Unpacking Students' Metacognitive Experiences

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Unpacking Students' Metacognitive Experiences in Writing Course: The Effects of Strategy Instruction

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Abstract. Recently there has been a number of consideration research on metacognition. However, little attention has drawn to metacognitive experiences especially in writing enterprises. In view of this, the present study investigated students' metacognitive experiences gathered from their writing in English as a foreign language (EFL) course. A set of semi-structured interview was used as the database to , first, explain students' judgments and feelings related to their mental effort, confidence, satisfaction, and task difficulty before, during, and after their cognitive process in writing and, secondly, the relations of students' metacognitive experiences and their writing performance were also assessed. To this end, 10 voluntory students who have participated in the learning of writing course have been recruited to take part on the interview. A series of questions were given to the participants related to the metacognitive experiences that comprise metacognitive knowledge and metacognitive strategies they run while learning writing. The outcomes of the study showed that students had varied problems solving strategies reflected from the different individual's control of the cognitive regulation. The findings also indicated that there were positive outcomes in favor of the metacognitive strategies used in the writing course particularly when the strategies were correlated to the manifestation of the metacognitive knowledge. This study has practical implications on the prominent of metacognitive experiences that can be activated in writing instructions to support learning achievement.

Key words: metacognitive experiences; metacognitive knowledge; metacognitive strategies; strategy instruction

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INTRODUCTION

Undoubtedly, metacognitive skill has shown as one of learning strategy that enables learners to quality- control the learning and then achieve their goals of learning at the end. Thereby, A number of research has proven the positive outcomes of the work of metacognition in helping students improve the learning (Devine, 1993; Mihalca et al., 2017; Teng et al., 2021). This skill helps individuals understand their learning processes and direct them to be an effective learner or reach higher learning achievement (Stanton et al., 2021). Due to the process of thinking about learning and knowing about tsk processing as the characteristics of metacognition, this executive skill appeals learners to develop the critical thinking skill, problem- solving skill and decision making skill in their learning processes (Flavel, 1979). For the sake of language learning success, metacognition is regarded as a crucial determinant as according to Flavel's (1976), the learners' knowledge concerning to the cognitive processes and products can be used by the learners to monitor, regulate, and develop their cognitive processes. For this reason, Zhang et al. (2019) mentioned that metacognition plays a pivotal role in language learning instruction.

John Flavel (1979) was considered as the pioneer of the term metacognition in education field. He defined metacognition as the ability of learners understand the cognitive functions and then monitor their own cognition and finally able to control and adjust their cognitive process according to their needs. Allen and Armour (1993) supported the metacognition definition as the knowledge and control of individuals over their own learning experiences and cognitive process. In short, metacognition is the individuals' knowledge on the cognitive process and how to apply the knowledge to achieve the goals of learning (Pitenoee & Ardestani, 2017). Cognition deals with how learners come with problem solving, while metacognition involves the learners' understanding of the process on how the problem is solved (King, 2004). From this understanding, it is clear that metacognition is part of cognition in terms of learners' capacity, strategies, or knowledge that monitor and control their own learning process.

The subcategories of metacognition falls into three components, namely, metacognitive knowledge, metacognitive experiences, and metacognitive strategies (Flavel, 1979; Anderson, 2003; Zhang & Zhang, 2018). It is hard to make

definite distinction among the three components, however the metacognitive knowledge, metacognitive experiences, and metacognitive strategies are complement and enrich one another (Teng et al., 2021) in which metacognitive knowledge influences the metacognitive experiences and then boost the use of metacognitive strategies (Papaleontiou-Louca, 2008). According to this view, a learner has learning experiences based on metacognitive knowledge (ie. If a learner know what is harder or easier to do) and then metacognitive strategies are possible revealed or emerged to achieving a certain aims. To this regard, metacognitive experiences according to Hertzog and Dixon (1994) differ from metacognitive knowledge and from metacognitive strategies.

Metacognitive experiences are considered a new concept for research in this recent time. Consequently, little attention has been given to the work of metacognitive experiences in educational study (Sun et al., 2021). Beforehand, the concept was introduced by Flavel (1979) thereafter the definition was developed by Efklides (2002) in terms of metacognitive experiences framework that encompasses ideas, feelings, judgements, and online metacognitive knowledge in problem solving process. Metacognitive experiences are manifestations of the online monitoring of cognition when the person comes across a task and processes the information related to it (Efklides, 2001). Metacognitive experiences monitor the progress being made towards one's learning goals. Specifically, metacognitive experiences monitor the outcome of processing the information in an affective or a cognitive manner- namely, namely metacognitive feelings and metacognitive judgements. Examples of metacognitive feelings that may convey information about one's competence are feeling of difficulty, feeling of confidence, and feeling of satisfaction. Whereas metacognitive judgments associated with feeling of difficulty are estimate of effort expenditure, and estimate of solutions or correctness (Efklides, 2001). In this regard, metacognitive experiences are paramount to make a learner aware of the fluency of the cognitive processing and of the match or mismatch between the goal set and the outcome achieved (Frijda, 1986). Teng et al. (2002) and Sun et al. (2021) posit that metacognitive experiences are significant in writing process as they are correlated with metacognitive knowledge and metacognitive strategies. Regarding this view, metacognitive experiences may launch the revision of the metacognitive knowledge and metacognitive strategies during the cognitive endevour (Papaleonteous-Louca, 2008)

