

Full Length Research Paper

A study of self-regulated learning strategies as predictors of critical reading

Bekele Birhanie Aregu

Bahir Dar University, Ethiopia.

Accepted 26 August, 2013

The study examines the effects of use of self-regulated learning strategies on critical reading performance among second year distance education students taking critical reading course. It also analyzes correlations of the variables treated. In this study, 140 participants, who were interested to participate, were included. To gather data, scales and tests were used. Both descriptive and inferential statistics, namely, Mean, standard deviation, Pearson product moment correlation coefficient, and multiple regression analysis were applied to analyze the data. The results reveal that all the variables are interrelated positively. Moreover, the output of the multiple regression analysis show that 52% of the variances in critical reading are accounted for by the group effects of the self regulated learning strategies entered in the regression equation. Among these, use of behavioral self-regulated learning strategies was found to have great effects on performance in critical reading. The findings seem to suggest that attention needs to be paid to the uses of self-regulated learning strategies.

Key words: Personal self- regulated learning strategies, behavioral self- regulated learning strategies, environmental self- regulated learning strategies, critical reading.

INTRODUCTION

It is evident that many learners at school face difficulties in reading, which can be ascribed to several factors such as too little reading practice, and/or poor reading instruction. In this regard, Alemu (2004, p.252) concludes, "...teachers still adhere to the traditional language teaching procedures." Besides, Bekele (2007), in his study of the relationship between first year English major students' preparatory school performance, college entrance exam scores, and gender and communicative English performance, showed that students were not able to clearly communicate in English.

Experiences tell us that one of the most pervasive educational problems baffling most of the teachers, educators, researchers, and others concerned seems to be college students' poor English language performance. Regrettably, even English, Amharic, and journalism majors, who are expected, on the basis of common

sense and experience, to have good English language skills compared to other subject area majors (for example, geography, or history majoring students), are deficient in their language proficiency including reading skills. Hence, it is now common to hear complaints from instructors that most students do not have reasonable English language skills. Different employing organizations (in Ethiopia) also complain that most recent graduates are not good at communication in English for different reasons. One of the major reasons for students' low level of foreign language proficiency seems to be the fact that students do not use various language learning techniques and strategies; however, there is adequate evidence of this.

It could be argued that use of learning strategies in general and self-regulated learning strategies in particular could contribute a lot to the teaching/learning of

English as a foreign language given that self-regulation of learning, as Zimmerman (1994) asserts, makes students active and responsible participants in the teaching learning process. But skills of self-regulation seem to have been missing facets of approaches to English language education. It could not also be unfair to say that self-regulated learning strategies have received very little attention from foreign language teachers and researchers, especially in the Ethiopian context.

Above all, even though self-regulated learning strategies, as Pintrich and De-Groot (1990) state, are believed to contribute to students' academic achievement, there is no evidence of the effects of self-regulated learning strategies to critical reading skills of students in general and distance learners in particular. This study is, therefore, devoted to investigating the effect of self-regulated learning strategies on achievement in critical reading in the context of learning English as a foreign language among distance education learners. To this end, the following research questions have been designed:

1. Are the variables (self-regulated learning strategies and critical reading) significantly interrelated?
2. What is the independent and group effects of self-regulated learning strategies on achievement in critical reading?
3. Which of the self-regulated learning strategies is the best predictor of achievement in critical reading?

LITERATURE REVIEW

The role of self-regulated learning (strategies): An overview

Self-regulated learning strategies can be defined in different ways by different scholars, but most of the time they are defined similarly, or with very little differences. For example, self-regulated learning strategies could be defined as techniques through which learners participate in the process of active learning and take responsibility for encouraging themselves to understand materials they deal with, to accomplish tasks, to monitor what they do, to assess their strengths and weaknesses, and to take corrective actions based on self evaluation reports (Good and Brophy, 1995). In a similar fashion, but with slight differences, Pintrich (2000:453) explains self-regulated learning as "an active and constructive process whereby students set goals for their learning, and then try to monitor, regulate, and control their cognition, motivation, and behavior guided and constrained by their goals, and the contextual features in the environment". This definition interestingly parallels Zimmerman's (2000) definition of self-regulated learning that puts emphasis on the interaction of three major elements: (a) personal regulation strategies, which refer to goal setting,

planning, transforming information, keeping records, controlling emotion etc., (b) behavioral self-regulation strategies that mainly takes into account the process of self observation, self evaluation, task analysis, questioning, self feedback and modifying performance, and (c) environmental self-regulation strategies that mainly involve analyzing learning context, asking others for help, seeking information for different sources, and making adaptations in a way that optimizes performance.

