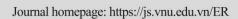


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Original Article

The Correlation of Non-English Majors' Use of Resource Management Strategies with Their Academic Achievement

Duong My Tham*

Nong Lam University, Ho Chi Minh City, Vietnam, Linh Trung Ward, Thu Duc District, Ho Chi Minh City, Vietnam

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Abstract: It is undeniable that self-regulated learning strategies are a pivotal key to 21st century language education in which learners are provided with freedom to take control over their own learning. Of the types of self-regulated learning strategies, resource management strategies are likely to be underestimated in practice despite the fact that these strategies are believed to assist EFL learners to modify the environment for achieving their learning goals. The study aimed to investigate resource management strategies employed by tertiary non-English majors and to explore the relationship between the students' use of resource management strategies and their academic achievement. The quantitative research was conducted with the employment of a closed-ended questionnaire which was administered to 117 students taking the TOEIC course. The results indicated that the research participants frequently employed resource management strategies in their English language learning. More importantly, it was found that the more frequently the students used resource management strategies, the higher academic achievement they gained. Such employment of resource management strategies in a Vietnamese EFL context serves as a reference in other similar EFL contexts.

Keywords: Academic achievement; correlation; non-English major; resource management strategies, self-regulated learning.

1. Introduction

Learning strategies are identified as techniques or devices a learner may use to intake knowledge (Rubin, 1975) [1]. In language education, a learning strategy is a mental and communicative procedure that

learners use to acquire a language (Nunan, 1999) [2] and even to better their proficiency (Hsiao & Oxford, 2002) [3]. More specifically, the use of self-regulated learning strategies which are closely related to academic achievement can explain the differences between good and weak learners (e.g., Pintrich, 2003 [4]; Zimmerman & Kitsantas, 2005 [5]). Self-regulated learning strategies include cognitive and metacognitive strategies and

E-mail address: tham.duongmy@hcmuaf.edu.vn

^{*} Corresponding author.

resource management strategies that are assumed to enable students to adjust their learning environment for targets and needs. This leads to a question concerning the effect of self-regulated learning strategies on learners' academic achievement that ESL/EFL teachers as well as researchers need to take into consideration.

While cognitive metacognitive and strategies have been taken into consideration, resource management strategies are likely to be underemphasized in research. Resource management strategies are the ones that students employ to take control over their learning environment such as effort, learning time, collaborative learning, and human including their resources instructors classmates (e.g., Corno, 1986 [6]; Zimmerman & Martinez-Pons, 1986 [7]). As a matter of fact, several college students are found to need support in making their plans on time management and help seeking. Furthermore, there has been not much research exploring the correlation between resource management strategies and learning outcomes in EFL contexts, especially in the context of Vietnam. This is regarded as a big gap that needs to be fulfilled. Therefore, this paper aims to scrutinize frequency of resource management strategies used by first-year students at a college in Ho Chi Minh City and explore the relationship between their use of resource management strategies and academic achievement. Accordingly, two research questions are formulated as follows:

- i) To what extent do the non-English majors use resource management strategies?
- ii) Is there a correlation between the students' use of resource management strategies and their academic achievement? If so, how?

2. Literature Review

2.1. Self-Regulated Learning

The eighties of the 20th century witnessed the emergence of the different terms of self-regulation, in an effort to explain learners'

ability to take control over their learning and to understand their motivation while doing so, such as self-control, self-instruction, or self-reinforcement (Zimmerman & Martinez-Pons, 1986). Self-regulation refers to the use of processes that activate and sustain thoughts, behaviors, and effects in order to attain goals (Schunk & Zimmerman, 1994) [8].

Self-regulated learning is explained by Pintrich (2000) [9] as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment" (p. 453). He relates self-regulated learning and academic achievement in a multifaceted approach. Self-regulated learning is considered a process that helps students in controlling their thinking, behaviors and emotions in order to successfully navigate their learning experience.

In conclusion, most of the authors assume that self-regulated learning is a process that self-regulated learners proactively use efficient strategies to improve specific skills and performance to achieve their learning goals (e.g., Oxford & Schramm, 2007 [10]; Zimmerman, 2002 [11]). Accordingly, the present study considers and relies primarily on Pintrich's (2000) definition of self-regulated learning because of its understandability and inclusiveness.