There has been greatly growing studies on metacognition, however they have mostly focused on the cognitive aspects, like task processing and monitoring and regulation of processing the content (Simons et al., 2020; Cer, 2019; Panahandeh & Asl, 2014), and metacognition on some specific domains, such as in science (e.g., Ben-David & Orion, 2013), reading (e.g., Yuksel & Yuksel, 2012), and listening (e.g., Birjandi & Hossein, 2012). Additionally, lots of further researches have also investigated metacognitive knowledge and metacognitive learning strategies (i.e., Riwayatiningsih et al., 2021; Simons et al., 2020; Cer, 2019). Nonetheless, little attention has been paid to the aspect of metacognitive experiences, particularly in EFL writing study that is ascertained from before writing, while writing process, and after completing the writing.

To address this gap, this study focuses on a particular aspect of metacognition, that is on exploring metacognitive experiences situated in EFL writing course. Its emphasis was on metacognitive feelings and metacognitive judgements that are present in learnig situation such as problem solving in text processing on writing activity. The multi-dimensional challenges in writing are acknowledged by the lack of awareness and writing strategies usage (Ruan, 2014; Teng, 2019). Therefore, treating students with strategy instruction may help them in their writing performances (Naghdipour, 2016; Machili et al., 2019). Strategy instruction may help students equip with the skills required to become good learners. Webster (2019), for example, investigated how strategy instruction was introduced to facilitate more effective language learning strategy to meet students' learning needs. The design of strategy instruction used the five stages model of strategy instruction adapted from Oxford's (2011). Biwer et al. (2020) has also investigated on strategy instruction through intervention program in higher education on practice testing. The results suggested the positive effects on knowledge about effective learning strategy to overcome difficulties during learning. On that account, the role of strategy instruction through metacognition is as determinant for language learning success (Rahimi & Katal, 2012; Ghapanchi & Taheryan, 2012; Nguyen & Phung, 2021).

Critical thinking and problem solving skills have also been prominent attention in academic writing. The ability to infer the reasonable judgments and decision are taken from the representation of metacognitive process which entail critical thinking and problem solving skills (Dywer, 2004). In the process of writing, a writer needs to make decisions for not only on ideas and content but also grammatical structures and other linguistic features (Fareed et al., 2016; Mohammad et al., 2017). Those reasons eventually make the complexity of writing skill (Schleppegrell, 2012; Derewianka, 2015; Gillet, 2017). In addition, the ability of activating the cognitive, linguistics, and background knowledge of the issue (Cigademoglu et al., 2017) together with generating sentences and paragraph in a good composition (Kazemian et al., 2021) make writing becomes a complex process. An effective writer must produce a text which is cohesive, logical, clearly structured, interesting, and properly organized with a wide range of words choices and mastery of conventions of mechanics (Jacobs & L, 1981). As Nunan (1989) argues that writing is an extremely difficult cognitive activity which requires the learner to have learning strategy intervention. For this reason, metacognition experiences may foster awareness in the writing process and has added as the suggested strategy to the development of strong writers in the classroom (Chaterdon, 2019; Cakici, 2018; Kallio et al., 218; Azizi & Estahbanati, 2017).

Researchers have admitted that complexity, accuracy, and fluency were significant in foreign language writing (Barrot & Agdeppa, 2021). From that three terms, complexity in writing refers to the students' experiences dealing with the wide range of grammatical forms and structures in language development (Pallotti, 2015). While the outcome of accuracy is associated with students' competency in the grammatical correctness while writing (Foster & Wigglesworth, 2016; Skehan, 2009). Concerning with the presentation of fluency, this performance relates to students' natural flow and rhythm in producing written words (Abdel Latif, 2013; Ellis & Barkhuizen, 2005). These writing performances can be initiated through appropriate pedagogical interventions in the writing classroom (Kiken et al., 2010; Wigglesworth & Storch, 2009). By providing metacognitive writing experiences for students, the production of more complex, accurate, and fluent written production is expected impose the language development. In particular, helping students in writing experiences are enabling them to develop the quality of writing. Therefore, it is crucial to conduct study on students' metacognitive experiences in writing to potray the strategy instruction for the language achievement.

