

The episodic was given in the transcription in order to classify the sequence of learning. The episodic teaching is determined based on teachers' utterances. As mentioned earlier in chapter 2, the teaching metacognition requires the teacher to set the teaching process that can make students actively involved.

The data reduction was applied in the next process. The data was focused on the students' interaction and behaviour in learning process which employ the problem-solving strategies. After that, the researcher used the table distribution in order to classify the categorization of problem-solving reading strategy. By interpreting the 8 items categorization from Mokhtari and Reichard (2002) and adapting the characteristics of problem-solving strategies from Karbalaei (2010), the data of student's interaction and behaviour were analysed. The analysis of the problem-solving was done by giving the tick in column of strategies. The complete table analysis distribution of problem-solving strategies can be seen in appendix 6. After that, the data was calculated for the problem-solving strategies used in each meeting and episode. Then, the data from each meeting were categorized based on the episode to be calculated in order to identify in what situation the strategies used most to the least.

### 4.3.3. Finding and Discussion

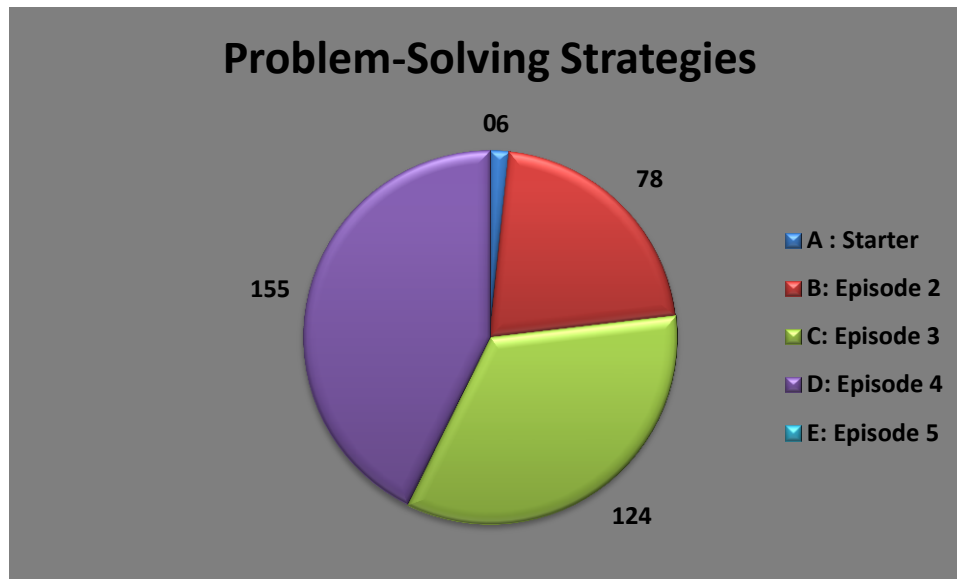


Chart 4.3.3. Problem-Solving Strategies Employed by Students in Episodes

The findings found that from the data reduction of 221 students' utterances the problem-solving strategy employed by students in the number of 363. The data gained through classroom observation for five meetings. The problem-solving strategies used as it is described in the chart. The problem-solving strategies are dominantly used most in Episode 4. The study uncovered that 155 problem solving strategies is frequently employed in episode 4. It can be perceived that episode 4 promote students to be involved actively in using the problem-solving strategies. Regarding to the teachers' interview, the teacher explained that in teaching reading he tried to explore as many as methods. The students were given the issues that need to be discussed in each group. They were directed to find as many as related English reading-materials in order to help them construct the hortatory exposition text. Then, the eight groups were demanded to present about what they have read in form of hortatory exposition text. In the discussion, the teacher asked the audience to explore the text given in order to propose a question to the group presenter. The group presenter was allowed to bring the related reading materials to help them answer the question. The teacher strengthened that the students are directed to explore the answer based on what they have read in text or what they have experienced as long as they could use the strategies to solve the problem given in the discussion. In line with this idea,

(DfES, p. 31) explained about the teacher in teaching metacognitive needs to enable students to identify their own strategies in order to achieve the learning goal. Moreover, the teacher needs to use any models that help students understand the topic and support the students to approach it in the right way. Regarding the facts in observing the learning activities, the teacher tends to use any models to support the students actively involved in classroom activities.

In relation to the findings, problem solving was frequently employed by students in episode 4. It seems to be caused the episode 4 is intended to explore the students' understanding towards the topic discussion. As described by (DfES, p. 33) episode 4 happens when the teacher discuss the subject-matter intensely, for instance the teacher give the model in the form of question that could be used to develop critical awareness of students. It similar with the fact in the classroom observation, the teacher tends to propose the case to students related with the topic of the text. The teacher usually gives the probing question in the middle of learning activity to the students in order to make them think critically about the problem given. It is confirmed with the teacher statement in the interview, the teacher noted that the question to the students is intended to make them explore on what they have read or experienced. Moreover, the students are expected to use any strategies to help them solve the problem given by the teacher. For that reason, it appears to be connection that the problem-solving strategies are dominantly employed in episode 4.

Additionally, the episode 3 is the second problem-solving most used in learning situation. Based on the analysis, 124 the problem-solving strategies were used by students. As mentioned in the chapter 2, (DfES, p.32-33) described that episode 3 takes place when the teacher use interrogating model to point out the main issue is being discussed. The teacher set up the learning situation that requires students identify the learning. It similar with the fact in the classroom observation, the teacher seems to direct the students to identify each process. Therefore, the students tend to use the problem-solving strategies in episode 3.

The episode 2 becomes the third problem-solving most used in learning situation. The analysis found that 78 problem-solving strategies. (DfES, p.32) described that episode 2 comes up when the teacher outlining the aim of learning.

In line with this idea, the data of classroom observation showed that the teacher stated the objective of learning in the beginning of lesson. After that, the students were directed to conduct the presentation about the particular topic of the hortatory text. In line with this, the teacher pointed out that the learning reading of hortatory text in different topics is the main objective of the lesson. It can be achieved through the discussion in the group presentation. Thus, it can be perceived that the problem-solving strategies used gradually in episode 2.

The least favored problem-solving strategies used was in the starter episode. (DfES, p.32) discussed that the starter episode occurs when the teacher asked the students to activate their prior knowledge. The teacher make the attention gather for instance in the form of questioning in the very beginning of lesson. Based on the analysis, the problem-solving was used in starter episode in the amount of 6. The low result seems to be caused there was not significant students taking turn in the starter episode. The slight difference is also uncovered in the episode 5. There was no problem-solving uncovered in this episode. The episode 5 as explained by (DfES, p.33) takes out when the teacher reviewed the lesson in the end of learning activity. Hence, it can be accepted that the problem-solving strategies were not employed by the students in this episode.

The findings revealed in relation to identify the implementation problem-solving used during learning processes were not much studied previously. Therefore the researcher tries to portray the discussion throughout the theory of episodic of teaching metacognition. The complete result is confirmed by relating it with the teacher's perspective in the interview.