

EFL Students' Use of Writing Strategies via Think Aloud Protocol

Sureerat Talapngoen and Poranee Deerajviset

Abstract— The purposes of this study were: (1) to investigate writing strategies that students employ in the process of writing English essay, (2) to examine the effects of think aloud protocol on developing EFL students' writing ability, and (3) to examine students' attitudes towards using think aloud protocol in the process of writing English essay. The participants of the study were 40 second year English major students who enrolled in 411232 English Essay Writing course in the second semester of academic year 2015 at the Faculty of Humanities and Social Sciences in Khon Kaen University. The research instruments were comprised of 1) the essay writing pretest and posttest, 2) the process essay, 3) think aloud protocol, 4) writing strategy questionnaire, 5) attitudes questionnaire, and 6) the interview. SPSS program was employed to analyze the statistics including the percentage, mean (\bar{X}), standard deviation (S.D.), and t-test. Content analysis was also employed to analyze the interview. The finding of the study showed that the mean score of the essay writing posttest of the experimental group was significantly higher than the mean score of the control group at $p < 0.05$ level. Participants used affective strategies most during the process of writing English essay. In addition, the study found that students had positive attitudes towards using think aloud protocol in essay writing. They revealed that think aloud protocol is useful, fun, and interesting for improving their writing ability. Students also recommended that think aloud protocol is suitable to be used in other language skills such as speaking and reading.

Keywords— Writing strategies, Think aloud protocol, EFL students

I. INTRODUCTION

WRITING strategies mean the set of skills that learners use in process of writing which could help learners overcome their difficult task of writing (Edward, 2005). Previous studies such as Ferris and Hedgcock (2014) showed that low-ability language learners normally use the same strategies during writing over and over again and do not make the significant progress in their written products. Low-achieving learners do not realize themselves of what strategies can improve their writing. In addition, several previous studies (e.g., Edward, 2005; Tapinta, 2006; Alharthi, 2011; Ferris &

Hedgcock, 2014) showed that writing strategies such as meta-cognitive, cognitive, social, and affective strategies could help learners improve their writing ability.

Think aloud protocol can be described as the verbalization of thinking during problem solving, reading, or other cognitive tasks (Oster, 2001; Schunk, 2004). In other words, participants might questions, verbalize commentary, generating hypotheses, or drawing conclusions. Davey (1983) indicated that think aloud protocol consists of two main elements: (1) concurrent which means information is verbalized through a cognitive process during composing a writing task, and (2) retrospective which is the idea explained after the writing task has finished. Think aloud protocol may use as both an instructional tool and method of assessment. Otherwise, think aloud protocol provide scaffolding for students as they engage in higher order thinking. Participants can do the activities and directly revealed thinking without delay and are expressed in students' own wording. For example, elementary school children may need think aloud protocol on verbalizing skill, check for understanding on reading or other activities, concentration, or reactivity. It might also affect to their strategic actions or their later recall. Thus, think aloud protocol are often used in expressing the strategic decisions that learners use in learning and performing task in a second language (Silva & Leki, 2004).

By focusing on the field of writing, think aloud protocol is a tool for writing development in terms of cognitive skill of writers during the writing process: planning, drafting, and revising (Tapinta, 2006). Interestingly, Gu (2014) indicated that think aloud protocol could help students reflect their own problematic writing or improve the writing ability to detect and diagnose problematic areas of writing on their own. Moreover, think aloud protocol offers access to decision making and reasoning process underlying cognition. The study of Guo (2010) employed think aloud protocol as a tool to improve the skill of cognition on writing. The finding revealed that think aloud protocol help participants organize their thinking process and reveals the content of working memory.

In order to examine the effects of think aloud protocol on writing, the following questions were asked:

Sureerat Talapngoen¹ Department of English, Faculty of Humanities and Social Sciences, Khon Kaen University, Thailand.

(e-mail: abouttoey@hotmail.com).