This study makes several contribution. First, it will provide meaningful implications for EFL writing pedagogy and research. Secondly, it will also help writing teachers in gaining a more nuanced understanding of metacognition for language learning proficiency which eventually such awareness can guide them in pedagogical interventions based on evidence. Third, theoretically, the findings will contribute to inform researchers on how metacognitive experiences as the determinant facet of metacognitive knowledge can be considered when examine the learning situations such as in text processing.

METHODS

Research design

This qualitative study was designed to describe the metacognitive experiences which cover metacognitive judgements and metacognitive feelings from 10 higher education students who have participated in multifaceted nature of EFL writing course from a private university in Indonesia. Students' metacognitive judgements and metacognitive feelings were also identified related to their writing performance. The data were collected via interviews which were transcribed and then interpreted through a thematic analysis approach. The research design involved developing an interview based on literature analysis from the facets of metacognitive experiences from Efklides (2005). The analysis of the data was done by adopting the interactive model by Miles and Huberman (1994)

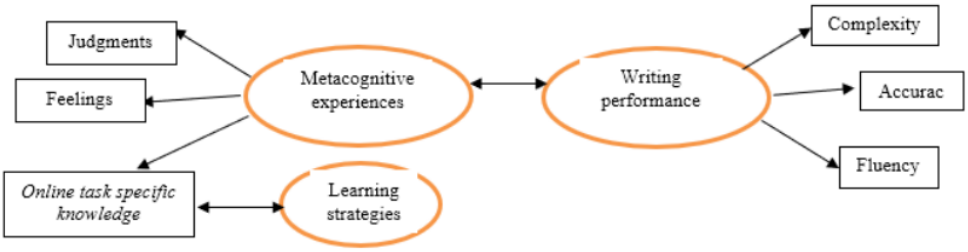
Participants

10 students were recruited for the sampling participants (6 girls and 4 boys) and their average age was 19. The participants were second year undergraduate students who take academic writing course at university of Nusantara PGRI Kediri. This university was included a private one that involves the students to pay the tuition fee every year. This mechanism makes a difference in part of the social- economic status between students who studied in the state university. Concurrently, the writing course was designed to improve writing performance by administering strategy instruction. This was noticeable from the

instructional design made by the lecturer. The initiated participants were selected because their score in writing were in A level which it indicates the excellent performance for the learning achievement. Moreover, this also means that the students had success in pertaining the writing instruction.

Procedures

The enlisted participants were invited for an hour in-depth interview using semi- structured questions on metacognitive experiences (Judgments, feelings, and the online task specific knowledge). In the beginning, the researcher sent a consent form to the participants to assured that they all have agreed to contribute to this research. In the interview process, they were investigated about their metacognitive experiences, such as (1) their judgments of; learning, estimation of effort, and estimation of time, (2) their feelings of; familiarity, difficulty, understanding, confidence, and satisfaction, and (3) their online task specific knowledge; task features and procedures employed. The questions of the interview were addressed to instigate the writing performance measurement (complex, accurate, and fluent written texts).



The interview was conducted using participants first language, just after the participants completed writing activity. Each participants was asked to respond in the semi-structured interviews items category of metacognitive feelings and metacognitive judgments refer to their writing exertion. The process of the interview, which lasted in an hour was recorded and transcribed in the verbatim model. The data obtained from the interview were then translated into English, and to assure its reliability and validity, the researcher confirmed the translation results to a translator, who is also a lecturer in the university. In anticipation of missing information during an interview session or having problems with the recording process, the researcher had prepared the plan to re-interviewed the participants to ensure internal data consistency.

Subsequent to the analysis of the data, Miles and Huberman's (1994) data analysis was used to come with the data reduction, data display, and conclusion. In the end, the results of the interview transcripts were classified into metacognitive feelings and metacognitive judgments as part of the metacognitive experiences.

RESULTS AND DISCUSSION

Students' metacognitive feelings on writing

In the metacognitive feelings of confidence category on writing process, the students' feelings are depicted from the following excerpts:

Excerpt 1:
"*It is easy for me to develop the ideas from the topic because I do several reading activity on related topic before I start to write*." (Student A)
Excerpt 2:
"I understand what I should write if the topics related to my daily lives." (Student B)
Excerpt 3:
"I believe the more I read the more I can write and I feel comfortable with the topics presented to my daily activities." (Student C)

