An Investigation on the Relationship Between Self-Regulated Learning and the Resultant Academic Achievements with Particular Reference to Grade 11 Students of Ginbot 20 preparatory School

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Abstract- The purpose of this study was to investigate the relationship between the use of self-regulated learning strategies and the students' academic achievements. To come up with the findings, conclusions and recommendations of this work, data was collected from Ginbot 20 Preparatory School, and analyzed and interpreted. The main data gathering instrument used by the researcher was structured questionnaire. Accordingly, to investigate the relationship between the uses of self-regulated learning strategies and the students' academic achievements, descriptive statistics (mean, median, and standard deviation) were used. And then, Pearson product moment coefficient (r) correlation was used to see the relationships between the strategies used by learners and their achievement. The findings shows that low achieving participants tends to prefer the meta-cognitive learning strategy (M = 4.10, SD = 0.60) than the other self-regulated learning strategies, and *statistically* significant correlation coefficients were found between meta-cognitive learning strategy and academic achievement, between cognitive strategy and academic achievement of the participants

Index Terms- self-regulated learning strategies, cognitive learning strategies, meta-cognitive learning strategies, Resource management learning strategies, high achievers medium achievers, low achievers

I. INTRODUCTION

In the history of language learning and teaching, different scholars and researchers tried to introduce different types of language learning strategies. From these different types of strategies, Zimmerman (2001), as it is cited in Schunk (2009) self-regulated learning strategy is the one and the recently introduced strategy with in the last three decades.

Self-regulated learning strategy can be defined in different ways. For example, Nilson (2014) defined self-regulated learning as the conscious planning, monitoring, evaluation and ultimately control of one's learning so as to upgrade or improve it. Another scholar known as Bekele (2013) also defined self-regulated learning strategy as "an active process through different strategies that help students try their level best to maximize their cognition and performance and to manage their behavior …

which could influence their learning". Both the two definitions have almost the same theme. Because, both definitions are used to mean self-regulated learning strategy is a strategy that enable learners to improve or increase their achievement or performance.

Different language experts and researchers agreed that learning strategies for second and foreign language has shown a remarkable growth. The focus of the curriculum in the education of language has changed to learner centered. The emotion/feeling, interest, potential, participation, etc. or their role in the teaching and learning process generally were not taken into account. Accordingly, the philosophy of language education has shifted its focus from teachers and teaching to learners and learning. The theory which was in practice till the 1960s was incomplete in that it didn't take the learners' internal feeling into account (Schunk, 2009), Hismanogly (2000).

As a result of the paradigm shift, by the beginning of the 1990s, the study of self-regulation had come of age, causing a "virtual explosion of work in this area", and becoming a "natural and organic part of the landscape of psychology and education" Reis (2004). The shift from behaviorism to cognitivist in educational psychology has placed an increasing responsibility in learners for their own learning, and self-regulated learning has become a frequent area of educational research. According to Bandura, (2001) and Ben-Ari, (1998) as they are cited in Alhabri (2011), self-regulated learning is an educational theory influenced by constructivism theory and social learning.

Before the 1960s, according to Schunk(2009), behaviorism theory which does not consider learners' internal states like thoughts, beliefs, and emotions was widely used in the process of language teaching and learning. At that time, behaviors were acquired through conditioning. In other words, behaviorists believed that any person could potentially be trained to perform any task, regardless of things like genetic background, personality traits, and internal thoughts (within the limits of their physical capabilities); all it takes is the right conditioning. And this was widely discussed by many scholars as it has gaps in taking the learners' active role.

Following this gap, Zimmerman (2001) as cited in Schunk (2009), self-regulation and motivation have been taken as important factors for effective learning. As a result of this,

cognitive theories of self-regulated learning have come in to existence after the 1960s. Students' achievement, in this way is assumed to be one of the learning aspects linked with learning strategy. According to McCombs and Marzano (1990); Murphy and Alexander (2000), self-regulated learning is very important for learners because it provides a combination of academic learning skills and self-control that makes learning easier as it makes them more motivated. They could develop the skill and the will to learn on their own. Of course, self-regulated learning strategy may be affected by different cultural and educational factors like achievement, years of learning and styles, motivation, gender and the like (Schunk, 2009).

