

## PRE-SERVICE TEACHERS' SELF-REGULATED LEARNING STRATEGY, MOTIVATION, AND REVISION BEHAVIORS IN EFL ACADEMIC WRITING

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### Abstract

The present study explored pre-service teachers' self-regulated learning strategy and motivation in EFL academic writing. A further aim of the study is to investigate the relationship between their self-regulated learning strategy and motivation as well as to explore the revision behaviors in English academic writing. A questionnaire was administered to 56 pre-service teachers (PST) majoring English language education. The questionnaire covered 16 items of questions regarding self-regulated learning strategy comprising environmental process, behavioral process, and personal process, as well as motivation. PSTs' revisions of academic writing were also assessed using writing revision categories to identify their revision behaviors. Descriptive analyses indicated that participants were moderate to high in their self-regulated learning strategy and motivation toward their writing activities. Furthermore, the result showed that despite the fact that self-regulated learning strategy in the aspect of environmental strategy and personal strategy did not significantly correlate with motivation, behavioral strategy significantly correlated with motivation. In addition to this, among the revision categories, the aspects of organization, citation, mechanics, language use, and references were the most common categories of revisions, while content and format were the least ones. The study might have implication on the PST's EFL academic writing instruction.

**Keywords:** self-regulated learning strategy, motivation, revision, EFL academic writing

### Abstrak

*Penelitian ini bertujuan untuk menemukan strategi dan motivasi belajar mandiri calon guru dalam penulisan akademik bahasa Inggris. Lebih lanjut, penelitian ini bertujuan untuk mencari hubungan antara strategi belajar mandiri dan motivasi serta untuk mengeksplorasi perilaku revisi dalam penulisan akademik bahasa Inggris. Angket diberikan kepada 56 calon guru pada Jurusan Pendidikan Bahasa Inggris yang mencakup 16 pertanyaan mengenai strategi belajar mandiri yang terdiri dari proses lingkungan, proses perilaku, dan proses pribadi, serta motivasi. Revisi penulisan akademik calon guru juga dinilai dengan menggunakan kategori revisi penulisan untuk mengidentifikasi perilaku revisi. Analisis deskriptif menunjukkan bahwa kategori peserta adalah sedang hingga tinggi dalam strategi belajar mandiri dan motivasi terhadap kegiatan menulis. Selanjutnya, hasil penelitian menunjukkan bahwa meskipun strategi belajar mandiri dalam aspek strategi lingkungan dan pribadi tidak secara signifikan berkorelasi dengan motivasi, strategi perilaku secara signifikan berkorelasi dengan motivasi. Selain itu, aspek revisi yang berupa pengorganisasian, kutipan, mekanika, penggunaan bahasa, dan referensi adalah yang paling banyak, sedangkan aspek isi dan format adalah yang paling sedikit. Penelitian ini diharapkan berdampak pada pengajaran penulisan akademis bahasa Inggris untuk calon guru.*

**Kata Kunci:** strategi belajar mandiri, motivasi, revisi, penulisan akademik bahasa Inggris

## INTRODUCTION

Academic achievement including writing skills of a higher education students is determined by some factors such as intelligence, studying habits, attitude, academic motivation, and self-regulated learning (Cetin, 2015). In line with this argument, Zimmerman and Risemberg (1997) asserted that beyond understanding vocabulary and grammar, writing necessitates self regulation to direct the writing processes to successfully bring about the improvement of the skill. In addition to this, writing activities that are usually “self planned, self-initiated, and self-sustained” require high personal regulation. Notwithstanding, a study indicated that students were moderate to slightly high in the use of self-regulated learning strategy, and their attitudes towards the engagement of self-regulated learning strategy were reported to be not well employed (Abadikhah, Aliyan, & Talebi, 2018).

Further, inspite of the fact that writing achievement entails self-regulated learning strategy, individuals have other nonidentical influencing aspects in acquiring their writing skills. A study conducted by Nami, Enayati, and Ashouri, (2012) underlined that students used particular learning approaches in their writing activities, and it was significantly correlated with the aspects of self-regulation including memory strategy, goal-setting, self-evaluation, seeking assistance, environmental structure, responsibility and organizing. Moreover, evidences also related self-regulation with motivation in which self-regulation correlated with motivation to the students’ achievement in general (Virtanen, Nevgi, & Niemi, 2013). However, in the context of pre-service teachers’ academic writing, little work has been done on the relationship between their self-regulated learning strategy and motivation as well as their writing revision behaviors.

