The correlation Between Self-Regulated Learning and Academic Achievement of English. A picture of Vietnamese High School Students.

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Abstract- Self-regulated learning has a positive effect on academic achievement. The purpose of this study was to determine whether there was any significant relationship between self-regulated learning strategies and academic achievement of English. The participants under study were 322 Vietnamese high school students. The data were collected through Motivation Strategies for Learning Questionnaire (MSLQ). Academic achievement data was collected by means of self-report final official score of English. The results showed that there was a positive correlation between self-regulated learning constructs and academic achievement. Moreover, the findings indicated that effort regulation was the dominant self-regulated learning strategy among high, medium and low achievers. Results were discussed in terms of their interpretation and recommendation.

Index Terms- Self-regulated learning – Academic achievement – MSLQ – Dominant – Vietnamese students

I. INTRODUCTION

Education systems aim at enabling students to be self-regulated learners through playing an active role in the learning process to achieve successful academic results. Self-regulated learning is thought of as an active and constructive process in which learners set their goals, monitor, regulate and control their cognitive, motivation and behaviour (Wolters, Pintrich, & Karabenick, 2003). A significant number of studies have highlighted the relationships of self-regulated learning with academic achievement among different levels and ages (Ariani, 2017; Schmitt, McClelland, Tominey, & Acock, 2015; Zimmerman, & Martinez-Pons, 1986; Zimmerman, 1990, 2001, 2008). Given the importance of enabling students to be involved in self-regulatory process, this study analyses the relationship between self-regulated learning and academic achievement of English in Vietnamese high schools.

Theoretical Framework

This study draws on the social cognitive theory proposed by Bandura (1986). In social cognitive theory, humans learn through interactions within a social context, which influences the attainment of behaviours. Within the social cognitive framework, behaviours, social settings and internal factors interact during the process of learning in which each person has a self-regulating system that affects beliefs, motivation and behaviours (Glynn, Taasoobshirazi, & Brickman, 2007).

Self-regulated learning is a human tendency to attain a degree of agency that allows agents to control their behaviours and environment (Bandura, 1991). The agency is only achieved through directing thoughts and actions (Usher & Schunk, 2018). In addition, self-regulated learning is not determined only by personal processes, but also by the environmental and behavioural events, which shed light on the reciprocal aspect of the theory (Bandura, 1997).

The processes of self-regulated learning depend to a great extent on the phases of the cyclical model presented by Zimmerman and Moylan (2009), which include self-monitoring, self-evaluation and self-reaction. The cyclical model of self-regulation shows the reciprocal interactions between personal, behavioural and environmental effects (Usher & Schunk, 2018). Bandura's social cognitive theory puts emphasis on the role of knowledge in determining an individual's performance since cognitive regulation is based on proactive actions that involve effective self-monitoring, self-evaluation and self-reaction.

1. Literature Review

1.1 Self-Regulated Learning

The significance of self-regulated learning lies on students' ability to employ certain strategies to improve their academic achievement (Hart, 2012). In self-regulated learning, there is a great emphasis on the role of the learners as active participants in the process of learning. Students regulate their learning process by setting their own goals, developing learning strategies, managing the time, the environment and assessing their understanding and performance (Roick & Ringeisen, 2018; Veenman, 2017; Zimmerman, 1995).

 Researchers have suggested certain models to explain self-regulated learning. Zimmerman and Schunk (2011) described SRL as students' systematic use of thoughts, feelings and actions to achieve academic goals. It is the degree to which students are "metacognitively, motivationally, and behaviourally active participants in their own learning process" (Zimmerman, 2001, p. 5;). Schunk (2012) simplifies these definitions of SRL by emphasizing on the role of self-monitoring, self-instruction and self-reinforcement in the self-regulation process in academic engagement. Self-monitoring refers to the setting of a target aspect of self-behaviour, while self-instruction relates to "discriminative stimuli that are produced by the individual and that set an occasion for responses leading to reinforcement" and self-reinforcement is the rewarding that learners provide to themselves, which facilitates academic engagement (Schunk, 2012, p.498).

In all, self-regulated learners are able to identify their goals, engage in self-monitoring and use effective strategies to achieve them (Iosseno et al., 2020).

1.2 The Relationship Between Self-Regulated Learning and Academic Achievement.

Self-regulated learning research indicates that some behaviours and beliefs lead to successful academic achievement. High achieving students tend to report using more self-regulatory skills and strategies than low achieving students (Zimmerman & Martinez-Pons, 1986; Schunk & Zimmerman, 1994).