According to Dickinson (1987), in order to enhance learners' awareness, training them by using the target language is very important if it is performed by distinguishing learning strategies from learning theories. In line with this, Zimmerman et al. (1996) noted that self regulation or self-regulated learning came into practice by focuses on process to maximize learners' achievement and success. This means, knowing how learners process the language and what kind of strategy they use to increase their understandings of the language is very important issue.

Three activities of self-regulated learning strategies are identified by Zimmerman and Martinez (1986) and Pintrich (1999). These are cognitive and meta-cognitive activities, resource management activities and affective activities. According to these scholars, cognitive activities refer to the rehearsal (the active involvement of the learners), elaboration, and organization of activities. Similarly, Zimmerman (1999) noted that meta-cognitive activities are activities of self-regulated learning strategies referring goal settings, self-monitoring and self-evaluation. On the other hand, resource management activities are activities of self-regulated learning activities concerned with time and effort management, seeking help and information from others and structuring environment for a better learning (Pintrich, 1999). According to a research done by Zimmerman and Martinez (1986), high self-regulated learners perform resource management activities repeatedly than low self-regulated learners.

In all these contexts, self-regulated learning strategy is used to mean or refer learning that results from students' self-regulated thoughts and behaviors that are oriented systematically towards the attainment of their goals (Schunk, 2009). Meaning that, it is closely related with autonomous learning of students to increase success.

Self-regulated learning strategies, currently, is being taken as a modern agenda in the global arena, Zimmerman et al. (1996). This is true as it is important to increase the knowhow and achievement of learners. Its contribution for the general teaching and learning process of language classrooms in particular and the merits that can increase the academic achievements of students in general is already studied by different scholars including Barry Zimmerman.

Nevertheless, the potential relationship between self-regulated learning strategies and students' achievement is not well researched in local contexts of Ethiopia. Therefore, focusing on identifying possible learning strategies for a better learning outcome is the important issue that must be noticed by foreign language teachers.

In this regard, what is observed on the ground in the context of Ginbot 20 preparatory school is not different from this. Most of the time, teachers and teaching, which results a greater academic achievement difference among learners, is the center of the teaching and learning process.

As a result of all these issues, the researcher was initiated to assess the use of self-regulated learning strategies and its relationships with the academic achievements of the students in Ginbot 20 preparatory school.

Research questions;
This study aimed to answer the following research questions.
1. What self-regulated learning strategies do students use?
2. Is there any significant relationship between self-regulated learning strategies and academic achievement?
3. Which self-regulated learning strategy affect students' achievement?

1.1. Objectives of the Study
The general objective of the study was to investigate the relationship between the use of self-regulated learning strategies and the resultant academic achievements.

Specific objectives:-
The specific objectives of the study are:-
- Investigating self-regulated learning strategies used by students.
- To see the relationship between self-regulated learning strategies and academic achievement.
- Identifying self-regulated learning strategies that affect students' achievement.

1.2. Significance of the study
The researcher assumes this study would have a greater importance for different stakeholders. For instance, students would be the primary beneficiaries of this study for many reasons. It could enable them to see the possible experiences and learning strategies to increase their success in their education. In addition, learners could benefit from this study by using self-regulated language learning strategies to increase their motivation, problem solving ability and creativity. Besides this, it would have a greater importance for teachers to take the uses of self-regulated learning strategies in to account at time of developing teaching materials. It is also important for teachers in helping learners to become independent (autonomous) learners. Even parents would get a significant advantage from this study to follow up and help their students in using self-regulated learning strategies and to provide learning materials. Finally, those researchers who want to do further research works regarding self-regulated learning strategy and its relationships with academic achievement at high school level, can get at least some back ground information in the context of Ethiopia.

1.3. Scope of the Study
The topic of this study is "An investigation on the relationship between self-regulated learning and the resultant academic achievements with particular reference to grade 11 students of Ginbot 20 preparatory and secondary school" which is found in East Gojjam Zone, Awabel Woreda, Lummame town.

In this study, from the currently attending students of the school, grade 11 students were the subjects of the study. The study was limited to see the relationships of self-regulated learning strategies and achievement with particular reference to Ginbot 20 preparatory school.

II. RESEARCH METHOD

The design of the study was descriptive in nature. Accordingly, quantitative data were collected and analyzed to address the basic questions of the study. The subjects of the study were taken from grade 11 of Ginbot 20 preparatory and secondary school purposively. In the school, there were about 340 students attending their grade 11 education. From this number, 190 of them were males and 150 of them were females. According to Best and Kahn (2005), from such a study area, taking about 30% from the whole population is advisable. As a result of this, by considering the total population of the study area, 102 students were selected to be part of the sample of the current study.