Poranee Deerajviset², Department of English, Faculty of Humanities and Social Sciences, Khon Kaen University, Thailand

1. What writing strategies do the students employ in writing process?
2. What are the effects of think aloud protocol on students' writing ability?
3. What are students' attitudes towards using think aloud protocol in writing process?

II. REVIEW OF THE RELATED LITERATURE

By focusing on writing process of second language writers, Mu (2007) aimed to investigate writing processes through the examination of the writing strategies of three Chinese post-graduate students in an Australian higher education institution. The analysis revealed that the three participants employed rhetorical, metacognitive, cognitive, and social or affective strategies in their writing practice. The finding demonstrated that with the exception of rhetorical strategies, all of the other strategies transfer across language in a positive manner. This result proved that writing strategies improve writing proficiency and solve writing problems.

Raofi, Chan, Mukundan, and Rashid (2014)'s study reported an investigation into writing strategies of Malaysian university students learning English as a second language. The result also showed that the highly proficient writers use more metacognitive strategies such as organizing ideas and revising content. There are the link between L2 writing proficiency that positively related to using writing strategies in different levels of participants. The study suggested for further research on writing strategies explicitly used to classify to the students and challenge them to improve their using writing strategies.

Based on the use of strategy instruction on writing, Silva and Graham (2015) studied the impact of strategy instruction on strategy use and how far learners of different proficiency level are able to use the strategies taught in an effective manner, are somewhat rare. The result revealed that the in-both high and low proficiency learners' strategy use was developed as a result of the instruction. The protocol also showed the writers use strategies in different combinations where these strategy clusters interact with each other during the process of writing.

With respect to the use of think aloud protocol, Edward (2005) studied about the writing process of college students by using think aloud protocol analysis. The study aims to analyze the holistic quality of writing, number of words written, and planning and revising strategies used during writing. There were 23 self-regulatory variables in the process of planning, monitoring, and revising used to identify the cognitive processes applied while composing essays. The result revealed that the participants who did more planning, monitoring, and reviewing of their writing by using self-regulate behavior on think aloud protocol had higher writing scores.

The study of Nuckles, Hubner and Renkl (2007) revolved the use of protocol as a self-regulated learning. The study aimed to use protocol writing with prompts to elicit important strategies as postulated by cyclical model of self-regulated learning. The study revealed that planning with remedial strategies of self-regulated learning fostered the best level of comprehension from the students. Therefore, the appropriate support writing can serve as advantages for helping students to self-regulate their understanding of subject matter. The cognitive and metacognitive strategies help writers overcome the difficulties of writing through instruction. They are instructed to write down their own reflections on previously presented learning contents. However, further research suggests the students should focus on the potential changes in their cognitive and metacognitive strategies.

III. MATERIALS AND METHODS

A. Participants

The participants of the study were chosen by a purposive sampling technique. They were 40 English major students (from regular and special programs) who enrolled in in 411232 English Essay Writing course in the second semester of academic year 2015 at the Faculty of Humanities and Social Sciences in Khon Kaen University.

B. Research Instruments

The research instruments employed in this study are: 1) the essay writing pretest and posttest, 2) the process essay, 3) think aloud protocol, 4) writing strategy questionnaire, 5) attitudes questionnaire, and 6) the interview.

C. Procedure

This study was conducted during the second semester of the academic year 2015 in 411232 English Essay Writing course at the faculty of Humanities and Social Sciences in Khon Kaen University. The study divided students into two groups: the control group and the experimental group. This study employed the experimental research. Participants did the pretests before training think aloud protocol with writing strategies. After that, the writing strategy questionnaire was distributed to the participants. The experimental group was trained about how to use think aloud protocol that helps participants reduce the ambiguity during think aloud protocol session. The participants in both control and experimental groups did the questioning activities. The participants were assigned to plan their writing, draft their essay, and edit their draft, respectively. The writing strategy questionnaire was distributed to students in each process of writing: planning, drafting, and editing. After that, the participants in both control and experimental groups did the posttest in order to measure their writing outcome. Then the participants were asked to

complete the attitudes questionnaire to investigate their attitudes towards using think aloud protocol in the process of English essay writing. Finally, some participants from the control and experimental groups were randomly selected for the interview.