2.2. Resource Management Strategies

Self-regulated learning strategy involves actions and processes learners need to achieve to acquire information or skills (Zimmerman, 1990) [12]. Boekaerts (1997) [13] asserts that self-regulated learning is related to cognitive and affective processes that work together on different components of the information processing system. Meanwhile, Brown and Pressley (1994) [14] argued that self-regulated learners are closely associated with good thinkers who employ cognitive strategies, metacognitive strategies, and Zimmerman and Martinez-Pons (1986) comprise cognitive and

metacognitive strategies in the model of self-regulated learning strategies. Apart from three aforementioned aspects of self-regulated learning strategies, Pintrich and De Groot (1990) [15] include resource management strategies in their self-regulated learning strategies model which has rarely been addressed in research; hence, this study focuses on resource management strategies including time and study environment, effort regulation, peer learning and help seeking as follows.

Time management concerns "scheduling, planning, and managing one's study time" (Pintrich et al., 1991, p. 27) [16]. According to these researchers, time management includes keeping blocks of time to study, utilizing study time more effectively and setting realistic goals; and it ranges in levels, from making schedules for one time/day of studying to creating weekly and monthly study plans.

Study environment management refers to a learner's behaviors to make arrangement or adjustment on their academic environment in order to make it "organized, quiet, and relatively free of visual and auditory distractions" (Pintrich et al., 1991, p. 27).

Effort regulation implies students' ability to control their attempts and concentration despite distractions and boring tasks. Not only does it reflect a commitment to fulfill one's academic goals, even when there are difficulties or distractions, it also points out a student's regulation in continuous use of learning strategies (Pintrich et al., 1991).

Peer learning means collaborating with peers, or making dialogues with peers to make learners understand course materials better and attain insights that they may not have achieved by themselves (Pintrich et al., 1991).

Help seeking is a unique self-regulated learning strategy as students have to do it through social interaction with the others. Students adjust their own learning by securing the support from the others in order to confront academic difficulties (Newman, 2002) [17]. When students monitor their academic task and identify the difficulties which they are not able to overcome by themselves, they often ask for

help from a reliable person. Seeking help might prevent possible failures, keeping engagement, lead to task success, and enhance the probability of long-term mastery and autonomous learning. Adaptive help seeking, which means asking for the help needed for independent learning, in contrast to simply requesting the correct answer, is an important strategy of self-regulated learning (Newman, 2002).

2.3. Correlation of Language Learning Strategies with Learning Outcomes

One of the dominant questions that EFL/ESL teachers take into consideration is how learner differences affect academic achievement. In fact, there have been numerous studies concerning the relationships between learning outcome and learner differences such as age, aptitude, cognitive style, and motivation and learning strategies.

Language learning strategies are teachable in a classroom to a certain extent, and they develop communicative competence as a tool for active, self-directed involvement (e.g., Brown, 2002 [18]; Green & Oxford, 1995 [19]; Oxford, 1990 [10]. O'Malley et al. (1985) [20] assert that there is a link between one's memory and experiences through learning strategies which can enhance the ability to comprehend knowledge. In addition, Oxford (2003) also states that when learners actively choose a strategy that fits their learning style and is appropriate to the type of foreign language work, they can develop the ability to learn dynamically and autonomously. Tseng, Dörnyei and Schmitt (2006) [21] also agree with Oxford (2003) [22] that foreign language learning strategies facilitate language learning.

The role of language learning strategies in general and self-regulated learning strategies in particular has been demonstrated in research. Ehrman and Oxford (1989) [23] state that the use of foreign language strategies is viewed as a factor to classify successful learners and unsuccessful ones because good language learners use more foreign language strategies than the rest. Several authors (e.g., Ahmed,

1989 [24]; Zhang & Li, 2011 [25]) assert that there is a direct relationship between the use of vocabulary learning strategies and the success of learning a foreign language through their studies. As a result, learners with higher learning outcomes will use more foreign language strategies than those who have lower learning outcomes. In addition, Pokay and Blumenfeld (1990) [26] conclude that there is a difference among strong and weak learners through the use of strategies in the subjects such as reading or math. Good performers use multiple strategies out of the thirteen strategies mentioned in Zimmerman and Martinez-Pons's (1986) study.

In brief, there is a positive correlation between the use of self-regulated learning strategies and learning outcomes, and these strategies can be used to predict students' learning outcomes (Pintrich & De Groot, 1990). Likewise, Zimmerman and Martinez-Pons (1986) assert that self-regulated learning strategies fundamentally influence learners' learning outcomes.

3. Methodology

3.1. Research site and Participants

This research was carried out at a college in Ho Chi Minh City, Vietnam, which is responsible for designing English teaching programs, making schedules and organizing entrance exams and final exams for all of the students who have to take part in a placement test to identify their levels before they enter the English courses. After the placement test, students have the right to register the course at their level (TOEIC 1, TOEIC 2 and TOEIC 3).

