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Developing Metacognitive Writing Strategy to Enhance Writing Skills Viewed from Prospective Teachers' Critical Thinking Skills

[1]Mohammad Kazemian, [2]Lalu Ari Irawan, [2]*Haerazi
[1]English Department, Guilan University of Medical Sciences, St: Parastar St., Rasht, Islamic Republic of Iran
[2]English Language Education, FBMB, Universitas Pendidikan Mandalika, Jl. Pemuda No. 59A, Mataram 83125, Indonesia

*Corresponding Author e-mail: haerazi@ikipmataram.ac.id

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Abstract

The metacognitive awareness and critical thinking skills were essential to be subjected to the prospective teachers to regulate their learning and train how to practice writing effectively. This study was aimed at developing the model of the metacognitive writing strategy to improve prospective teachers' writing skills viewed from critical thinking skills in Indonesian higher education. To attain the research aim, the research and development (R&D) study was employed. The stages of R&D design included defining, designing, developing, and disseminating. To attest to the effectiveness of the metacognitive writing strategy, the researcher used a quasi-experimental design in the form of pre-test and post-test control group design. The prospective teachers were divided into two groups, the experimental and control group. The experimental group was treated using the metacognitive writing strategy, while the control group was taught using the conventional strategy. The instruments of collecting data used the metacognitive writing test and critical thinking test. Then, the data were analysed using descriptive and inferential statistical devices. The results of the study showed that the metacognitive writing strategy can help prospective teachers to regulate their learning activities in terms of what and how to write in the class. At the top of that, they are able to compose good exposition texts. It was proven that the average score of learners in the experimental class was higher than those on the control class. The research findings were elaborated in the research discussion.

Keywords: metacognitive strategy, writing skill, critical thinking skill

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INTRODUCTION

Writing is one of the most difficult language skills for prospective teachers to acquire. They need to activate their cognitive, linguistics, and cultural knowledge together in composing good paragraphs with proper cohesion and coherence devices (Haerazi et al., 2018). In addition, writing requires enough scientific literacy to generate sentences and paragraphs easily. This ability involves not only comprehending scientific issues but also having the ability to compose the issues in written forms. Cigademoglu et al. (2017) state developing writing skills is the common feature of scientific literacy in the literature. Therefore, writing skills are uneasy to acquire like other language skills. Non-native prospective teachers and even for native speakers require much more to practice writing.

Teaching writing skills in higher education necessitates prospective teachers to develop their higher-order thinking skills (Sinaga & Feranie, 2017). One of the higher-

order thinking skills is critical thinking (Suryanti, Arifin, & Baginda, 2018). HOTS are related to the three upper levels of Bloom's taxonomy (Samsudin & Hardini, 2019). In this study, prospective teachers are engaged in HOTs activities such as critical thinking. They need to treat their critical thinking skills in a daily life situation. Critical thinking skills are very critical in developing prospective teachers' writing skills. In order to apply their critical thinking skills, developing the metacognitive awareness of prospective teachers is crucial (Erenler & Cetin, 2019). Winne (2011) reinforces that "metacognitive awareness becomes a key aspect in learning social science since it allows learners to regulate their cognitive skills and task performance effectively". Including for English learners, they need to activate their metacognitive skills. According to Zohar (2004), metacognition refers to the awareness of learners' cognitive processes.

The cognitive aspects mostly influenced prospective teachers' writing achievement in arranging good sentences and paragraphs although cultural factors and linguistic aspects are essential (Haerazi & Irawan, 2019). Cognitive aspects are considered as the main effect that causes low achievement in writing classes. Developing critical thinking skills and metacognitive awareness for prospective teachers is an appropriate way to help them to regulate their learning. According to Ennis (2013), the critical skill is a way of reflective thinking based on logical reasons that determine what to do, while metacognition is aware of the cognitive process (Ramli et al., 2019). Therefore, the role of critical thinking is important in English language pedagogy (Veliz & Mauricio, 2018). Besides, metacognitive awareness helps prospective teachers to create learning activities.

Prospective teachers display critical thinking skills to understand, interpret, and decide what they read and hear in order to compose appropriate responses in the form of the writing texts. In this learning, they learn how to share ideas based on deep insight and the results of their thinking process. According to Pu and Evan (2018), critical thinking guides learners to perform their ability in writing and it can develop their personal development of knowledge. Moreover, the acquisition of language skills like writing and reading skills necessitates critical thinking skills (Paul & Elder, 2006). It helps learners to administer "their learning style, cognitive development, and effective information seeking" (Aghajani & Gholamrezapour, 2019). Referring to writing aspects, critical thinking skills are promising factors that help prospective teachers to understand aspects of grammar, content, organization, vocabulary, punctuation, and cohesive and coherent devices.