Therefore, the present study aims to further explore the issue of self-regulated learning in English academic writing by addressing three specific questions: (a) what are the pre-service teachers’ self regulated learning strategies and motivation in EFL academic writing? (b) what is the relationship between pre-service teachers’ self regulated learning strategies and motivation in their writing

activities? and (c) what are the pre-service teachers' writing behaviours of revision relating with self regulated learning strategies and motivation?

### **Self-Regulated Learning in Academic Writing**

Self regulated learning theories and strategies emerged in 1980s in response to determine the successful learners. Self-regulated learning is defined as “meta cognitively, motivationally, and behaviorally active participants in their own learning processes” (Zimmerman, 1989, p. 4). Additionally, Pintrich (1990) pointed out that the process of self regulation is related to goal orientation, hence learners are considered as the active participants who can set, regulate, and control their own strategies to achieve the goal. Further, Orhan (2007, p. 391) interpreted that it is “the ways in which learners take control of their own learning.” Therefore, self regulated learners indicate the goal to attain as well as regulate their cognition, motivation, behavior, and environment.

From the social cognitive perspective, Zimmerman (1989) underlined that students' self-regulated learning does not stand solely, but it is reciprocal causations among three major factors: personal, environmental, and behavioral processes. In addition, Bandura (as cited in Zimmerman, 1989) argued that these reciprocal relations are not equal in their strengths and degrees. This is to say, environmental process may appear stronger or more dominant than the other factors in particular situation. However, it is identified that these personal, environmental, dan behavioral determinants of self regulated learning could be managed by personal efforts, behavioral performances, and environmental changes.

In academic writing context, self-regulated learners initiate and control their writing toward three fundamental forms of self regulation: personal processes, referring to the writers' regulation toward their beliefs about composing texts; behavioral processes, dealing with the performance strategic of writing; finally, environmental processes, relating to the social setting in writing production (Zimmerman, 1989; Zimmerman & Risemberg, 1997; Harris & Graham, 2009). Besides, Harris & Graham (2009) argued that it is essential to determine particular strategies of the learners in their writing processes.

Several studies have been conducted regarding the enactment of self-regulated learning in academic writing. A research by Qian and Yan (2008) indicated that self-regulated strategies had positive impact on students' writing proficiency and formed their habits of planning, self-checking, and self-revision. In line with this study, Sanad (2014) also concluded that self-regulated learning contributed to the development of writing skills depended on students' self-evaluation, self control, and self-reinforcement. Further, a cross cultural report was investigated in relation with self-regulated strategies for school writing task in which it implies different type of strategies of the students to regulate their writing affected by different cultural backgrounds and gender diversity (Malpique, Simao, & Frison, 2017). In addition, self regulation was assessed with writing beliefs and epistemology of pre-service teachers in their academic writing task, and their beliefs about learning writing were indicated to have important role in their self-regulation behaviours (Hammann, 2005). Relating to this study, Göy (2017) conducted an action research on the development of self-regulated writing strategies of EFL students, and the result showed that self-regulation approach improved students' writing skills with the teachers' additional feedbacks and continuous instructions. Finally, students' attitude toward the employment of self-regulated learning varied from moderate to slightly high suggesting the reinforcement of the use of self regulation in their writing (Abadikhah et al., 2018).

### **Academic Writing Motivation in Self-Regulated Learning**

According to Brown (as cited in Ziahosseini & Salehi, 2008), motivation is defined as “commonly thought of as an inner drive, impulse, emotion, or desire that moves one toward a particular action.” This is to say that motivation leads individuals to have an impulse to do something. In the language learning, including writing, motivation is systematically related to motivation. Motivation in learning language skills was indicated to be crucial toward the students' outcomes (Bernard, 2010; Virtanen et al., 2013). However, Binalet & Guerra (2014) argued that learners' language performances were not greatly related with their motivation.

Relating academic writing motivation with self-regulated learning, Zimmerman (1989) pointed out the role of motivation in which when students are motivated, they are more likely to implement appropriate self-regulation strategies; likewise, when they successfully enact self-regulation strategy, they are more motivated to achieve their learning goals. This study is in line with the study conducted by Fahim and Rajabi (2015). They examined the effect of self-regulated learning strategy development on writing performance and writing motivation of EFL learners, and it was indicated an increase in the motivation of the learners toward foreign language writing. In addition to this, the study conducted by Razi, Vahidian, and Hashemi (2015) showed significant relationship between the academic self-regulation and motivation. Nevertheless, students' academic motivation and self-regulated learning did not predict the academic achievement (Cetin, 2015).