A plethora of studies investigated the relationship between self-regulated learning and academic achievement among graduate and undergraduate students that revealed positive results (Ariani, 2017; Schmitt, McClelland, Tominey, & Acock, 2015; Zimmerman & Martinez-Pons, 1986). Pintrich and De Groot (1990) investigated the relationship of motivational orientation, self-regulated learning and academic performance with a sample of 173 students from English and science classes. They found out that self-regulation, self-efficacy and test anxiety were the main predictors of academic performance. Likewise, Jensen et al. (2019) conducted 126 empirical research studies examining the impact of SRL on academic achievement. SRL was found to be the best predictor of academic achievement. In line with this, Alotaibi, Tohmaz and Jabak (2017) found that among self-regulated constructs including goal setting and planning, monitoring, memorization, rehearsal and social assistance, goal setting and planning were found to be the best significant predictor of academic achievement. Moghadari-Koosha et al. (2020) examined the impact of several variables such as SRL, motivation and self-efficacy on academic achievement. The data were gathered through Grade Point Average (GPA) from 400 paramedical undergraduate participants. They found that SRL was the most significant predictor of academic achievement. Therefore, recent studies have documented that self-regulated learning has a significant correlation with academic achievement.

Researchers have found that lack of self-regulated learning skills has a negative impact on academic achievement (Busse & Walter, 2017; Dresel & Grassinger, 2013; Rizkallah & Seitz, 2017). Students in general face many challenges and get poor academic achievement due to their lack of self-regulation. They are likely to be passive receivers of knowledge rather than proactive ones who are capable of being responsible for their own learning. In this respect, there is a widely held assumption that deficiencies in self-regulated learning generate poor academic achievement. Therefore, the present study addresses the following research questions:
- Is there any significant relationship between self-regulated learning and academic achievement?
- What is the dominant self-regulated learning strategy used by high, medium and low achieving students?

Based on the research questions above, the following hypotheses were formed:
- H1. There is a significant relationship between SRL and Academic achievement.
- H2. There is a dominant self-regulated learning strategy used by Vietnamese students.

II.   METHODOLOGY

2.1. Descriptive Statistics of Participants

In this study, the researcher has chosen 322 random students from different high schools in Ha Long city, Quang Ninh province, Vietnam. The responses were collected anonymously in order to protect the privacy of the participants. Students were aged between 15 and 18 years old. Table 1 shows gender, grades, percentage and cumulative percentage of each group.

Table 1: Demographic Background of Participants

	Frequency	*Percentage*	*Valid percentage*
Male	134	41.6	41.6
Female	188	58.4	58.4
Grade 10	235	73.0	73.0
Grade 12	87	27.0	27.0

2.2 Research Tools

With the purpose of answering the questions, two instruments were used to gather the data on SRL strategies and academic achievement variables. These are Motivational Strategies for Learning Questionnaire and self-report academic score in English subject.

2.2.1 The Motivational Strategies for Learning Questionnaire (MSLQ)

In order to gain information about the SRL strategies used by the participants, the Motivational Strategies for Learning Questionnaire developed by Pintrich and De Groot (1991) was used. MSLQ is a self-reporting tool with 81 items in total, 50 items for motivational beliefs and 31 items for self-regulated learning strategies. The instrument uses a seven point-Likert scale ranging from 1 "Not at all true of me" to 7 "very true of me". In this study, the researcher used the Motivational Strategies for Learning Questionnaire MSLQ (Pintrich et al., 1991) because of its proven reliability and ability to gain insight about students' usage of SRL strategies. Moreover, only five constructs were chosen to cnonduct this research. These are metacognitive-strategies, time and study environment, effort regulation, help seeking and peer learning. The questionnaire consisted of 31 questions, which was translated into Vietnamese language to help students give accurate answers. The translated Vietnamese version was checked by 3 different English teachers whose mother tongue is Vietnamese language. They all helped the researcher to accurately provide the appropriate translation and eventually, they all agreed on the accuracy of the translation.

2.2.2 Official English Subject Grades

Academic achievements were collected by means of self-report academic score in English subject of the first semester of academic year 2022/2023.

2.3 Procedures

Permission was obtained from the principals of the selected high schools in Vietnam to collect the data from the participants who were informed that their participation is voluntary, and their participation would not affect their grades. Before administering the questionnaire to students, they were well instructed on how to answer the items of the questionnaire and they were provided with information about the project. Finally, the results were computed using SPSS statistics 25 in order to answer the research questions.

2.4 Data Analysis

Descriptive statistics (mean and standard deviation) was used to analyse the data collected through (MLSQ) and Academic achievement score. Pearson product moment coefficient (r) correlation was used to identify the relationship between SRL strategies and academic achievement. Furthermore, descriptive statistic was used to determine the dominant self-regulated learning strategy used by high, medium and low achieving students.