Teaching writing skills for prospective teachers becomes a challenge for English lecturers. Prospective teachers still feel uneasy to express their ideas into paragraphs. They need to train in critical thinking. Also, metacognitive awareness is an important aspect for them to develop. Critical thinking skills and metacognitive awareness are essential for developing writing skills. One of the instructional language strategies used to integrate both is the metacognitive writing strategy. Dulger (2011) states the metacognitive writing strategy is a good way for teaching writing skills because it leads learners to attain total writing achievement in general, on content, vocabulary, organization, and mechanics in particular. The point touch of this strategy is to utilize the prospective teachers' metacognition. Metacognition here refers to their awareness of thinking about what they know and what they do not (Iskandarwassid & Sinendar, 2011).

The metacognitive writing strategy is learner-centered learning and more individual. Referring to Dulger (2011), this strategy is developed for teaching writing skills viewed from critical thinking skills. It has four learning phases that include centering, prewriting, arranging, planning, and evaluating. It is then called as CPAPE. Prewriting activities encourage prospective teachers to recognize what kind of genre they want to write. Arranging and planning activities tend to seek out the proper learning, writing tasks, setting goals, and learning objectives. At the end of this, prospective teachers are asked to

evaluate themselves in the form of self-monitoring and self-evaluation. Therefore, utilizing the metacognitive writing strategy is important since the prospective teachers are able to develop their metacognitive awareness and critical thinking skills.

The novelty of this study lies in the use of the metacognitive writing strategy to improve prospective teachers' writing skills viewed from the level of critical thinking skills. Critical thinking skills are exploited to guide prospective teachers to operate their thinking process. At the same time, they activate their metacognitive skills. Metacognition as the thinking process necessitates critical thinking skills. In the learning context, prospective teachers learn how to learn. They know their capabilities and modalities to learn. At the end, they know the best instructional strategy to practice writing effectively.

Teaching writing skills in higher Education are oriented into two writing theories, namely process-oriented theories and product-oriented theories (Haerazi & Irawan, 2019). The process-oriented theories are increasingly applied to improve prospective teachers' writing performances. According to Hawkins (2007), process-based theories of writing conceive of "writing as a problem-solving activity". It refers to a belief that the more prospective teachers are provided with higher-order processing skills, the more they are capable of performing successfully in problem-solving situations. Meanwhile, the product-oriented theories are employed to generate various genres as the result of writing. The two writing theories require rhetorical knowledge, process knowledge, and formal knowledge (Tardy, 2009). Therefore, treating prospective teachers with higher-order thinking skills (HOTs) helps them to regulate their learning to improve their writing performances.

Byrnes and Manchon (2014) writing includes a complex process. It requires the meaning-making cognitive process and the cognitive factors play an important role in the learning context (MacArthur & Graham, 2016). Lecturers try to operate learners' working memory. According to Olive (2012), the cognitive process necessitates working memory functions. The working memory and the writing process and product stimulate learners to complete writing tasks (Revesz et al., 2017; Michel, et al., 2019). In teaching writing skills in higher education, the lecturers can train the prospective teachers to develop metacognition and critical thinking skills in writing classes. It was reinforced by some studies relating to cognitive skills because the role of metacognition and critical thinking skills in writing is promising (Calix, 2015; Yeh, 2015; Negretti, 2017). One of the learning strategies that find clues for prospective teachers to enhance the two cognitive processes is metacognitive writing strategy.

Metacognitive writing strategy nowadays is implemented to help language learners acquire writing skills effectively. It is used to build learners' cognitive ability in order to construct and coordinate their own learning process in writing. Oxford (2006) states metacognitive writing strategy involves learning activities that provide a process for learners to coordinate their own learning process when they are in writing. Learners do a reflection stage cognitively toward what they write. It refers to what Zohar and Dori (2012) depict that the metacognitive writing strategy provides "the process of reflection on learners' own thinking and keeping track of how their thinking is getting them closer to the goals during the writing".