### **Self-Regulated Revision on Academic Writing**

Self regulation of writing is often associated with students' use of cognitive, social, and behavioral strategies. In other words, students regulate their writing behaviour through some strategies. Revision is one of the units of writing personal strategies aside from planning, organizing, self-evaluating, recalling/creating mental images, time planning, readers' awareness (Zimmerman, 1989; Malpique et al., 2017). Further help-seeking as social/environmental strategy is also deployed to regulate the students' self regulation in writing processes. Those together form the students' writing development in EFL learning.

Writing revision can be identified through several items such as types of revision (addition, deletion, substitution, permutation, distribution, consolidation, and re-order), size of revision (symbol, word, phrase, clause, sentence, paragraph), and function of revision (grammatical, cosmetic, texture, unnecessary expression, explication) (Min, 2006). He also examined the positive impact of trained peer review of EFL students' writing types and quality. Implicitly, this is to say that behavioral strategies was also utilized to achieve the writing improvement. In terms of writing section, Jacobs et. al. (as cited in Nabhan, 2016) designed writing

categories that divided part of writing into content, organization, vocabulary, languages, and mechanics to evaluate the students' writing performances and behaviours.

## **METHODS**

### **Study Design**

This case study involving quantitative method was used to investigate self-regulated learning strategies and motivation in EFL academic writing. A questionnaire consisting of 16 items of questions was developed and spread to pre-service teachers (PST) of English Language Education Department at a private university in Surabaya, East Java, Indonesia, during the academic year 2018-2019. Researcher took the agreement with the participants to administer the questionnaire in the classrooms. Also, PSTs' writing revision categories were designed and assessed to identify their revision behaviours.

### **Study Participants**

The participants were 56 pre-service teachers (10 males and 46 females) of the third year majoring English Language Education Department, Faculty of Teacher Training and Education at the Universitas PGRI Adi Buana Surabaya, East Java, Indonesia. The students were from 2 different classes (27 students from class A and 29 students from class B) who took *Academic Writing* (3 Credits) course with the topic of article format, organization, mechanic, in text citation (direct quote, paraphrase, summary), and references. Additionally, they had passed 2 prerequisite courses including *Basic Writing/Paragraph Writing* (3 credits) and *Intermediate Writing/Essay Writing* (3 credits).

### **Data Collection**

A questionnaire was administered to the students of both classes by the researcher. The data were collected in the end of meeting of the courses. The participants were given the explanation about the purpose and the items of questions. In addition to this, their names would remain anonymous. There were 56 third year students from two different classes returned the questionnaire. Answering the questionnaire took for about 45 minutes. After finishing, the researcher collected the questionnaire and thanked the participants for their

willingness to support the study. Regarding the PST's revision behaviours, PST's were assigned to complete academic writing, and then they revised their work. The researcher analysed and calculated their revision.

### **Instruments**

Assessing pre-service teachers' self-regulated learning strategy, the researcher used the instrument developed and validated by Malpique and Veiga Simão (as cited in Malpique et al., 2017). The questionnaire followed the categories of self-regulated learning strategy by Zimmerman (1989) including environmental (environmental structuring, help-seeking), behavioral (self-monitoring, self-consequating, self-verbalising), and personal strategies (time planning, self-evaluating, planning, revising, organizing, readers' awareness, recalling/creating mental images). The questionnaire consisted of 12 items of questions using a 5-point Likert Scale 'never'=1, 'rarely'=2, 'sometimes'=3, 'often' =4, and 'always'=5 (Brown, 2010). While, motivation questionnaire included 5 questions following response options of a 5-point Likert Scale 'strongly disagree'=1, 'disagree'=2, 'neither agree or disagree'=3, 'agree'=4, and 'strongly agree'=5 (Brown, 2010). Verifying the content validity of the questionnaire of motivation, the researcher invited two experienced EFL lecturers to study the items. In addition, the reliability of the items was measured using Cronbach's Alpha, and the reliability statistics showed that the score was 0,632 indicating that the questionnaire was reliable. In addition to this, the PSTs' revisions of academic writing were calculated using writing revision categories to identify their revision behaviours. The researcher developed the writing revision categories into format, organization, content, citation, references, mechanics, and language use.