To make the sample more heterogeneous first, students were grouped into three groups (low, medium, and high achiever students) by using stratified sampling technique based on their academic achievement. After that, by giving an equal and independent chance of being selected, 102 students, (31 students from low achievers, 41 students from medium achievers and 30 students from high achievers groups) were selected by using lottery system. The researcher used document analysis of

students' 2007 E.C. and self-regulated learning strategy questionnaire adapted from Pintrich et al. (1991) taken from Artino (2015) was used to gather data. So as to reduce contamination of data, first, the researcher assumed to see and record the students' result that was obtained from the school students' record office. Next, the questionnaires were distributed for the respondents after oral orientations.

III. DATA ANALYSIS AND INTERPRETATION

As the primary concern of the study focused on the relationships of self-regulated learning strategies and academic achievement, first, descriptive statistics (mean, median, and standard deviation) were used. And then, Pearson product moment coefficient (r) correlation was used to see the relationships between the strategies used by learners and their achievement. Furthermore, to see the self-regulated learning strategies used by high, medium and low achievers; one-way ANOVA test was computed by using SPSS Version-20 (Statistical Package for Social Science Version-20) software.

Results
3.1. Demographic Backgrounds of Participants

Table 1 presents the basic demographic characteristics of the participants in terms of their age, gender and academic achievement categories.

Table 1 Basic Demographic Background of Participants

Demographic background	Category	Freq.	%
Age in years **M = 18.42** **SD = 1.10**	17	22	21.6
	18	33	32.4
	19	29	28.4
	20	18	17.6
	Total	**102**	**100.0**
Gender	Male	69	67.6
	Female	33	32.4
	Total	**102**	**100.0**
Achievement Categories	Low Achievers	31	30.4
	Medium Achievers	41	40.2
	High Achievers	30	29.4
	Total	**102**	**100.0**

Table 1 reveals some basic demographic characteristics of the students. As the Table indicates, the participants were found between the age ranges of 17 and 20 year-old with the mean age of 18.42 and the standard deviation age of 1.10. A relatively more number of participants were found at the age of 18 followed by age 19, which constitute 33 (32.4%), and 29 (28.4 %) number of participants, respectively. Regard gender compositions, Table 1 shows that while 69 (67.6 %) are males, the remaining 33 (32.4 %) were females. Finally, to look at the academic achievement of the participants, the academic results to English language subject were grouped into three categories (i.e., low achievement = 27 - 57, medium achievement = 58 - 71, and

high achievement = 72 - 93). Based on these categories, Table 1 shows that 41 (40.2 %), 31 (30.4 %), and 30 (29.4 %) of the participants were found under of the medium, low, and high achievement categories, respectively.

3.2. The Dominant Learning Strategy

To identify a relatively dominant self-regulated learning strategy among the participants, the mean and standard deviation scores of low, medium, and high achieving participants were computed. The computation results are presented in Table **2.**

Table 2 Mean and Standard Deviation Scores of Low, Medium and High Achieving Students

Achievement Categories	Statistics	MCS*	RMS	CS
Low Achievers	M	*4.10*	3.48	3.32
	SD	*0.60*	0.68	0.80
Medium Achievers	M	3.88	3.66	*4.00*
	SD	0.81	0.69	*0.50*
High Achievers	M	3.83	3.77	*4.17*
	SD	0.79	0.68	*0.70*
Total	**M**	*3.93*	**3.64**	**3.84**
	SD	*0.75*	**0.69**	**0.74**

*MCS = Meta-cognitive Strategy; RMS = Resource Management Strategy; CS = Cognitive Strategy

Table 2 shows that low achieving participants tends to prefer the meta-cognitive learning strategy (M = 4.10, SD = 0.60) than the other self-regulated learning strategies. Moreover, medium achieving participants appear to use cognitive learning strategy (M = 4.00, SD = 0.50). Similarly, Table 2 reveals that cognitive strategy (M = 4.17, SD = 0.70) seems to be used more by the high achieving participants. Finally, the overall values of mean and standard deviation scores in Table 2 depicts that meta-cognitive learning strategy (M = 3.93, SD = 0.75) is dominantly utilized by participants of the study.