Ohtani and Hisasaka (2018) state metacognition refers to how prospective teachers recognize their own cognitive process. Since this happens in the learning context, "metacognition involves two processes, namely metacognitive knowledge and metacognitive activities". The two processes involve goal setting, planning, selection, and modification. In addition, metacognitive writing activities are able to promote metacognitive awareness during learning. Fisher (2009) depicts "the characteristic of metacognitive skills cover strategic knowledge, self-awareness, awareness of the tasks, knowledge of the context, conditional knowledge, and knowledge of the self". Besides, the indicators of metacognitive skills include "declarative knowledge, procedural knowledge,

conditional knowledge, planning, information management strategy, understanding of the monitoring, implementation of the strategy, and evaluation" (Schraw & Moshman, 1995; Magno, 2010; Maftoon, et al., 2014). The complete indicators of the metacognitive skills can be presented in Table 1 as follows.

Table 1. The indicators of Metacognitive Skills

Indicators	**Definition of Sub-Scale**
Declarative Knowledge	Refers to know about things
Procedural Knowledge	Refers to know how to do things
Conditional Knowledge	Refers to know the why and when aspects of cognition
Planning	Include the selection of appropriate ways and strategies and the allocation of resources which affect performance
Information Management Strategy	Strategy sequences and skills applied in processing information more efficiently
Monitoring	Doing an assessment of learners' learning or strategy use
Debugging Strategy	Strategies applied to correct comprehension and performance errors
Evaluation	After a learning episode, conducting an analysis of the performance and strategy effectiveness

The metacognitive writing strategy tries to develop prospective teachers' writing skills viewed from critical thinking skills. The critical thinking skills are assumed as a factor that affects the learners' writing achievement. In this study, the metacognitive learning strategy is also known as a self-regulated learning strategy (Baker et al., 2015; Tuysuzoglu, & Greene, 2014; Ohtani & Hisasaka, 2018). The terms of metacognitive strategy relate to a learning strategy to improve the learners' cognitive and metacognitive processes (Marcel, et al., 2006). Nevertheless, the metacognitive writing strategy is a proper term for teaching writing skills. It is oriented to develop prospective teachers' writing skills. Additionally, Maftoon and Seyyedrezaei (2012) state the metacognitive writing strategy tries to regulate and monitor the self-regulated learning process. Learners engage in managing their writing processes individually. Self-management, self-monitoring, and self-evaluation are critical activities in the implementation of the metacognitive writing strategy. Besides, Kuhn (2000) depicts the metacognitive strategy tolerates learners to manage what they have learned through their own learning styles.

Many references for critical thinking skills have been used in relation to the learners' needs for developing their language skills. Critical thinking skills are assumed as highly valued, desirable, and an increasingly important asset (Johanson, 2010; Ralston and Bays, 2015) for teaching and learning goals. In an educational context, critical thinking is often taken from Dewey's philosophical and educational work (Veliz & M-Veliz, 2018). Critical thinking defines as one of the higher-order skills or higher-order thinking skills (Geertsen, 2003). It is also explicitly equated with reasoning skills (Kuncel, 2011). Critical thinking in learning activities also refers to Bloom's taxonomy (Pikkert & Bays, 2015; Shaarawy, 2014). All of those skills are aimed at developing prospective teachers to think and regulate their learning.

In teaching writing skills, critical thinking becomes an important issue to facilitate prospective teachers in order to operate their cognitive process in composing good paragraphs (Zhang, 2011). Some studies have found that the higher-order thinking skills and learners' academic achievement are interrelated (Tam & Linh, 2017; Mursyid & Kurniawati, 2019). The critical thinking indicators include interpretation, explanation, inference, and evaluation (Lampert, 2011). In teaching writing skills, interpretation refers to learners' ability to interpret what to write correctly. What to write can be explained appropriately by learners. Then, learners are able to make a conclusion appropriately,

completely, and contextually. At the end, learners should be able to evaluate their arguments correctly, logically, and completely.

METHOD

Research Design

This study was classified as a quantitative study which was a quasi-experimental research design. This study was initially preceded by developing the metacognitive learning strategy in the teaching of writing by conducting the 4Ds (Define, Design, Develop, and Disseminate) process. The 4Ds design was adapted from Desstya et al. (2019). To know the effectiveness of the metacognitive writing strategy, the quasi-experimental method with pre-test and posttest only control group design was employed. The pretest was done to meet the prospective teachers' writing skills and critical thinking skills.

