

The Use of Metacognitive Knowledge in Essay Writing among High School Students

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Abstract

This paper report part of a bigger project aimed to evaluate the effectiveness of metacognitive strategies on students' performance in essay writing. The aspects of metacognitive strategies considered in this study include the use of declarative knowledge, conditional knowledge, and procedural knowledge. The focus of this paper is on the use of metacognitive strategies during the writing activity. Before the intervention process, the participants were given a task to write an essay and after that they were asked to do metacognitive reflection. Data were analyzed using content analysis procedure. The respondents consisted of 18 secondary school students from poor urban community. The data revealed that ten participants did not use declarative knowledge namely: i) did not make the outline of the essay before writing, ii) did not identify keywords that represent the requirement of the question, and iii) how to expand ideas. These results indicate that students did not possess enough declarative knowledge about writing. The study also found that 11 respondents did not use declarative knowledge in the attempt to expand ideas. In terms of conditional knowledge, nine of the respondents still could not identify when and why certain strategies should be used. Whereas in terms of procedural knowledge, the study showed that all the participants did not show the use of important steps needed in writing a good essay. In conclusion, this study provides evidence on the need of an intervention or teaching modules to help improve students writing skills.

Keywords: metacognitive reflection, declarative knowledge, conditional knowledge, procedural knowledge

1. Introduction

Studies in learning process have found that students are more able to learn complex skills when they can think "metacognitively," that is, when they think about their own thinking and performance so they can consciously monitor and change it. Baradaran and Sarfarazi (2011) stated that the use of the principles of teaching based on cognitive and metacognitive as scaffolding through contextualize, modeling, discussion, contingency, and construction in the Zone of Proximal Development (ZPD) can solve the problems in teaching writing skills in English as a Foreign Language at the Islamic Azad University of Mashhad. The result shows that the scaffolding technique can improve students' performance in writing through generating ideas, structuring essays, drafting, writing and editing. Tufekci and Sapar (2011) also noted that a constructive method also improves the ability of students to produce creative writing among students as well as helps to improve their communication skills, knowledge of grammar, vocabulary, and increase awareness of the relationship of culture and language. This method also enhances students' motivation to learn a foreign language. Therefore, the approach based on cognitive and metacognitive strategies are able to produce students who can generate ideas in a critical and analytical writing skill.

Literature shows that there are weaknesses in students' writing skills. National Assessment of Educational Progress (NAEP; Salah-Din, Persky, & Miller, 2008), only 33% of eighth-grade and 24% of 12th-grade students perform at or above the proficient level in writing (defined as solid academic performance). Student who score below this level are classified as obtaining only partial mastery of the literacy skill needed at their respective grade. If partial mastery is interpreted as performing below grade level, then 67% of eight-grade and 76% of 12 th-grade students can be considered as writing below grade level. Malaysian Examination Board Report (2010) also revealed that the number of students with moderately in essay writing is more than a high

performance (excellent) and low. Many weaknesses that need to be improved to achieve the level of mastery of the writing at the level of honors and awards. Khir and Marzukhi (2009) reported that most students cannot write a good, accurate, and meets the requirements of the questions in a timely manner. Students do not have extensive knowledge about the topic of the essay is written, and the students are not able to display the contents of a brilliant, cannot describe the content in a clear and precise, and no evidence or examples of appropriate and clear to every argument put forth. Essay writing presented by students is not growing. Students write one or two sentences about the topic statement, but did not elaborate title by associating it with the current issues. In fact, the introduction paragraph does not have a strong association with the paragraph content. The same is done by the student in writing of the contents of paragraph essays in which most students cannot write a paragraph to fill more than 100 words and only use 30 to 40 words only.

In the case of writing activity, it is hypothesized that students who are weak in writing skills are related to their thinking skills. Writing activity involves high order thinking skills. It is one of the most difficult skills in language proficiency. Review of past studies revealed that students did not have thinking and learning management skills (Shahlan, 2012). In addition, there is a lack of metacognitive knowledge namely declarative knowledge, conditional knowledge and procedural knowledge in writing tasks (Saemah, 2010). It is not known how students capitalized this kind of thinking skills in their writing activity. Therefore, the objective of this paper to discusses, analyze and to determine how the students used metacognitive knowledge includes declarative knowledge, procedural, and conditional when producing essays writing among secondary students in Malaysia.