Within the scope of the study, 117 first-year non-English majors in two TOEIC 1 classes, who just finished final exam of TOEIC 1 course, were conveniently selected as participants. There were 88 males (75.21 %) and 29 females (24.79 %).

3.2. Research Instruments

In this study, a closed-ended questionnaire was used as the main data collection tool. The questionnaire consisted of two parts: Part I aimed to get the students' general information on gender and the results of the TOEIC-based mid-term test and part II addressed the employment of resource management strategies. This questionnaire was adapted from Pintrich et al.'s (1991) questionnaire of motivation strategies for learning because this questionnaire contains items relating to resource management strategies. Resource management strategies in the questionnaire were categorized into four groups: Time and learning environment (4 items), regulation (5 items), peer learning (4 items) and help seeking (3 items).

The questionnaire was first written in English language and then translated into Vietnamese language to make sure that all of the participants could understand the content of the questionnaire without any language barriers. Besides, the content of the questionnaire was cross-checked with one college of the researcher to ensure its reliability. Furthermore, a pilot study was carried out to increase the validity, reliability of the research instrument (e.g. Oppenheim, 1999 [27]; Radhakrishna, 2007 [28]; Seliger & Shohamy, 1997 [29]).

3.3. Data Collection and Analysis Procedures

Before the official delivery of the questionnaire to the participants, a pilot study was conducted with the participation of 10 students who were learning in different classes. These students, who were excluded from the main study, did the questionnaire and returned it to the researcher within around 10 minutes.

After the pilot study with follow-up insignificant modification, the research questionnaire was administered to 117 students in different TOEIC 1 classes with the help of the teachers. These students answered the questionnaire at their 30-minute break time. The researcher was in each meeting to ensure

that all items in the questionnaire were fully understood by the participants. In addition, the students' final scores of TOEIC 1 course were collected for analysis.

With reference to data analysis, the data were processed through SPSS version 20.0. More specifically, descriptive statistics and Pearson correlation coefficient were used to investigate frequencies/percentages of resource management strategies employment and the correlation between the participants' use of resource management strategies and their academic results respectively. In addition, Mean (M) and Standard Deviation (SD) were used to analyze the overall mean scores of four core categories of resource management strategies with five intervals (i.e., 1.00-1.80=never; 1.81-2.60=rarelv: 2.61-*3.40*=*sometimes*; 3.41-4.20=often; 4.21-5.00=always).

4. Results

4.1. Students' Using Resources Management Strategies

As illustrated in Table 1, the overall descriptive statistics results of all the themes illustrated the students' perspectives on the frequencies of using resource management strategies in descending order in terms of Mean (M). The problems related to time and learning environment achieved a dominant position compared with the others (M=3.90, SD=1.01). The second position was occupied by help seeking (M=3.59, SD=0.90), followed by peer learning (M=3.45, SD=1.10) and effort regulation (M=3.42, SD=1.09). This means that the participants often employed resource management strategies in their learning (Table 1).

At the first glance, most of the participants frequently used time and learning environment strategies. In particular, Table 2 indicated a big number of the respondents who "often" followed their study plans (44.4%), had fixed learning space (47.9%), and attended class regularly (45.3%) while almost a half (45.3%) affirmed that they "always" chose the best place where they could pay much attention to their studies. Only few participants did not show their interest in TLES. It can be inferred that the participants may find it useful to employ these strategies (Table 2).

Table 1. The overall mean scores of four categories of resource management strategies

No	No. Types of resource management strategies Rar	Donle	N=117		
NO.		Kalik	M	SD	
1	Time and learning environment	1	3.90	1.01	
2	Effort regulation	4	3.42	1.09	
3	Peer learning	3	3.45	1.10	
4	Help seeking	2	3.59	.90	

Note: M: Mean; SD: Standard Deviation. Table 2. Frequency of time and learning environment strategies

			N			N=117		
Item	Time and learning environment strategies		Never	Rarely	Sometimes	Often	Always	
1	I study in a place where I can concentrate on my course work.	F %	7 6	14 12	17 14.5	26 22.2	53 45.3	
2	I stick to a stable study schedule.	F %	1 0.9	10 8.6	24 20.5	52 44.4	30 25.6	
3	I have a regular place set aside for studying.	F %	2 1.7	12 10.3	19 16.2	56 47.9	28 23.9	
4	I attend class regularly for this course.	F %	3 2.5	7 6.0	21 18	53 45.3	33 28.2	

Note: F: Frequency; %: Percentage.