IV. RESULT AND DISCUSSIONS

In this section, the results of t-test for proficiency test between two groups, t-test for showing the results of pre-test and posttest scores, statistics of writing strategies use in the essay writing pretest and posttest, and descriptive statistics of data for attitudes on using think aloud protocol will be presented finally.

TABLE I:
THE ESSAY WRITING SCORES OF THE CONTROL AND EXPERIMENTAL GROUP

Group	N	M	SD	Std. Error Mean	Sig (2-tailed)	F	t	df
Pre control	20	5.99	1.17	.26891	.838	.244	.206	18
experimental	20	6.04	0.93	.21676	.838		.206	37.66
Post control	20	7.83	1.56	.34988	.000	.800	-4.88	18
experimental	20	10.59	0.97	.23975	.000		-4.88	35.77

Table 1 shows the mean score of the pretest of the control group was (M = 5.99, SD = 1.17) and the experimental group (M = 6.04, SD = 0.93), $t(38) = .206$, $P > .05$. The mean score shows that the writing scores between two groups in the pretest were similar. In the posttest, the mean score of the control group was (M = 7.83, SD = 1.56), and the experimental group was (M = 10.59, SD = 0.97), $t(38) = -4.88$, $P = .000$. The results showed that there is a significant difference between two groups in the posttest.

TABLE II
STUDENTS' USE OF WRITING STRATEGIES IN THE ESSAY WRITING PROCESS

	<i>Experimental Group</i>			
	M	SD	M	SD
<i>Writing Strategies</i>				
Planning Process:	3.12	0.35	4.48	0.74
Meta-cognitive Strategy				
Drafting Process:	3.15	0.54	4.68	0.80
Cognitive Strategy				
Editing Process:	2.66	0.44	4.41	0.61
Social Strategy				

The results shows that the experimental group had higher mean scores of writing strategies used in the posttest than the control group. The results implied that there is the significant difference in using writing strategies for the experimental group after learning by think aloud protocol. The findings are relevant to the previous study of Mu (2007) which indicated that using various strategies in writing helps improve writing proficiency and solve writing problems. It is also related with the study of Silva and Graham (2015) which indicated that the proficiency learners use writing strategies more than low proficiency learners. It can be implied that the writing ability

of learners depends on using appropriate writing strategies as well.

This result of the essay writing obviously shows that students have improved their writing ability and outperformed students in the control group in the writing tasks. It can be implied that think aloud protocol has effects on the writing performance of the students. The findings of the study are consistent with Guo (2010)'s study which showed that think aloud protocol can facilitate students on learning process of writing included translating, paraphrasing, activating background knowledge, or referring to previous parts. The finding is also congruent with the study of Gu (2014) which reported that think aloud protocol facilitates students to use writing strategies in different combinations where these strategy clusters interact with each other during the process of writing.

The findings of attitudes questionnaire revealed that most students in the experimental group expressed positive attitudes towards using think aloud protocol on writing process ($\bar{X} = 3.40$). Some students perceived the usefulness of think aloud protocol in terms of enhancing the consciousness of learning, enjoyment, and motivation. These findings are relevant to the previous studies such as Hashima (2016), Tapinta (2006), and Silva and Graham (2015). These studies found that think aloud protocol could help the writers discover the sight ways of creating certain stages of writing process. Hu & Chen (2007) claimed that think aloud protocol could help students reflect their own writing problems or improve their writing ability to detect and diagnose their writing problems.

In conclusion, training students to use writing strategies through think aloud protocol can be beneficial to students in terms of improving their writing ability, motivating writing strategy use, and finally enhancing their self-awareness in using writing strategies during writing process. With respect to the study's attempt, it will be most beneficial for students'

writing if they know a wide range of writing strategies and use think aloud protocol in their writing tasks. The finding of this research can help language teachers improve their approaches to teaching writing and raising students' awareness towards using different strategies in their writing.