### **Data Analysis**

To analyse the data, the response options of the question items were given the number 1 to 5 based on the Likert Scale point. All the means and standard deviations for self-regulated learning strategy and motivation questionnaire were calculated in the descriptive statistics. The researcher used three level of language learning strategy by Oxford and Burry-Stock (1995). Those categories are high

(means of 3.5-5.0), moderate (means of 2.5-3.5), and low (means of 1.0-2.4). To determine the correlation between self-regulated learning strategy and motivation in EFL writing task, Person Correlation was also used. Further, the PST's revisions of writing assignment were calculated in terms of the numbers and frequency (percentage). For data analysis, the researcher utilized SPSS 16.0 software packages.

## RESULT AND DISCUSSION

### Self Regulated Learning Strategies

Table 1 displays the overall quantitative results for three categories of self-regulated learning strategies and motivation. The self-regulated learning categories were ordered from the highest means to the lowest ones. As shown in the table, environmental strategies and behavioral strategies were high with mean of 4.04 and 3.96 respectively. While the personal strategies were somehow in the moderate level indicating that the participants are likely to have problems with their personal learning styles. In addition, participants' motivation in academic writing was included in high level.

Tabel 1: Means and Standard Deviation of Self Regulated Learning Strategies and Motivation

<b>Variables and Questionnaire Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
Environment Strategies	56	4.04	.669
Behavioral Strategies	56	3.96	.625
Personal Strategies	56	3.55	.573
Motivation	56	3.85	.372

### The Environmental Strategies

Table 2 presents the environmental strategies covering environmental structuring and help-seeking. The descriptive statistic is displayed from the highest to the lowest ones. The highest means belonged to item 1 with a value of 4.19 which requested the participants to rate their preference to write in certain situation, and the second rank belonged to the item 2 with a value of 3.89 which asked them about their tendency to seek help from their partners.

Table 2. Descriptive Statistics for the Environmental Strategies

<b>Variables and Questionnaire Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
<b>Environmental Stragies</b>			
Environmental Structuring			
Q1 I try to write in quite places	56	4.19	.98
Help-Seeking			
Q2 I ask for help from other friends	56	3.89	1.00

Note: Variables are in decending order from the highest means to the lowest ones.

### **The Behavioral Strategies**

As table 3 shows, behavioral strategies included self-consequating, self-monitoring, and self-verbalising which are ranked from the highest means to the lowest ones. Self-consequating (item 4) was rated in the highest score with a numerical value of 4.58 in which participants rated the resting time in their writing. The medium mean score belonged to item 3 about self monitoring with a numerical value of 3.78 which required them to rate their listing activity to complete their writing tasks. Finally, The lowest mean score was self-verbalising (item 5) with a numerical score of 3.51 in which they are asked to rate their creativity to note the teachers' instruction.

Table 3. Descriptive Statistics for the Behavioral Strategies

<b>Variables and Questionnaire Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
<b>Behavioral Strategies</b>			
Self-consequating			
Q4 I take a break when finish my writing	56	4.58	.98
Self-Monitoring			
Q3 I write a list of anything to do to complete my writing task	56	3.78	1.10
Self-verbalising			
Q5 I say the teachers' instruction to my own words to complete my writing task	56	3.51	.87

Note: Variables are in decending order from the highest means to the lowest ones.

### **The Personal Strategies**

Table 4 demonstrates personal strategies focusing on planning, organizing, revising, self-evaluating, recalling/creating mental images, time planning, and reader's awareness from the highest mean to the lowest one. The participants rated planning (item 8) as the highest score with the mean score of 4.42 which

evaluated their ideas development before writing. The second highest was organizing (item 10) with the mean score of 3.92 regarding their introduction writing. The next rank belonged to the item 9 (revising) with the value of 3.87 reporting their ways to improve their writing. Self-evaluating (item 7) and recalling (item 12) received the value of 3.75 and 3.32 respectively. Participants also reported the moderate mean (3.32) for time planning (item 6). The lowest mean appeared in readers' awareness (Q11) with the value of 2.39.