In short, Schunk and Zimmerman (2003) noted that while variations on the social cognitive conception of self-regulated learning exist, most scholars suggest that it should be taken as an interactive process in which the learner formulates the desired learning objective, monitors progress, and regulates cognitive, behavioral, and environmental challenges, so as to make learning consistently effective and fruitful. In relation to this, it is remarked that self regulation refers to individuals' active involvement in such different learning activities as designing goals; monitoring and evaluating their progress; and when necessary adjusting their strategies for meeting their goals (Bandura, 1986, 1991; Schunk, 2001; Zimmerman, 2001). To exemplify, suppose a student who has planned for a grade of 'A', but comes to understand during the semester that his or her current methods or strategies of studying and learning are unlikely to yield a high grade. If this student is devoted to do better or to meet her/his goal, s/he might self regulate by spending more time and effort studying the course, seeking assistance from teachers, or using other productive strategies and /or methods. These self regulated learning strategies may boost the student's probability of achieving his or her goal.

A recent study by Bergin et al. (2005) explored the link between use of self regulated learning strategies and academic achievement, and they came to conclude that there exists positive relationship of students' use of strategies, such as metacognitive strategies and resource management strategies to academic achievement. In other words, those who frequently used the learning strategies were able to accomplish tasks more successfully compared to those who rarely use the strategies. In this regard, it was reported that 45% of the variance in academic achievement was accounted for by the use of self regulated learning strategies (ibid).

Likewise, some previous studies (Pintrich and De Groot, 1990; Zimmerman and Martinezpons, 1986, cited in Wolters, et al., 1998) noted that students, who were self regulated learners, were found successful in achieving their academic goals, owing to self-regulated learning strategy employment. Highly successful students not only reported greater use of personal self regulated strategies, such as rehearsing and memorizing, but also behavioral self regulated learning strategies, for instance, task analysis and self evaluation (ibid). In sum, students' self-regulated learning strategies that they employ were found to be predictive of their performance on standardized

Table 1. Mean, Standard deviations, and correlations of the variables in the study (N=140).

Variable	M	SD	1	2	3	4
1.PSRLS	22.95	7.03	1			
2.BSRLS	13.06	3.59	.67**	1		
3.ESRLS	9.61	1.84	.42**	.38*	1	
4.CR PER	44.97	9.81	.51**	.63**	.41**	1

*p<.05(two-tailed), **p<01 (two-tailed)

Note. PSRLS = personal self-regulated learning strategies, BSRLS = Behavioral self-regulated learning strategies, ESRLS = Environmental self-regulated learning strategies, CR PER = critical reading performance.

tests (Zimmerman, and Martinzpons, 2004).

METHODS

Research design

The study depends on correlation research design that focuses on showing the correlation among the major variables in question.

Participants

The study depended on distance education English majors taking critical reading course in the Humanities faculty of Bahir Dar University. Using simple random sampling technique, 140 participants were selected from the subjects of the study. There were 56 females and 84 males involved in the study. All members of the sample had a middle socio-economic status, and their age ranged from 24 to 36.

Instruments

Self-regulated learning strategy use scale: This indicator is a rating scale adapted to assess students' use of self-regulated learning strategies (Chan and Youlden, 1992, cited in Cole and Chan, 1994). There are 24 items, each describing a student using one of the Zimmerman's (1989) self-regulated learning strategies. After each description, respondents are required to rate the strategy on a 5-point scale in terms of how often they employ that strategy. Ratings on the items were divided into three sub scores reflecting the uses of personal self-regulated learning strategies consisting of 13 items, which could result in a maximum score of 65 and a minimum score of 13; Behavioral self-regulated learning strategies consisting of 6 items, which could result in a maximum score of 30 and a minimum score of 6; and environmental self-regulated strategies consisting of 5 items, which could result in a maximum score of 25 and a minimum score of 5.