The three successful student writers declared that they feel confident in writing, especially topics related to their reading and daily activities (student A, B, and C). These feeling of confidence denoted that they were able to recall their prior knowledge (cognitive and metacognitive strategies) while writing. These kind of feelings were a result of the aptitude in reaching the cognitive goals. This discovery was in line with (Efklides, 2001, 2006)'s finding that feeling of confidence was related to the learners' interest and feeling of liking on a task after they had finished working on it with the positive mood. The positive affect made the learners ease in the effort of exertion the task, thus this engagement supported in the future similar tasks. The students' positive metacognitive feelings of confidence decoded their use of metacognitive

knowledge in order to make control the decisions of problem solving. These decisions were then implemented through metacognitive strategies. It was apparent from the above extracts that reading was the strategy to make students felt confident in articulation of ideas in their writing. Unlike the successful student writers, less successful student writers contended that they do not feel confident in good ability in writing. They were also unable to recall their prior knowledge in their writing process as they were lacking the writing experiences. This kind of feeling was related to the outcome of processing, the estimate of correctness and feeling of difficulty. For instance, two of the less unsuccessful student writer contended that:

Excerpt 4
"*I do not have good writing ability and this task makes me difficult. I am aware that I lack of experiences in writing, so I need to write more*." (Student D)
Excerpt 5
"*I feel hard to write complicated sentences, so I develop the simple forms and structures."* (Student E)

In terms of metacognitive feelings of difficulty in writing, the less successful student writers had negative feelings affected from the lack of fluency. This was due to the interruption of processing within their cognitive goals. In the interview, the participants shared their feelings of difficulty in the task demand as shown from excerpt 4 and 5, and at the same time they developed more effort to task processing. Their feeling of difficulties were product of monitoring the cognitive process and had the quality of unpleasant feelings. Therefore, the student writers who were aware of their feelings of difficulties denote their negative effect of processing and tried ways of solution in order to get in the fluency of processing. This attribution to the task complexity or lack of personal competence, called the students to proceed with the planning of the process or with the use of strategies in learning. This findings have flourished the existing studies on emotions in the field of language learning research (e.g., Kasper, 1997; Zhang, 2002; Wu, 2006; Davari et al., 2020). The findings suggested that the feeling of difficulty is associated with the feeling of confidence. Thus, it also supported Koriat and Levi's (1999) findings that the evidence of metacognitive feelings of difficulty were caused by lack of understanding the task demand or procedural knowledge during processing.

Students' metacognitive judgments on writing

In another category of metacognitive experiences was metacognitive judgments. The judgments of student writers estimated their effort of expenditure in the process of writing regarding with the vocabulary use, grammar use, sentence structures and organization. These writing components have been considered as the pertinent of the dimensions of complexity, accuracy, and fluency in writing performance. The students' metacognitive judgement estimates their (1) effort in writing performance, such as in the following excerpt:

Excerpt 5
"I pay attention to words choices used in my writing." (Student F)
Excerpt 6
"I ask my self if my writing matches with the instruction." (Student G)

The above excerpt indicated that the students tried to estimate the effort of exertion in writing process relating with vocabulary use, grammar use, sentence structure, and organization. The allocation of this effort guided them with deliberation use of strategies for regulating learning that involved process in planning, monitoring, and evaluation of cognitive goals. This process was apparent when students worked with revision activity for word- level clarity in order to find words that best express their ideas. Another presentation of this metacognitive judgments was observed through students' activities to monitor the organization of the informations they have gathered in outline in the order of importance.

(2) the effort in calculating the time. This occurance was apparent when students were attentive to the time needed or used. These exertions might be attributed from the examination culture in their learning context that they habituated in school learning circumstances. For that reason, students appertain to decide the right time in order to get effective learning enterprise. This level of judgments is related to the execution of responses that it would increase the confidence when students launched the task in shorter time.

Another metacognitive judgments were based on online task- specific knowledge which were noticed from students' initial use of words and ideas or thought in writing. This performance is related to students' spontaneous awareness of task and strategies during writing process. The

example of this exertion is shown from the excerpt below:

Excerpt 7

"I make necessary modifications from my plan while writing." (Student H)

Excerpt 8

"I pause while writing and ask my self if the message is clear." (Student I)

Excerpt 9

"While writing, I ask myself if the vocabulary and grammar are appropriate.' (Student J)

The excerpt above revealed that students' judgements related to their own knowledge of cognition process in writing have guided them to set strategies during the monitoring phases. The illustration of the judgments can be described that students use their understanding how they proceed the task and adjust the strategies used as it needed.

The results of the study showed that learners' metacognitive feelings and judgments of estimates were significantly correlated with their writing scores. Students who have intense metacognitive experiences tend to perfom better learning to write. The orchestration of metacognitive knowledge has directed them in the proficiency level of the writing performance.

CONCLUSION

Taken together, this study attempts to explicate students' metacognitive experiences on writing process concerning with complexity, accuracy, and fluency. The results from the interview showed the role of metacognitive experiences in explaining the association between metacognitive knowledge and the learning strategies used. Findings from data analysis demonstrated that students' metacognitive knowledge played as the predictive factors to reach the learning strategies for their writing performance, and that association was mediated by metacognitive experiences. From students' statements relating to metacognitive feelings, metacognitive judgments, and online metacognitive task knowledge on writing revealed the presentation of their writing performance.

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