The instruments of this study used a writing test and questionnaire. The writing test was aimed at seeking out prospective teachers' writing achievement. It was distributed in the pretest before treatments and in the posttest period after treatments. The two groups were allotted the writing test. Also, the questionnaire was distributed to seek out the level of prospective teachers' critical thinking skills. The researcher enquired prospective teachers to fill out the questionnaire by ticking off one of the five options presented. Afterwards, they should write the reasons in the simple sentences or a simple paragraph. The prospective teachers' answers in the form of paragraphs were confirmed with the indicators of critical thinking skills.

Data Analysis Technique

To analyze the research data, the descriptive and inferential analysis was employed. The descriptive analysis aimed to find out the prospective teachers' writing achievement and critical thinking skills gained from the pretest and posttest computation in the control and experimental group. The analysis covered the mean, mode, median, and standard deviation. Meanwhile, the inferential analysis was employed to gain the conclusion of the study based on the proposed hypothesis. The IBM SPSS 21.0 was used to compute the statistical analysis fast and accurately. The normality and homogeneity were measured.

The inferential analysis was done using a parametric statistical technique, namely the multifactor analysis of variance (ANOVA). This analysis was employed to attest to the research hypothesis. The alternative hypothesis (Ha) was accepted because Fo was greater than Ft in sig. level 0.05. Then, the null hypothesis was rejected because the Fo was lower than Ft. The conclusion was taken in the sig. level 0.05. The computation of the ANOVA test operated the IBM SPSS 21.0 as a statistical analysis device to have accurate and fast data multiplication. Afterwards, the interpretation of whether the data collected are in contradiction or supporting is also conducted well.

RESULTS AND DISCUSSION

Research Findings

The metacognitive writing strategy was developed in line with the prospective teachers' target needs and learning needs in the teaching of writing skills in the private universities in West Nusa Tenggara, Indonesia. This metacognitive learning strategy was aimed at improving the prospective teachers' writing skills viewed from critical thinking skills. The developed metacognitive writing strategy can be drawn in Table 2 as follows.

Table 2. The Developed metacognitive writing strategies

No	Teaching Steps	Learning Activities
1	Centering the learning	▪ Students are asked to link the topics provided with their own background knowledge.

No	Teaching Steps	Learning Activities
		▪ Students are directed to pay attention to some specific things associated with the topics. ▪ Students are asked to generate topic sentences based on the materials given. ▪ At the end of this stage, students produce topic sentences that are elaborated as sentences of a paragraph.
2	Prewriting	▪ Students are given an explanation of writing strategies in the class. ▪ Students are asked to read some genres targeted for supporting the topic sentences. ▪ In groups, students discuss and explore writing strategies related to genres provided. ▪ Students are directed to analyze the generic structure and social function of texts given as the model text. ▪ At the end of this stage, students have an understanding of the model text going to write
3	Arranging and planning the learning	▪ Students apply their understanding of writing strategies (drafting, editing and revising, and publishing). ▪ Students are requested to utilize their understanding of the model text. ▪ Students conduct a plan to practice writing the model text provided. ▪ Students are directed to arrange a paragraph based on the topic sentence and supporting sentences. ▪ Students are involved to monitor their own thinking reflected in the resulted paragraphs. ▪ At the end of this stage, students are able to generate a complete exposition text.
4	Evaluating the learning	▪ Students carry out self-monitoring towards their own paragraphs relating to the paragraph organization, contents, grammar, language uses, vocabularies, and mechanics. ▪ Students conduct a self-evaluation towards the writing strategies, the way they create a paragraph introduction, body of text, and conclusion paragraph of exposition texts. ▪ Students gain direct feedback relating to the learning process and writing strategies. ▪ In this phase, students are expected to evaluate their writing strategies until they produce a complete exposition text.

The field-testing of the metacognitive writing strategy was carried out by conducting an experimental study. The study involved five writing lecturers from three different private universities. The data of target needs and learning needs dealing with metacognition and critical thinking were collected from some private universities. The complete results of prospective teachers' writing achievements and critical thinking skills can be seen in Table 3 as follows.

Table 3. The prospective teachers' writing skills

Groups	Scores	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Experimental	Pre-test	70.210	.901	68.408	72.011
	Post-test	79.946	1.706	76.534	83.358
Control	Pre-test	70.861	.891	69.079	72.643
	Post-test	70.595	1.442	67.711	73.479

The prospective teachers' writing skills in the experimental group are greater than those in the control group. The writing aspects assessed in this study include organization, content, vocabulary, grammar, and mechanic. Three lecturers are involved as raters to assess the prospective teachers' writing tasks for the two groups. The prospective teachers are enquired to write a complete exposition text. The writing achievements for both groups are assumed that those are influenced by the level of critical thinking skills. The prospective

teachers' critical thinking skills in the pre-test and post-test can be presented in Table 4, while summary of ANOVA test can be seen at Table 5 as follows.