1.1 Metacognitive Knowledge

In this study, metacognitive strategy refers to the use of metacognitive knowledge namely declarative knowledge, procedural knowledge and conditional knowledge in essay writing. Flavell (1976, 1978, 1979) described metacognitive knowledge as consisting of knowledge or one's belief in basic knowledge about the factors that influence cognitive process. He divides knowledge into three categories, namely knowledge about your own self or individuals (declarative knowledge), knowledge of the tasks or activities (procedural knowledge) and knowledge of learning strategies (conditional knowledge).

Declarative knowledge (facts and information) is "knowledge about" or "knowledge concerning". Some researchers argue that all declarative knowledge is stored or disclosed in statements and joint statements in memory (Anderson, 1985). Declarative knowledge includes facts, beliefs, opinions, generalizations, theories, hypotheses and attitudes towards something, someone and yourself (Paris, Lipson, & Wixson, 1983). Miechenbaum and Biemiller (1998) and Forgy (1994) states that the application of declarative knowledge can be understood as follows; (i) what do I want to know? (ii) what keywords and information can be obtained? (iii) what is already known by me? and (iv) what information should I seek?

Procedural knowledge refers to knowledge about the 'how' to conduct cognitive activities (Anderson, 1990; Hunt et al., 1989; Paris et al., 1983). Meanwhile, A. Reber and E. Reber (2001) state procedural knowledge is the knowledge that helps us control the relevant factors when evaluating a particular phenomenon (specific steps taken in solving a particular task or activity). An example of a procedure in writing an essay is the use of metacognitive strategies. Its use can be recognized when the situation arises; (i) how can I use the information properly? (ii) how can I present this information? (iii) what are the steps I need to use in completing the task? Therefore, knowledge of important procedures in carrying out cognitive activities is expected to improve writing proficiency among students thereby improving achievement in writing (Anderson, 1990; Hunt et al., 1989; Paris et al., 1983).

Conditional knowledge refers to the question of when and why a certain strategy or procedure was used (Woolfolk, 2008). In this study, conditional knowledge is a description of the context and appropriate situation with the application or procedure in relation to the writing technique or strategies. As a conclusion, this study focuses on the use of metacognitive elements (declarative knowledge, procedural knowledge and conditional knowledge) in helping students produce good essays and expert. Metacognitive teaching and learning strategies have been developed based on the theory of metacognition through metacognitive reflection among students.

The implementation of these activities can be explicit using the plan technique, drafting introduction technique, and expand the topic sentences, review, edit and conclusion. Metacognitive knowledge and cognitive regulation complement each other during the writing process of teaching and learning. This is because declarative knowledge is important when making the acquisition, transfer and settlement of essay writing assignment whereas procedural knowledge is important when performing routine or tasks (Gagne, 1985).

During the writing process, students will receive two types of knowledge about the language they are learning (Faerch & Kasper, 1983). The first is the declarative knowledge that is implicit or implied and involves

internalization or absorption of language rules, such as definitions of words, aspects of grammar and spelling. Secondly, which is the procedural knowledge, is generally used implicitly or explicitly (Carr, 2010). These strategy and procedures are used to process the information and language skills (e.g. writing and reading). In an effort to continue the learning process of writing skills, it starts from declarative knowledge to procedural knowledge until the performance of these skills become more automatic. The expand topic sentences technique uses declarative knowledge to answer questions on when and how they are used to expand the contents of which are listed (Shahlan, 2012). Therefore, the declarative knowledge, procedural and conditional knowledge about writing technique and strategies are important metacognitive elements as it help students learn how to learn.