In terms of the use of effort regulation strategies, Table 3 showed a prominence of "high frequency" over the "low frequency" for items 5, 6, 7, and 8. Specifically, 90 out of 117 students (76.9%) agreed that they were "often" or even "always" aware of weekly readings and assignments (item 6). The next commonly-used strategies went to completing earlier-planned tasks (item 7), making a great attempt to deal with any challenging tasks (item 8), and

working hard (item 5) with 60.6%, 53.8%, and 49.6% respectively. In contrast, several participants showed disinterest in boring learning materials (item 9). Statistically, 40.6% of the respondents stated that they "seldom" or even "never" tried to finish the exercises when the materials were not appealing to them. In general, the findings demonstrated the participants' great efforts in their learning process (Table 3).

Table 3. Frequency of effort regulation strategies

T ₄	Effort regulation strategies		N=117					
Item			Never	Rarely	Sometimes	Often	Always	
5	I work hard to do well in this class even when I don't like what we are doing.	F %	8 6.8	19 16.2	32 27.4	43 36.8	15 12.8	
6	I make sure to keep up with the weekly readings and assignments for this course.	F %	2 1.7	4 3.4	21 18	60 51.3	30 25.6	
7	I try to finish what I planned earlier.	F %	2 1.7	18 15.4	26 22.2	52 44.4	19 16.2	
8	I try to learn difficult lessons though I don't love them.	F %	6 5.1	25 21.4	23 19.7	50 42.7	13 11.1	
9	Even when course materials are dull and uninteresting, I manage to keep working until I am able to finish it.	F %	9 7.7	39 33.3	27 23.1	30 25.6	12 10.3	

Note: F: Frequency; %: Percentage.

It is obvious that there was a difference in terms of frequency among the strategies used by the non-English majors. More than a half "often" or "always" attempted to complete the task through group work (59%) and helped their classmates with explaining the materials (53.8%). On the contrary, the students did not pay much attention to arranging time for group discussion about the learning materials outside the classroom (item 12) as well as discussing the lessons learned in class (item 13). As can be seen in Table 4, the percentages of item 12 and item 13 for "never" and "rarely" scales were

quite high, with 40.2% and 41.9% respectively. This means that the students probably preferred working in group in class to doing so out of class (Table 4).

Similar to the above-discussed groups, the majority of participants would rather ask their teacher and friends for help than look for information on the Internet on their own. As can be observed in Table 5, up to 73.5% of the participants admitted high frequency of needing their peers' assistance when they had trouble with the materials. Apart from the classmates, they asked the teacher who was in charge of

their class for help. However, a large proportion of participants (61.6%) hardly ever

or occasionally made use of online sources (Table 5).

Table 4. Frequency of peer learning strategies

			N=117				
Item	Peer learning strategies		Never	Rarely	Sometimes	Often	Always
10	I try to explain the materials to my classmate.	F %	7 6	19 16.2	28 24	38 32.4	25 21.4
11	I try to work with other students in this class to complete the course assignments.	F %	5 4.3	24 20.5	19 16.2	57 48.7	12 10.3
12	I set time to discuss the course materials with a group of students outside the classroom.	F %	20 17.1	27 23.1	24 20.5	36 30.8	10 8.5
13	I meet my friends out of school time to discuss the lessons we have learnt in class.	F %	13 11.1	36 30.8	22 18.8	37 31.6	9 7.7

Note: F: Frequency; %: Percentage.

Table 5. Frequency of help seeking strategies

		N=117					
Item	Help seeking		Never	Rarely	Sometimes	Often	Always
14	I ask the instructor to clarify concepts I don't understand a lesson well.	F %	5 4.3	16 13.7	24 20.5	48 41	24 20.5
15	When I can't understand the materials in this course, I ask another student in this class for help.	F %	5 4.3	6 5.1	20 17.1	57 48.7	29 24.8
16	I try to search for the information on the Internet when I don't understand a lesson.	F %	7 6	32 27.4	40 34.2	30 25.6	8 6.8

Note: F: Frequency; %: Percentage.

4.2. The Correlation Betwee the use of Resource Management Strategies and Academic Achievement

As displayed in Table 6, the participants' strategies of peer learning, help seeking, and time as learning environment were positively correlated with their academic results (r=0.386, p=0.000; r=328; p=0.000; r=0.287, p=0.002 respectively) because their significance levels

were smaller than 0.01. These positive correlations indicated that when the non-English majors actively performed the activities by collaborating with their classmates, looking for the assistance of their friends or lecturers when necessary, setting a clear schedule for self-study, and attempting to handle the difficult lessons, their academic performance improved then.