Table 4. The prospective teachers' critical thinking skills

Critical Thinking Skills of Writing in Groups		Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Post-test	High	79.229	1.445	76.338	82.120
	Medium	77.338	1.980	73.377	81.298
	Low	69.244	2.284	64.676	73.813
Pre-test	High	71.500	1.303	68.894	74.106
	Medium	69.647	.828	67.990	71.304
	Low	69.851	1.150	67.550	72.151

Table 5. Summary of ANOVA test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4033.133[a]	5	806.627	12.026	.000
Intercept	304685.658	1	304685.658	4542.510	.000
Groups	1175.694	1	1175.694	17.528	.000
Critical	926.812	2	463.406	6.909	.002
Groups * Critical	436.318	2	218.159	3.253	.046
Error	4024.458	60	67.074		
Total	401685.000	66			
Corrected Total	8057.591	65			

Discussion

The metacognitive strategy is viewed consistently as self-regulating learning focusing on the specific cognitive processes. In this study, the metacognitive strategy has some stages in the teaching of writing, namely centering the learning, prewriting, arranging and planning the learning, and evaluating the learning. It was different from some researchers who applied this strategy through different stages of the planning, monitoring and problem-solving, and evaluation (Rahimirad, 2014; Oz, 2016; Nosratinia, Ghavidel, & Zaker, 2015; Moza et. al., 2019). It was also different phases developed by Pintrich (2004) and Zimmerman (2000) who posited learning stages, namely forethought, monitoring, control, and reflection. These strategies were employed for different learning focuses such as Greene and Azevedo (2007) that focused on the cognitive process that occurs in memory processes and operations.

This study concentrated on investigating the effectiveness of the metacognitive writing strategy to improve prospective teachers' writing skills viewed from critical thinking skills for the English language education study program. This strategy placed pre-service teachers much more in self-evaluation writing. In practice, learners were asked to be more individual in writing activities. Moreover, they were given more chances to work themselves. It is in line with Veenman, Prins, & Elshout (2002) who declare that the metacognitive activities lead learners to activate the self-monitoring process and self-evaluation. It is also reinforced by Nelson (1996) and Schnotz (1992) who claim that metacognitive activities help learners to function their higher-order thinking process.

In the phase of centering the learning, pre-service teachers are asked to link the topics provided with their own background knowledge. They are trained to perform what they know about the topic. The knowledge of the topic going to write is a way to activate students' declarative knowledge which is one of the metacognitive awareness dimensions in the metacognitive writing strategy (Schraw, Crippen, & Hartley, 2006; Sandi-urena et al., 2011). Besides, the students are directed to pay attention to some specific things associated with the topics. It is aimed at training them to internalize the content of the

learning materials. At the top of that, they are able to generate topic sentences based on the materials provided and the topic sentences are elaborated as sentences in the form of a paragraph.

The next phase of the metacognitive writing strategy is pre-writing. The learning activities of this phase direct students to work in the genres or text types being learned. The students are invited to relate the text with other knowledge targeted for learning. In this study, students are asked to write exposition texts. They are involved in discussing the generic structure of the exposition text. In addition, they are also inquired to explore the writing and self-regulation strategies to write. The role of the lecturer in this situation is given an explanation of writing strategies for prospective teachers in the class. It helps them to negotiate and regulate their ideas easily into paragraphs. This finding was in line with Teng and Zhang (2016) who report that regulation strategies have a positive effect on EFL students' writing courses. Moreover, Zhang and Zhang (2013) and Oxford (2013) found that in the writing course learning strategies play an essential role to foster students' writing achievement and learning activities.

The phase of pre-writing is aimed at building students' knowledge of the genre being written. To dig students' understanding of it, they are asked to read some genres targeted for supporting the topic sentence in a small group. In the group, they discuss and explore writing strategies related to genres provided. At the end of learning, students have an understanding of the model text going to write. To assist students in doing so, they are provided with some clues such as goal setting, idea, topic sentence, and language devices. Writing a clue is necessary for students as their guide. It is reinforced by Worden (2018) and Teng and Zhang (2017) who reported that the teaching of writing is characterized by strategies, choices, and clues on how learners should perform their writing on papers.