III.   RESULTS

3.1 Academic achievement score

One of the main aims of this study was to determine the relationship between self-regulated learning strategies and academic achievement of English. Therefore, in order to answer the first question, self-report final official score of English was used. Table 2 shows the grouping of students which was based on their scores in English. There were three main categories including high, medium and low scorers. The results show that high group 43.4.2% (140 students) scored between 8 and10. Medium group 33.8.% of participants (109 students) scored between 5 and 7; while the low group, which 22.8% of the total participants (73 students) scored between 1 and 4.

Table 2: Grouping of Participants Based on Academic Achievement Scores

Groups	*Range*	*Frequency*	*Percentage*	*Valid Percentage*	*Cumulative Percentage*
High	8-10	140	43.4	43.4	43.4
Med	5-7	109	33.8	33.8	77.2
Low	1- 4	73	22.8	22.8	100.0
Total	322	100.0	100.0	100.0	_____

3.2 Self-regulated learning score

The score of students' self-regulated learning strategies was collected through the Motivational Strategies for Learning Questionnaire described earlier. Table 3 shows means and standard deviations of the academic achievement in English subject of the first semester and self-regulated learning strategies subscales including metacognitive self-regulation, time and study environment management, effort regulation, peer learning and help seeking. We concluded from the table that participants generally reported a medium level of self-regulated learning strategies as the mean score of the five subscales ranges between 3.78 and 4.26.

Table.3: Mean and Standard Deviation Score of SRL Constructs

Variables	Number of Items	Mean	Standard Deviation
Meta-cognitive Strategies	12	3.8134	1.0703
Time & study environment	8	4.1836	1.0679
Effort regulation	4	3.7811	1.1601
Peer learning	3	4.1222	1.5635
Help seeking	4	4.2686	1.3378

3.3 The relationship between SRL and academic Achievement

Pearson Moment correlation coefficient was used to investigate the strength of the relationship between the SRL strategies subscales (metacognitive self-regulation, time and study environment management, effort regulation, peer learning and help seeking) and academic achievement of Vietnamese students. This correlation is not causal as one variable does not necessarily cause the other. Table 4 shows that all correlation coefficients were positive and significant between academic achievement and metacognitive self-regulation ($r = .072$), time and study environment ($r = .096$), peer learning ($r = .035$), help seeking ($r = .067$) and effort regulation ($r = .076$) as the correlation values (r) are all close to 1. The closer the value to 1 is, the stronger the relationship. Therefore, the results obtained support our first hypothesis.

Table.4: Pearson Correlation Coefficient of SRL Constructs and Academic Achievement

Variables	Academic Achievement	Meta-cognitive strategies	Time & study management	Effort management	Peer learning	Help seeking
Academic Achievement	1	.072**	.096**	.076*	.035*	.067**

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

* Correlation is significant at the 0.05 level (2-tailed)

4.4 The dominant SRL strategy used by High, Medium and Low Achieving Students

In order to investigate the dominant self-regulated learning strategy used by high, medium and low achieving students, a descriptive statistic was used. Table 5 displays that high achievers appear to use help seeking (M=4.32, SD=1.29) more than the other learning strategies. In addition, medium achieving students tend to prefer effort regulation (M=4.40, SD=1.34). Likewise, effort regulation was the most self-regulated strategy used by low achieving students. This indicates that effort management is the dominant self-regulated learning strategy used by students. The outcome was supported by the overall mean score of effort management, which is (M=3.72, SD=1.34). Therefore, the second hypothesis is accepted.

Table.5: Descriptive Statistics of High, Medium and Low Achieving Students.

	Descriptive Statistics	Meta-cognitive strategies	Time & study management	Effort management	Peer learning	Help Seeking
High Achievers	*Mean*	3.87	4.24	3.72	4.17	4.32
	S.Deviation	1.02	1.03	1.10	1.55	1.29
Medium Achievers	*Mean*	3.49	3.87	4.40	3.95	4.07
	S.Deviation	1.18	1.14	1.34	1.49	1.44
Low Achievers	*Mean*	2.72	2.79	3.04	2.33	2.41
	S.Deviation	1.60	1.58	1.60	1.63	1.77
Total	*Mean*	3.36	3.63	3.72	3.48	3.60
	S.Deviation	1.26	1.25	1.34	1.55	1.50

IV. CONCLUSION

Many studies have highlighted the importance of being able to set learning goals, regulate and control the learning process for successful academic achievement (Cheng, 2011; Tekbiyik, Camadan & Gulay, 2013; Zimmerman & Martinez-Pons, 1986; Schunk & Zimmerman, 1994). In the same vein, this study examined the relationship between self-regulated learning and academic achievement in English. Descriptive statistical analysis showed that students reported a moderate level of self-regulated strategies behaviour. Correlation coefficient analysis revealed a positive relationship between five SRL constructs and academic achievement in English. Furthermore, the overall mean score of self-regulated learning construct revealed that the dominant self-regulated learning strategy used by students was effort management.