However, the significance level (p) for the correlation between the students' academic achievement and the effort regulation was not statistically significant (p=0.063 >0.05). This finding showed that some students still got low results even though they tried their best to improve their leaning. This situation might come from the fact that English was not a main subject, and students had many other subjects to learn; therefore, when they got some problems with the English lessons, the students might ignore them instead of trying their best to understand the lessons.

Table 6. Correlation between the use of resource management strategies and academic achievement

		Acader Achiev	
	Peer learning	r p	0.386** 0.000
urce ement gies	Help seeking	r p	0.328** 0.000
Resource management strategies	Time and learning environment	r p	0.287** 0.002
а	Effort regulation	r p	0.172 0.063

^{**} Correlation is significant at the 0.01 level.

5. Discussion

5.1. High use of Resource Management Strategies

presented above, the resource management strategies were commonly used by the students with the following descending order: Time and learning environment, help seeking, peer learning, and effort regulation. Comparing to the results of Pintrich et al.'s (1991) study, the finding of this research pointed out that the students expressed a higher tendency of using learning strategies in terms of the average mean scores. This means that resource management strategies probably benefited the participants in this study. In other words, it was resource management strategies that helped facilitate these students' learning. This finding is in line with some scholars'

viewpoint on the merits of resource management strategies (e.g., Newman, 2002; Pintrich et al.,1991). However, this result was contrary to that in Trần Quốc Thao and Dương Mỹ Thẩm (2013) [30] indicating the low frequency of using self-regulated learning strategies among non-English majors at a college in Daklak, Vietnam.

5.2. A positive Correlation Between the use of Resource Management Strategies and Learning Outcomes

Statistically, peer learning strategies had the greatest effect on the students' academic achievement. Their learning results were also under the influence of the help seeking strategies. What is more, strategies related to time and learning environment to some extent influenced the learning outcomes although this influence was not as significant as that of the two previous groups. These findings supported by a position saying that self-regulated learning greatly contributes to learners' outperformance in the field of academic achievement (e.g., Bandura, 1986 [31]; Zimmerman, 1983 [32]) are similar to those found in the previous studies (e.g., Corno, 1986; Kosnin, 2007 [33]; Ozan et al., 2012 [34]).

Surprisingly, however, there was no relationship between effort regulation strategies and their academic achievement. This can be explained that this restriction partly came from the matter that English at the research site is not a main subject, and the students have to take a lot of subjects; therefore, when they encounter some problems with English lessons, the students may ignore them instead of trying their best to understand the lessons. This finding seems to be different from the results of the previous studies (e.g., Kosnin, 2007; Ozan et 2012) that emphasize the positive correlation between resource management strategies in general and effort regulation in particular. It can be inferred that the non-English majors are less likely to take control over their own learning. That is, they may not achieve good results without the assistance of their teachers and friends.

6. Conclusions and Recommendations

The results from the analysis of quantitative data indicated that the students were actively engaged in resource management strategies. In particular, time and learning environment strategies actually received the highest mean score, followed by strategies of help seeking, peer learning, and effort regulation. This means that the participants found it useful to utilize resource management strategies, especially the relating strategies to time and study environment. The finding also indicates a positive correlation between resource management strategies and the academic Specifically, achievement. peer learning strategies had the greatest impact on academic performance. Besides, strategies regarding time and learning environment and help seeking more or less affected the students' learning outcomes. On the other hand, the strategies of effort regulation did not have any influence on the students' learning results.

Based upon the findings, some pedagogical implications are provided as follows. The students should be encouraged to use resource management strategies. namely learning environment, help seeking, and peer learning because the use of these strategies is positively correlated with their learning outcomes. According to the students, noticeably, peer learning helped improve their academic results. Therefore, EFL teachers should create more room for collaborative learning in which students will be able to learn from and support one another. What is more, EFL teachers need to pay more attention to students' use of effort regulation strategies. To use resource management strategies effectively, hence, it is suggested that EFL teachers introduce resource management strategies to their students prior to the course and offer them counseling when needed during the learning process. Finally, EFL teachers together with administrators also need to organize extracurricular activities and seminars to shed light on the usefulness of resource management strategies and equip students with indispensable knowledge and skills of these strategies.

Although the results of this study have contributed to the literature of self-regulated learning strategies, there exist a few unavoidable limitations namely time limit, the quite small sample size. It is recommended that further research should conduct a study with a bigger sample size and/or employ more instruments such as interview, journal/diary, observation, tests for data triangulation. Moreover, future researchers ought to take cognitive and metacognitive strategies into account.

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