The prospective teachers' learning activities in the two previous phases also are designed with the higher-order thinking process. It enables prospective teachers to manage their thinking process. It is in line with Suratno et al. (2019) who state cognitive activities can be administered by metacognition skills. For example, in the discussion process, they are asked to interpret and explain the topics that they are going to write. Also, they carry out a conclusion as the discussion result of the linguistic and generic structure of exposition texts. At the end of that, prospective teachers have writing strategies to generate a complete exposition text. These activities invite prospective teachers to know what and how to write. How to write refers to the procedural knowledge in the metacognitive writing strategy.

Since the prospective teachers have known how to write exposition text, they continue to regulate and plan the targeted text composition. It is done in the phase of arranging and planning the learning. This phase is a stage where they are asked to apply their understanding of writing strategies (drafting, editing and revising, and publishing). These writing strategies are effective for them arranging and regulating their learning. it is in accordance with Tucel et al. (2016) and Ulu (2011) who argue that the planning dimension of the metacognitive writing strategy gives meaningful development during the writing activities. In addition, this phase can predict prospective teachers' performance and goal attainment. This finding is reinforced by Kizilcec et al. (2016) who report that self-regulation strategy enables learners to predict attainment of personal learning goals through strategic planning activities. In addition, the writing strategies can be done well because prospective teachers have enough declarative, procedural, and conditional knowledge. This leads them to decide what to do in their learning process (Wang et al. 2009).

In the teaching of writing, metacognition help prospective teachers determine what to do in the learning activities, so they can apply more appropriate strategies to write effectively. This learning refers to the awareness of conditional knowledge. It is in line

with Erenler and Cetin (2019) who state conditional knowledge indicates that learners know which strategy should be applied properly in a specific situation. In doing so, each prospective teacher is invited to conduct writing processes such as doing drafting, editing, and revising processes. They are also requested to utilize their understanding of the exposition text. Individually, they reorganize a plan to practice writing the model text requested. At the same time, the lecture leads prospective teachers to arrange supporting sentences based on the topic sentence. At the end of this stage, they are able to generate a complete exposition text.

When prospective teachers apply the initial stages of the metacognitive writing strategy to generate a complete exposition text, they are asked to evaluate the final writing product. It is aimed at monitoring the prospective teachers' performance, assessing the effectiveness of the writing strategy, and identifying the writing mistakes they make (Efklides, 2008; Meijer et al. 2006; Moos and Azevedo, 2009). In doing so, prospective teachers are inquired to conduct a self-evaluation towards the writing strategies, the way they create a paragraph introduction, body of text, and conclusion paragraph of exposition texts. It is in line with Veenman, et al. (1997) who state the prospective teachers' self-evaluation is directed as the learning process in favor of learning objectives. At the same time, they gain feedback relating to the learning process and writing strategies. Direct and indirect feedback shows an effective way to improve their performance (Fukuta & Kawaguchi, 2019; Patel, 2018). At the end of this, they are able to produce a complete exposition text as the final product.

CONCLUSION

The result of this study showed that the use of the metacognitive writing strategy was able to enhance prospective teachers' writing skills. The important aspect influencing the prospective teachers' writing achievement is the level of critical thinking skills. Elaborating the metacognitive dimensions and critical thinking skills was effective enough to involve prospective teachers in expressing their ideas into a complete exposition text. The prospective teachers who have higher-order thinking skills were easier to negotiate the teaching stages of the metacognitive writing skills than those having lower-order thinking ability. The stages consisted of centering the learning, pre-writing, regulating and planning the learning, and evaluating the learning.

The metacognitive dimensions are the potential to enhance prospective teachers' understanding of complex writing composition in terms of exposition texts. It was reinforced by Cetin et al., (2018) in the science fields, Sampson and Walker (2012), and Erenler and Cetin (2019) in EFL learning. In teaching writing, this strategy provides for prospective teachers with an ample opportunity to dig up their ideas individually. Moreover, the process of writing can be done well in any phase of the strategy. This study reveals that the metacognitive strategy leads prospective teachers to foresee writing problems and determine the information going to write.

RECOMMENDATION

The development of the metacognitive writing strategy generates the learning model as suit as prospective teachers' target needs and learning needs in the teaching of writing skills at higher education. It can be an alternative way to develop prospective teachers' competences based on higher order thinking skills in writing classes. Nevertheless, further studies need to pay attention to the level of prospective teachers' metacognitive skills, cognitive skills, and linguistics awareness. Lastly, further researchers need to explore other language learning models to support the metacognitive writing strategy in teaching other language skills (speaking, reading, and listening skills).

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