2. Methodology

The research design is a survey which aims to identify the extent of metacognitive knowledge is used in the production of an essay writing. The participants comprised of 18 students from one secondary schools in Malaysian Education system (age between 14-16 years old) from one poor urban community and have low academic achievement. Respondents were assigned to all student (18 students) who participate in academic tutoring classes under MyKasih programme. This is because previous studies showed that the use of metacognitive knowledges can improve the performance suitable for use on low and higher achievements among students, especially in writing activity (Shahlan & Saemah 2012). They were given a task to write an essay and after that they were asked to do metacognitive reflection explaining step by step how they come up with the essay during the writing process. Data were analyzed using content analysis procedure.

3. Result

3.1 Declarative Knowledge

Based on the respondents' metacognitive reflection, the respondents were able to master the declarative knowledge by understanding the task given to them. This is shown from the respondents' responses below;

I read the instructions because I can understand the questions and then I will start writing the essay because I already know what is required in the task. (respondent 1)

I will read the questions first because I want to know how to write this essay. (respondent 2)

First, I will read the title of the question in order to understand the title... (respondent 4)

Try to understand the title given because we need to understand the title that was given before writing an effective essay (respondent 5)

Try to understand the title given and think of the content (respondent 7)

By repeatedly reading the questions has also assisted me in searching for relevant information (respondent 10)

The result of the analysis of the findings on documents and metacognitive reflective journal showed that 10 respondents did not use declarative knowledge in writing the outline of the essay, did not focus on the key words and thus were unable to elaborate the important points. This has caused difficulties in the students to obtain ideas and write the appropriate introduction. It shows the respondents of this research have not been mastered declarative knowledge. These are the responses given by them.

After that, I will think for a while on how to start writing the topic sentence. (respondent 5).

After that, I will start thinking of some the points because I want to complete writing the essay.

After that I will think for a while to find ideas to start writing the essay (respondent 15)

For a moment I will think of how I came about choosing those points for the content in order to expand the essay. (respondent 14)

Trying to find ideas, searching for relevant materials. (respondent 8)

Based on the metacognitive reflection and the document analysis, 3 respondents succeeded in providing good main points. The reason is that they were able to relate their experiences and their previous knowledge. Therefore, declarative knowledge can be applied when someone wants to know or understand the given question. This is shown in the responses below;

I find the main points by reminiscing the past or the mistakes that I have made. (respondent 5)

After that, I get ideas from my experience and it has helped me to write. (respondent 7)

In order to find the first main point, I will recall my experience or put myself in the situation. (respondent 9)

Based on the metacognitive reflective analysis and the students' answers, several factors have been identified;

3.1.1 Outlining the Main Points

Results show 10 respondents did not stress the importance of writing the outline as the approach in writing the essay. Consequently, they did not elaborate the main points and they only wrote whatever came across their minds without any systematic planning. However, those who wrote the outline gave these responses;

Write the points that I have brainstormed so that I will not forget and outline the points. (respondent 11)

Write the outline to ease the process of writing the essay. (respondent 12)

I will rephrase the title when writing the introduction. (respondent 13)

After that, I will write an outline to ensure that I follow the correct format of essay writing (respondent 15)

After that, I will try to write an essay on a different sheet of paper first (respondent 6)

3.1.2 Students Were Merely Listing Important Points

In this research, 14 respondents were not only incompetent in the use of declarative knowledge in elaborating the ideas but also the inability to use the discourse markers effectively in their essays. This is highlighted in the responses below;

The things that I was supposed to do...obtain high marks help my parents in times of hardship and try not to offend them by hurting their feelings. (respondent 8)

I help by parents with the house chores like, cleaning the house, sweeping the floor and hanging out the clothes (respondent 3).

This sector can be developed with good management practices when communicating with the clients. This will in turn satisfy tourists who are travelling in Malaysia (respondent 14)

Only 4 respondents were able to develop the salient points effectively as shown in their responses below:

The government can help in developing the tourism sector by advertising the places of interests in our country. Thus, the society who are really keen to visit these places...(respondent 13)

...to maintain the cleanliness of the public toilets and public places. This is because, cleanliness in public places...(respondent 10)

...by running many promotions about the interesting places in Malaysia. This can be implemented through advertisements...(respondent 11)

3.2 Conditional Knowledge

The use of conditional knowledge encompasses the aspects of when and why the students are not using the strategy. The findings also showed that all the 18 respondents are not competent in conditional skills which refer to when and why certain steps should be used. The respondents can only perform the writing task based on their basic knowledge of essay writing which include introduction, the content of the body and the conclusion as based on the following statements;

After I have written the introduction, I immediately wrote the first main point. However, after writing several lines I found the essay that I have written was out of topic or off topic. Consequently, I wrote a new introduction (respondent 10)

I start thinking of the first main point related to the title or question without drafting anything (respondent 13).