3.3. The Relationships between Learning Strategies and Academic Achievement

The other major intent of the study was to investigate the relationships between academic achievement of the participants and their learning strategies. Thus, Pearson Moment correlation coefficient was computed to investigate correlations among meta-cognitive, resource management and cognitive strategies, and academic achievement of the participants. The computed correlation matrixes are shown in Table 3.

Table 3 Pearson Correlation Matrixes among Learning Strategies and Academic Achievement

	MCS❦	RMS	CS	AA
MCS	1	.41	-.11	-.21*
RMS	-	1	.04	.18
CS	-	-	1	.40**
AA	-	-	-	1

** p < 0.01, 2-tailed
* p < 0.05, 2-tailed
❦ MCS = Meta-cognitive Strategy; RMS = Resource Management Strategy; CS = Cognitive Strategy; AA = Academic Achievement

Table 3 reveals that only *statistically* significant correlation coefficients were found between meta-cognitive learning strategy and academic achievement, between cognitive strategy and academic achievement of the participants. Thus, meta-cognitive learning strategy was correlated *negatively* with academic achievement with a *lower* magnitude (*r = -.21, p < .05,*

two-tailed). This indicates that participants who score lower in academic achievement tend to score higher in the meta-cognitive learning strategy and vice versa.

However, Table 3 indicates that cognitive learning strategy showed *positively* relationship with academic achievement scores of the participants with a *moderate* magnitude (*r = .40, p < .01, two-tailed*). This appears to show that participants who scored higher in the cognitive learning strategy were also scorers of higher academic achievements, and those who scored lower in cognitive learning strategy tends to score lower in their academic achievements.

3.4. Conclusion

Relatively, the dominant and frequently used self-regulated learning strategy used by the students is:

- Low achieving participants have a tendency to have a preference on the meta-cognitive learning strategy than the other self-regulated learning strategies.
- Cognitive learning strategy is most likely used by both medium and high achieving students.
- In a more general way, from the whole learning strategies, meta-cognitive learning strategy is the strategy the students dominantly utilize to enhancement their academic performance.

The conclusion forwarded as a result of the study in terms of relationship between self-regulated learning strategies and the students' academic performance is:

- Low academic achievers tend to score higher in the meta-cognitive learning strategy and vice versa.
- participants who scored higher in the cognitive learning strategy also scored higher academic achievements, and those who scored lower in cognitive learning strategy tends to score lower in their academic achievements.

REFERENCES

[1]   Alharbi, et al. (2011).**An Investigation into the Learning Styles and Self-Regulated Learning Strategies for Computer Science Students.** School of Electrical Engineering and Computer Science, the University of Newcastle, Australia

[2] Artino, A. (2015).A Review of the Motivated Strategies for Learning Questionnaire University of Connecticut

[3] Bekele, B. (2013). Enhancing Self-Regulated Learning in Teaching Spoken Communication. BDU.

[4] Best, J. W. and Kahn J.V. (2005).Research in Education. Hall of India. New Delhi

[5] Birihanu, C. (2012).The Relationship between Self-Regulated Learning Strategies and the Students Academic Resultant Achievement. Bahir Dar University.

[6] Boer, H. et al. (2012). Effective Strategies for Self-regulated Learning: A Meta-Analysis.

[7] Borich, G.D., and Tombari, M.L. (1995).*Educational Psychology: Contemporary Approach*. New York: Hamper Collins College Publisher.

[8] Cobb, R. (2003).The Relationship between Self-Regulated Learning and Academic Performance in Web-Based Courses.

[9] Corno, L. (2001). **Self-regulated learning: A volitional analysis**. In B. J. Zimmerman & D. H. Schunk (Eds.), Self-regulated learning and academic achievement: Theory, research, and practice (Vol. 2, pp. 111-142). Mahwah, NJ: Erlbaum.

[10] Dickinson, L. (1987).**Self-Instruction in Language Learning**. Cambridge: Cambridge University Press.

[11] Effeney, G. (2013).Self-Regulated Learning: Key strategies and their sources in a sample of **Adolescent males1.** Australian Journal of Educational & Developmental Psychology. Vol 13, 2013, pp. 58-74.Faculty of Education, Australian Catholic University.