Table 4. Descriptive Statistics for the Personal Strategies

Variables and Questionnaire Items	N	Mean	SD
<b>Personal Strategies</b>			
Planning			
Q8 I decide which ideas I want to develop before writing	56	4.42	.78
Organizing			
Q10 I write an introduction to introduce the topic	56	3.92	.91
Revising			
Q9 I improve my text by changing some parts (add, remove, change)	56	3.87	.93
Self-evaluating			
Q7 I think about my writing is well written or not after completing my writing	56	3.75	1.09
Recalling/creating mental images			
Q12 I visualize my ideas that I am writing about as I write	56	3.32	.99
Time Planning			
Q6 I establish a specific time to do my writing task	56	3.16	1.38
Readers' Awareness			
Q11 I imagine who would read my writing before I start writing	56	2.39	1.13

Note: Variables are in descending order from the highest means to the lowest ones.

### Writing Academic Motivation

As seen in table 5, the participants reported the highest score of 4.60 of their preference on teachers' appreciation (item 17). The second highest score with 4.28 was about their motivation to be successful in their study. The motivation of writing for future career (item 13) and the enjoyment of writing in English (item 13) were noted to get a value of 4.03 and 3.30 respectively. Moreover, the lowest mean was item 16 with the score of 3.00 which evaluated their preferences of English language skills other than writing.

Table 5. Descriptive Statistics for Motivation

Variables and Questionnaire Items		N	Mean	SD
<b>Motivation</b>				
Q17	I have pleasurable feeling and am proud of myself when my writing is appreciated.	56	4.60	.75
Q14	I feel that I have to learn writing in order to be succesful for my study	56	4.28	.65
Q15	Writing skill is important for my career in the future	56	4.03	.87
Q13	I like and enjoy writing in English	56	3.30	.68
Q16	I prefer learning writing than other English skills (such as reading, listening, and speaking)	56	3.00	.66

Note: Variables are in decending order from the highest means to the lowest ones.

### Correlation between Self-Regulated Learning Strategy and Academic Writing Motivation

From the tabel 6, motivation significantly correlated with value of .352 for behavioral strategy. While, motivation did not significantly correlate with value of .160 for self-regulated learning strategy in the aspect of environmental strategy and with the value of .247 for personal strategy.

Table 6. Correlation of Self-Regulated Learning Strategy and Writing Motivation

		Environment Strategy	Behavioral Strategy	Personal Strategy	Motivati on
<b>Environment Strategy</b>	Pearson Correlation	1	.054	-.056	.160
	Sig. (2-tailed)		.692	.683	.240
	N	56	56	56	56
<b>Behavioral Strategy</b>	Pearson Correlation	.054	1	.424**	.352**
	Sig. (2-tailed)	.692		.001	.008
	N	56	56	56	56
<b>Personal Strategy</b>	Pearson Correlation	-.056	.424**	1	.247
	Sig. (2-tailed)	.683	.001		.066
	N	56	56	56	56
<b>Motivation</b>	Pearson Correlation	.160	.352**	.247	1
	Sig. (2-tailed)	.240	.008	.066	
	N	56	56	56	56

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### Revision Behaviours in EFL Academic Writing

Table 7 indicated the pre-service teachers' revision behaviours in the form of writing aspects and their percentages toward academic writing. 56 participants' writing articles were assessed focusing on their revisions. A total of 909 revisions were found in the aspects of format, organization, content, citation, references, mechanics, and language use. The highest percentage (34%) of revisions fell into the organization aspect, while the lowest one (2.86%) fell into the content aspect. Citation and mechanic aspects got 20.57% and 19.91% respectively. In addition to this, 17.82% and 16.28% belonged to language in use and references aspects. Finally, format aspect received 5.50% of revisions and was marked as the second lowest percentage.

Table 7. Revision categories and percentages

No	Categories	Description	Numbers of Revisions	Percentages
1	Format	Including good title, author's identity, margin, font, size, heading.	50	5.50%
2	Organization	Including writing abstract (background, aims, methods, conclusion, keywords), Introduction (introducing the topic, review relevant theory, gap, aims), discussion (relevant theory), conclusion (restatement, reflection, recommendation, implication, limitation, future studies), and paragraph organization (unity, transitional signals, topic and supporting sentences)	317	34.87%
3	Content	Including relevant topic and development of thesis	26	2.86%
4	Citation	Using standard of in-text citation (direct quotation, paraphrase, and summary)	187	20.57%
5	References	Using standard of reference format (author, year, title, DOI/link, indented line, alphabetical order, consistency)	148	16.28%
6	Mechanics	Including punctuation, capitalization, and spelling	181	19.91%
7	Language Use	Including types of sentences (simple, compound, complex, and compound complex sentences) and avoiding run-ons, comma splices, and fragment	162	17.82%

## **Discussion**

From the data obtained, the researcher is interested in investigating PST's self-regulated learning strategy and motivation as well as exploring the revision behaviours in EFL academic writing. Self regulated learning strategy included environmental process, behavioral process, and personal process, as well as motivation. Further, revision behaviours followed the aspect of academic writing aspects comprising format, organization, content, citation, references, mechanics, and language use.