Then, I understood the meaning and tried to write grammatically correct sentences to strengthen my essay. (respondent 15)

Subsequently, I will think for a while and plan on how to write the sentences...(respondent 5)

3.3 Procedural Knowledge

Based on the answers given by the respondents at the beginning of the evaluation, it was found that the respondents have not mastered procedural knowledge. Some of the introductions that were written did not have the characteristics of effective sentences that will impress the reader namely to focus on the requirements of the question, to state the consequences, to provide examples, to explain the steps and to express the importance of the points stated in the essay. In other words FCESInemomic technique (Focus, Consequence, Example, Steps and Importance) are not used in the essay. There are some respondents who did not write the introductory paragraph and instead continue to write the main points only. Some examples of the paragraph writing are shown below;

Essay Question:

Parents are people who should be loved. What are some ways you should do to show them that you truly love them?

Parents are people who should be loved. (F). Without them, we will not exist in this world (I) (ST3/4).

Some of the things that I should be doing are helping my parents. I should help them to wash the dishes and do the laundry (S) (ST2/1).

Parents are people who are loved by many (F). We really need them irrespective whether it rains or shines (I) (ST2/4).

Parents are very important to the daily lives of children when their children need it (I) (ST3/1).

The things should I should do are to help my parents. The things that I do are such as washing the dishes, hanging out the clothes, washing the clothes and taking care of my siblings (E) (ST2/2).

In this decade, parents are people who are very important in our lives (F). In addition to showing our love to them, we can also show other ways to portray our love to them (E) (ST3/3).

Only one respondent successfully used the techniques of writing by writing the introduction with the emphasis on the characteristics of good introduction in writing.

Parents are noble people (F). They have been taking care of us and shower us with love (E). Their dedication and sacrifice on our behalf *can never* be fully *repaid* (I). However there are many ways for us to prove our love to them (emphasis to the subject) (ST2/5).

Based on several answers of the respondents, we can compare the suggested answers using FCESInemonic technique for good introduction writing essay (Shahlan 2012).

Parents are people whom we truly love in a family (focus). Without our parents, we would not be in this world (consequence). This is because they give birth to us, shower us with all their love and shape our future (example). We should strive to provide our unconditional love to our parents (steps). Therefore, the practice of the love towards our parents should be instilled in each individual's life so that life will become more meaningful (importance).

Most of the respondents were able to list the ideas or main points, but they could not elaborate the ideas properly. They lack the use of appropriate discourse markers. This can be shown given in the example of the second paragraph (first main point).

Things that I should do to my parents are by getting excellent exam result, helping my parents when in trouble and not hurt their feelings (ST3/4).

I help my parents to clean the house, sweep the floor and hang out the clothes to dry (ST2/1).

I help my parents to clean the house every day. I sweep the rubbish, mop the house and clean the windows. I spend my free time by helping them to clean the house (ST2/2).

Some of the things that I do...one of it is to learn diligently regardless in school or at home so that my our parents effort will not go to waste in raising us to be a useful person (SIT3/1).

Some of the things that I ought to do for my parents are to make them happy because they want their children to live comfortabl...they always say work hard at first, and enjoy the fruits of labour. They want to live comfortably during their old age (ST3/2).

Things I should do to help parents by helping is when mother is cooking I will help her to cook mother. During mother's day, I will give a gift in honor of mother's day (ST2/4).

By cleaning the house while they are busy working or earning a living, when we clean the house while they are not at home, it will reduce their burden to do house work when they return home. Indirectly we are able to show our appreciation to them (ST3/3).