- [23] Someren, M. W., Bernard, Y. F., & Sandberg, J. (1994). *The Think Aloud Method, A practical guide to modelling cognitive process*, London, University of Amsterdam Press.
- [24] Tapinta, P. (2006). *Exploring Thai EFL University students' awareness of their knowledge, use, and control of strategies in reading and writing*, Unpublished Dissertation, University of North Texas.

REFERENCES

- [1] Alharthi, K. (2011). *The impact of writing strategies on the written product of EFL Saudi male students at King Abdul-Aziz University*, unpublished dissertation, Newcastle University.
- [2] Chien, C. (2010). Students' use of writing strategies and their English writing achievements in Taiwan, *Asia Pacific Journal of Education*, 32(1), 93-112.
<https://doi.org/10.1080/02188791.2012.655240>
- [3] Davey B (1983). Think aloud: modeling the cognitive processes of reading comprehension. *Journal of Reading*, 27, 44-47.
- [4] Edward, A. C. (2005). *The writing process of college students with and without learning analysis disabilities: A protocol analysis*. University of Maryland Press.
- [5] Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32(4), 365-387.
<https://doi.org/10.2307/356600>
- [6] Ferris, D. R., & Hedgecock, J. S. (2014). *Teaching L2 composition: purpose, process, and practice* (3rd ed.). New York, NY: Routledge Press.
John Benjamin Press.
- [7] Gu, Y. (2014). To code or not to code: Dilemmas in Analyzing Think Aloud Protocols in Learning Strategies Research. *System* 43, p 74-81.
<https://doi.org/10.1016/j.system.2013.12.011>
- [8] Guo, X. (2010). *L1 and L2 writing strategies: A study of Chinese graduate student writers using concurrent think-aloud*, University of Victoria Press.
- [9] Hashima, N., & Hermilinda, I. (2016). Exploring the Writing Process of Indonesian EFL Students: The Effective of Think Aloud Protocol. *Advances in Language and Literary Studies* 7(2), p 171.
- [10] Hyland, K. (2003). *Second Language Writing*. Cambridge: Cambridge University Press.
- [11] <https://doi.org/10.1017/CBO9780511667251>
- [12] Hu, G & Chen, B. (2007). "Protocol-Based Study of University-Level Chinese EFL Learners' Writing Strategies". *English Australia Journal*, 23(2), 37-55.
- [13] Mu, C. (2007). An Investigation of Three Chinese Students' English Writing Strategies. *Teaching English as a Second or Foreign Language*, 11(1).
- [14] Nuckles, M., Hubner, S., & Renkl, A. (2009). Enhancing Self-Regulated Learning by Writing Learning Protocols. *Learning and Instruction*, 258-271.
<https://doi.org/10.1016/j.learninstruc.2008.05.002>
- [15] Oxford, R. L. (2011). *Teaching and Researching Language Learning Strategies*. London: Pearson Education.
- [16] Oster, L. (2001). Using the think-aloud for reading instruction. *The Reading Teacher* 55(1) 64-69.
- [17] Raoofi, S., Chan, Mujandan, & Rashid. (2014). A Qualitative Study into L2 Writing Strategies of University Students. *English Language Teaching*, 7(11), 39-45.
<https://doi.org/10.5539/elt.v7n11p39>
- [18] Silva, T., & Leki, L. (2004). *A synthesis of research on second language writing in English*, New York, NY: Routledge Press.
- [19] Silva, R. (2015). Writing Strategy Instruction: It's Impact on Writing in a Second Language for Academic Purposes. *Language Teaching Research*, 19(3), 301-323.
<https://doi.org/10.1177/1362168814541738>
- [20] Silva, R., & Graham, S. (2015). The Effects of Strategy Instruction on Writing Strategy Use for Students of Different Proficiency Levels. *System*, 53, 47-59.
<https://doi.org/10.1016/j.system.2015.06.009>
- [21] Schunk, H.D. (2004). *Learning Theories*. London: Pearson Publication Ltd.