The analysis of the data revealed that the overall score of the PST's self regulated learning strategy and motivation was high. This indicated that PST's involved the invironmental, behavior, and personal strategies appropriately. In general, the results of the study were in line with the research conducted by Nami et al. (2012); Abadikhah et al. (2018), and Cetin (2015) in which they used more than there dimension/categories such as memory strategy, goal-setting, self-evaluation, seeking assistance, environmental structure, responsibility, and organizing.

The invironmental strategies such as help seeking tended to be low. It could indicate that students' group work or collaboration in completing their writing assignment were less. Writing classroom management could be set to emphasize on the group or pair activities such peer review. In regard to behavior strategies, self monitoring should be taught to the students to make a list of anything to complete their writing assignment. Practically, students did not question when they were given a time for discussion session.

More importantly, the personal strategies were considered to be essential issue for the students since they have to produce good writing through several stages in the process writing. Coffin et al. (as cited in Nabhan, 2019) suggested the stages of process writing including prewriting, planning, drafting, reflection, peer/tutor review, revision, and editing and proofreading. Based on the result, personal strategies were noted to be the lowest means of all. Further, among the personal issues such as planning, organizing, revising, self-evaluating, and recalling, students' time management was regarded as the crucial issue. It was

proven by the participants who did not employ the time planning well. The same result was also found in the study of Abadikhah et al. (2018) showing that the personal matter such as establishing the time to complete the writing was found to be the lowest one. The reason for the finding could be from the students who were likely to procrastinate. Andrea and Evans (as cited by Abadikhah et al., 2018) argued that poor time management leads the students to keep away from self-regulation strategies. In other words, the writing activities require self-discipline to follow the whole processes of writing stages.

As being suggested by Zimmerman (1989) that self-regulated learning is related to students' motivation. This statement was supported by the study of Fahim and Rajabi (2015) and Razi et al. (2015). In contrast to these arguments, the finding of this study revealed that self-regulated learning strategy in the aspect of environmental strategy and personal strategy did not significantly correlate with motivation; however, behavioral strategy significantly correlated with motivation.

Regarding students' revision behavior, the study revealed different perspective of assessing students' writing revision in terms of comprising format, organization, content, citation, references, mechanics, and language use. It was found that among the revision aspects such as organization, citation, mechanics, language use, references were the most common aspects of revisions, while content and format were the least ones. This might be different from the perspective that see the revision categories into types of revision size of revision, and function of revision (Min, 2006). Seen from the content problems, it relates to students' learning strategy of planning in which students should develop their ideas before writing. Generating ideas through several techniques such as as mind map in pre-writing is suggested in writing process approach (Nabhan, 2016)

## **CONCLUSION**

Understanding the PSTs' self-regulated learning strategy in EFL academic writing is crucial for the teachers to improve their teaching performance and achieve better students' writing skills. The study indicated that PST's self-regulated learning strategies in EFL writing were included to be moderate to high.

Additionally, although self regulated learning strategy in the aspect of environmental strategy and personal strategy did not significantly correlate with motivation, behavioral strategy significantly correlated with motivation. Moreover, PST's time management through all stages of writing process was one of the crucial issues in academic writing classroom. One of the factors might be that our classroom settings do not emphasize the importance role of students' self regulation.

Additionally, students writing improvement is not likely to achieve without revision process to all aspects of categories including organization, citation, mechanics, language use, references, content, and format. Further, it is principal to understand and evaluate the students' strenghts and weaknesses in their writing competence. More importantly, it was found that content of writing had been one of the greatest issues in writing, hence implicitly developing the students' idea might be essential to be highlighted. Finally, the study might have pedagogical implication toward teaching writing consolidated with students' self-regulated learning skills and strategies.

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