Among them are shaking hands and kissing our parents before going to sleep each day. In this way they will be reminded that they always being loved. This act will also strengthen ties between families (S2/5).

Based on analysis of the respondents' documents, none of the respondents was able to master the ways on how to develop the content of the essay from the main points. Overall, the content of the paragraph writing shows glaring grammatical errors in both words and sentences. Even though the content is relevant, the explanation was unclear as most of the respondents were not able to elaborate on the salient points for content of the essay. The

development of the content was also less interesting, inappropriate paragraph and not a single discourse marker was used in writing the paragraph. For example ..., conclusion ..., etc.

4. Discussion

Results of the study provided evidence on the lack of metacognitive skills namely declarative knowledge, procedural knowledge and conditional knowledge that contribute to student achievement on the essay writing. It is therefore appropriate for language educators to focus on these elements during the process of teaching and learning. With the use of metacognitive teaching strategies, the elements of metacognitive knowledge are emphasized. The focus of the activities carried out in this strategy is to plan, draft, revise or edit the essay writing process. The implementation of these activities can be explicit using the plan technique, drafting introduction technique, and expand the topic sentences, review, edit and conclusion. Metacognitive knowledge and cognitive regulation complement each other during the writing process of teaching and learning. This is because declarative knowledge is important when making the acquisition, transfer and settlement of essay writing assignment whereas procedural knowledge is important when performing routine or tasks (Gagne 1985).

During the writing process, students will receive two types of knowledge about the language they are learning (Faerch & Käsper, 1983). The first is the declarative knowledge that is implicit or implied and involves internalization or absorption of language rules, such as definitions of words, aspects of grammar and spelling. Secondly, which is the procedural knowledge, is generally used implicitly or explicitly (Carr, 2010). These strategy and procedures are used to process the information and language skills (e.g. writing and reading). In an effort to continue the learning process of writing skills, it starts from declarative knowledge to procedural knowledge until the performance of these skills become more automatic. The expand topic sentences technique uses declarative knowledge to answer questions on when and how they are used to expand the contents of which are listed (Shahlan, 2012)

According to Baker and Brown (1984), metacognitive skills allow students to control the development of what he or she has learned and try to understand something. Thus, metacognitive awareness relates to the process of thinking and learning strategies, while procedural knowledge is directly involved with the monitoring, directing learning and thinking. All these processes translate in the metacognitive strategies such as focusing on learning, organizing and planning the learning and assessing whether the learning is successful or otherwise. Therefore, coordination between metacognitive awareness and thinking processes in accordance with the views of Piaget (1973) which states that metacognition can be developed when the child enters the formal operational level and capable of thinking to a more abstract thinking. Through the practice of metacognitive reflection, students will remember and reflect on the learning process that occurs.

Metacognitive reflection helps students to be aware of the learning process through which it passes (Beyer, 1988). In this study, among the activities involved in the process of metacognitive reflection is to evaluate the achievement of learning outcomes and learning content (the content of a subject) and the process of learning how to learn (Saemah et al., 2010). Metacognitive reflection practices through metacognitive strategies technique encourage students to make self-reflection. Personal reflection allows the students to identify the advantages and disadvantages of a writing assignment and follow-up action plan to improve the quality of learning. Through self-reflection activities, students can familiarize themselves with self-questioning. Practices of self-reflection, students tend to form a frame, reconstruct the frame, and a new action plan on an ongoing basis as recommended by Schon (1983). Techniques used in the metacognitive strategy against the students are able to make students more aware of metacognitive awareness when, how, and why the technique is used. As a result, the depicting elements of the explanation metacognitive strategies influence and contribute to the increase in mean score essays.

5. Conclusion

Declarative knowledge, procedural and conditional knowledge about writing technique and strategies are important metacognitive elements as it help students learn how to learn. Consequently, it contributes to students' performance in essay writing. However, the study found, students still lack of these skills. It is hypothesized that using the metacognitive strategy in writing will enhance students writing skills. Therefore, it is suggested that language educators give attention to the importance of these elements during the teaching and learning writing skills.

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