[12] Hismanogly, M. (2000).Language Learning Strategies in Foreign Language Learning and Teaching. Hacettepe University. Turkey.

[13] Hofer, B. K., Yu, S. L., & Pintrich, P. R. (1998).**Teaching college students to be self-regulated learners**. In D.H. Schunk & B. J. Zimmerman, (Eds).Self-regulated learning; from teaching to self-reflective practice, (pp. 57-85). New York, NY: Guilford Press.

[14] Ismail, A. M. and Sharma, A. K. (2012). Self-Regulated Learning Strategies.

[15] McCombs, B. and amp; Marzano, R. (1990).**Putting the Self-Regulated Learning.** The Self as an agent in integrating skills and will, Educational Psychologist25, 51-70.

[16] McGew, K. (2008). Beyond IQ: A model of Academic Competence & Motivation (MACM) Institute for Applied Psychometric. www.iapsch.com/acmcework/self-regulatory.html

[17] McNamara (1996).Measuring Second Language Performance. London. Longman.

[18] Ministry of Education (1994).The Education and Training Policy of Ethiopia.

[19] Ministry of Education (1996).Higher Education Relevance and Quality Agency.

[20] Murphy, p. k. and Alexander P. A. (2000).A Motivated exploration of Motivation Terminology. Contemporary Education Psychology, 25, 3-53.

[21] Nilson, L. (2014). The Secrete of Self-regulated Learning.

[22] Oxford, R. (1992/1993). Language Learning Strategies in a Nutshell: Update and ESL

[23] Paris, G. & Winogard, P. (2001). **The role of Self-Regulated Learning in Contextual Teaching:** principles and practices for teacher's preparation.

[24] Pintrich, P. R. (1999). The role of motivation in promoting and sustaining self-regulated learning. Journal of Educational Research, 31, 459-470.

[25] Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991).*A manual for the use of the motivated strategies for learning questionnaire (MSLQ).* National center for research to improve postsecondary teaching and learning, University of Michigan, Ann Arbor, MI.

[26] Pintrich, P. (1995). **Understanding Self-Regulated Learning**. In P. Pintrich (Ed.), Understanding Self- Regulated Learning. San Francisco, CA: Jossey-Bass.

[27] *Reis, S.* M. (2004). Self-regulated Learning Institute for Talent Development. www.davidsongifted.org/db/Articles-id-10600.aspx

[28] Rubin, J. (1981).Study of Cognitive Processes in Second Language Learning .Applied Linguistics 11, 41-51.Schunk, D. (2009). Self-Regulated Learning.

[29] Weinstein, C. E., Husman, J., & Dierking, D. R., (2000). *Interventions with a focus on learning strategies*. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 727-747). San Diego, CA: Academic Press.

[30] Yang, M. H. (2000).The Study on Development and Validation of a Self-regulated Learning Model. Unpublished doctoral dissertation, Seoul National University, Seoul Korea.

[31] Zimmerman, B. J. (1998). Developing self-fulfilling cycles of academic regulation: An analysis of exemplary instructional models. In D. H. Schunk& B. J. Zimmerman (Eds.), Self- regulated learning: From teaching to self-reflective practice (pp. 1-19).New York, NY: Guilford Press.

[32] Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. Contemporary Educational Psychology, 25, 82-91.

[33] Zimmerman, B. J. (2001). Theories of self-regulated learning and academic achievement: An overview and analysis. In B. J. Zimmerman & D.H. Schunk (Eds.), Self-regulated learning and academic achievement: Theoretical perspectives (2nd ed., pp. 1-37). Mahwah, NJ: Erlbaum.

[34] Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. Theory into Practice, 41(2), 64-72.

[35] Zimmerman, B. J. (1999). **Commentary: toward a cyclically interactive view of self-regulated learning**. International Journal of Educational Research, 31, 545-551.

[36] Zimmerman, B.J., Bonner, S., & Kovach, R. (1996).*Developing Self-regulated learners: Beyond achievement to self-efficacy*. Washington, DC: American Psychological Association.

[37] Zimmerman, B. J., & Martinez-Pons, M. (1986).Development of a structured interview for assessing student use of self-regulated learning strategies. American Educational Research Journal, 23(4), 614-628.

[38] Zumbrunn, S. (2011).**Encouraging Self-Regulated Learning in the Classroom:** A Review of the Literature. Virginia Common Wealth University October 2011

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