On one hand, the results of this study revealed positive correlation between academic achievement in English of Vietnamese high school students and self-regulated learning constructs including metacognitive self-regulation, time and study environment management, effort regulation, peer learning and help seeking. The results are consistent with other studies that they found a strong relationship between self-regulated learning and academic achievement (Alotaibi, Tohmaz & Jabak, 2017; Schmitt, McClelland, Tominey, & Acock, 2015; Zimmerman & Martinez-Pons, 1986; Schunk & Zimmerman, 1994). The results implied that high and medium achieving students tented to effectively regulate their learning process. However, more attention should be paid to low achieving student by instructing them about the importance of undertaking responsibilities for their own learning. In addition, it is of paramount importance that parents and teachers guide students to set their own academic goals, use effective learning strategies and monitor their learning process, especially when students make the transition from secondary to high school. Teachers need to pay great attention to different categories of students, including low, medium and high achieving students by providing them with the appropriate training on how to use effective learning strategies and how to build the sense of independence in autonomy in learning. This may positively contribute to the development of self-regulated learning skills among all students, which will definitely have a positive impact on their learning outcomes.

The second major finding of this study is the dominant self-regulated learning strategy used by high, medium and low achievers. The results indicated that effort management is most likely used by participants among self-regulated learning strategies. That is, students tended to control their effort and attention in challenging situations such as distractions. Furthermore, it reflected that students managed themselves well when it comes to completing study and commitment goals. Therefore, effort have to be made to prepare students to be more effective users of other different self-regulated learning strategies, which would have a positive impact on their academic achievement.

The concept of self-regulated learning is still not well known, especially in developing countries such as Vietnam and Morocco. Thus, it is recommended that this concept should be included in the content of every subject and be introduced to students by teachers and parents. Every student needs to be aware of the importance of using learning strategies to be successful (Paris & Oka, 1986). It is

generally assumed that students have deficiencies in self-regulation skills. However, when teachers and parents direct their students to the appropriate use of self-regulation skills, results will be satisfactory.

Generally, this study has demonstrated that self-regulated learning is associated with academic achievement of English course for high school students. It showed what self-regulated learning strategy is preferred by students. The researcher used only MSLQ questionnaire as an instrument tool, which is considered one of the limitations of this study. Future research might need to consider the use of a variety of methods to collect data in order to get more accurate results such as class observations, thinking aloud protocol and interviews.

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REFERENCES

[1] Alotaibi, K, Riyad,Tohmaz, and Omar, Jabak (2017). The relationship between self-regulated   learning and academic achievement for a sample of community college students at king saud university. Education Journal, vlo.6(1), pp.28-37.

[2] Ariani, D. W. (2017). Relationship model among learning environment, learning motivation, and self-regulated learning. *Asian Social Science, 13*(9), 63-81. doi.org/10.5539/ass. v13n9p63

[3] Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice Hall.

[4] Bandura, A. (1991). Social Cognitive theory of self-regulation. Organizational Behavior and   Human Decision Processes, 50(2), 248–287.

[5] Bandura, A. (1997). Self-efficacy: The exercise of control. Freeman.

[6] Busse, V., & Walter, C. (2017). A longitudinal study of motivational foreign language   learning motivation in higher education: Changes and their causes. Wiley on Behalf of the National Federation of Modern Language Teachers Associations, 97(2), 435–456. https://doi.org/10.1111/j.1540-4781.2013.12004.x

[7] Cheng, E. C. K. (2011). The role of self-regulated learning in enhancing learning performance. The International Journal of Research and Review, 6, 1–16.

[8] Dresel, M., & Grassinger, R. (2013). Changes in achievement motivation among university freshmen. Journal of Education and Training Studies, 1(2), 159–173. https://doi.org/10.11114/jets.v1i2.147

[9] Glynn, S. M., Taasoobshirazi, G., & Brickman, P. (2007). Nonscience majors learning science: A theoretical model of motivation. Journal of Research in Science Teaching, 44(8), 1088-1107.

[10] Hart, C. (2012). Factors associated with student persistence in an online program of study: A review of the literature. Journal of Interactive Online Learning, 11(1), 19–42.

[11] Jansen, R. S., van Leeuwen, A., Janssen, J., Jak, S., & Kester, L. (2019). Self-regulated learning partially mediates the effect of self-regulated learning interventions on achievement in higher education: A meta-analysis. *Educational Research Review, 28*, 100292. doi.org/10.1016/j.edurev.2019.100292

[12] Losenno, K.R. Muis, B. Munzar, C.A. Denton, N.E. Perry. (2020). The dynamic roles of cognitive reappraisal and self-regulated learning during mathematics problem solving: A mixed methods investigation Contemporary Educational Psychology, 61 (2020), Article 101869,

[13] Moghadari-Koosha M., Moghadasi-Amiri, M., Cheraghi, F., Mozafari, H., Imani, B., & Zandieh,M. (2020). Self-efficacy, self-regulated learning, and motivation as factors influencingacademic achievement among paramedical students: A correlation study. Journal of Allied Health, 49(3), E145-E152.

[14] Paris, S., & Oka, E. (1986). Children reading strategies, Meta cognition, and motivation. Developmental Review, 6, 25-56.

[15] Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. Journal of Educational Psychology, 82(1), 33-40.

[16] Rizkallah, E. G., & Seitz, V. (2017). Understanding student motivation: A key to retention in higher education. Scientific Annals of Economics and Business, 64(1), 45–57. https://doi.org/10.1515/saeb-2017-0004

[17] Roick, J., & Ringeisen, T. (2018). Students' math performance in higher education:Examining the role of self-regulated learning and self-efficacy. Learning and Individual Differences, 65, 148-158. doi: 10.1016/j.lindif.2018.05.018

[18] Schunk, D. H. (2012). Learning theories an educational perspective (6th ed.). Pearson.

[19] Schunk, D. H, & Zimmerman, B. J. (Eds.). (1994). Self-regulation of learning and performance: Issues and educational applications. Hillsdale, NJ: Lawrence Erlbaum Associates.

[20] Schmitt, S. A., McClelland, M. M., Tominey, S. L., & Acock, A. C. (2015). Strengthening school readiness for Head Start children: Evaluation of a self-regulation intervention. Early Childhood Research Quarterly, 30, 20-31.

[21] Tekbıyık, A., Camadan, F. & Gulay, A. (2013). Self-regulated learning strategies as predictors of academic achievement in science and technology courses. Turkish Studies, 8, 567–582. doi:10.7827/ turkishstudies.4473

[22] Usher, E. L., & Schunk, D. H. (2018). Social cognitive theoretical perspective of self-regulation. In D. H. Schunk, & J. A. Greene (Eds.), Educational psychology handbook series. Handbook of self-regulation of learning and performance (pp. 19–35). Routledge/Taylor & Francis.

[23] Veenman, M. V. J. (2017). Learning to self-monitor and self-regulate. In R. E. Mayer & P. A. Alexander (Eds.), Handbook of research on learning and instruction (2nd ed., pp. 197-219). New York: Routledge.

[24] Wolters, C. A., Pintrich, P. R. & Karabenick.(2003). Assessing academic self-regulated learning. Prepared for the conference on indicators of positive development: Definition, measures, and prospective validity.

[25] Zimmerman, B. J. (1990) Self-regulated learning and academic achievement: An overview. Ed-ucational Psychologist, 25(1), 3-17.

[26] Zimmerman, B. J. (1995). Self-regulation involves more than metacognition: A social Cognitive perspective. Educational Psychologist, 30(4), 217-221. doi: 10.1207/s15326985ep3004_8

[27] Zimmerman, B. J. (2001). Theories of self-regulated learning and academic achievement: An overview and analysis. In B. J. & D. S. (Eds.), *Self-Regulation of Learning and Academic Achievement: Theoretical Perspectives (2nd ed., pp 1-37).* Mahwah, NJ: Lawrence Erlbaum Associates.

[28] Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal, 45*(1), 166-183.

[29] Zimmerman, B. J., & Moylan, A. R. (2009). Self-regulation: Where metacognition and motivation intersect. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Handbook of metacognition in education* . Routledge/Taylor & Francis Group.

[30] Zimmerman, B. J., & Martinez-Pons, M. (1986). Development of a structured interview for as-sessing student use of self-regulated learning strategies. American Educational Research Journal, 23, 614-628.

[31] Zimmerman, B. J., & Schunk, D. H. (Eds.). (2011). Handbook of self-regulation of learning and performance. New York, NY: Routledge.

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