To make the items clearer to the subjects, the items were adapted and rephrased, and then pilot-tested. Moreover, the reliability of the scale was calculated on the basis of usage total score and found to be .91.

Critical reading test: This test is intended to measure students' critical reading skills. Hence, the major characteristics of tests (for example, practicality, validity, reliability etc.) were taken into consideration in preparing the reading test. Besides, the test items were given to two instructors who are experienced in teaching and testing reading skills for evaluation. Moreover, based on the given

comments, the tests items were modified. The modified tests were administered, as indicated before, to evaluate students' critical reading performances. The reliability of the test was calculated and found to be .88.

Methods of data analysis

First, descriptive statistics such as means and standard deviations were calculated and presented in order to provide readers with an overview of the findings. Then, the interrelationships of the variables under study were calculated using Pearson product moment correlation coefficient. Finally, to examine the independent and group effects of the predictors in projecting student's performance in critical reading, multiple regression analysis was applied.

FINDINGS AND DISCUSSION

Findings

In this section, there are two tables that show the results of data analyses. Specifically, the first table shows the means, standard deviations, and correlations of the variables treated, and the second table displays the outputs of the multiple regressions.

As indicated in Table 1, the mean scores of students' use of personal self-regulated learning strategies (22.95), behavioral self-regulated learning strategies (13.06), environmental self-regulated learning strategies (9.61), and critical reading performance (44.97) are found to be below average. This seems to show that most of the students' scores in the stated variables are less than the expected scores.

It also seems clear from Table 1 that the relationships of the variables to one another are significantly positive. Most importantly, the uses of all of the three aspects of self regulated learning strategies are found to have significantly positive relation with critical reading performance. And these positive relations possibly imply that an increase in one of the independent variables is likely to show an increase in the dependent variable.

The multiple regression results displayed in Table 2 show that 52% of the variances in students' critical reading performance is accounted for by the predictors, namely, use of personal self-regulated learning strategies, behavioral self regulated learning strategies, and that of environmental self regulated learning strategies ($R=.71$, $R^2=.52$, $F_{(3,136)}=361.16$, $p<.00$).

The output of the multiple regression on the independent effect of each of the variables showed that all of the predictors, namely, use of personal self regulated learning strategies ($\beta=.27$, $t=8.08$, $p<.00$), behavioral self regulated learning strategies ($\beta=.34$, $t=9.08$, $p<.00$) and that of environmental self regulated learning strategies ($\beta=.23$, $t=4.74$, $p<.01$) were found to be significant predictors of critical reading performance. However, the use of behavioral self regulated learning strategies is

Table 2. Regression on the independent and group effects of uses of PSRLS, BSRLS, and ESRLS on critical reading performance (N=140).

$R^2 = .52$	Variable	SEB	Beta	T	Sig T
Standard error=2.74	PSRLS	.04	.27	6.82***	.00
F= 362.16	BSRLS	.06	.34	7.26***	.00
Sig F=.00	ESRLS	.02	.23	4.07**	.01

P<.01, *P<.00.

found to be the best predictor of students' performance in critical reading.

Discussion

As clearly depicted in Table 1, all of the variables treated in the study were found to be significantly associated with each other. To illustrate, use of personal self regulated learning strategies was found to be a significant correlate of behavioral self regulated learning strategies ($r=.67$, $p<.05$), ESRLS ($r=.46$, $p<.01$), and critical reading performance ($r=.21$, $p<.05$). These findings seem to agree with the results of most studies conducted on self regulated learning and its significant effect of academic achievement. Bekele's (2013) study on the effect of self-regulated learning on speaking efficacy and performance is a case in point. Table 1 also shows that, the relationships of behavioral self regulated learning strategies to environmental self regulated learning strategies ($r=.38$, $p<.05$) were found to be significant. This significant correlation of the two predictors could be attributed to the nature of the variables. Since both of them are major facets of self-regulated learning strategies, they are likely to share some common elements that are likely to produce relationships between the two variables. Most importantly, the relationship between use of behavioral self regulated learning strategies and critical reading performance was found to be strongly significant ($r=.63$, $p<.01$). Besides, the link between use of environmental self-regulated learning strategies and critical reading performance ($r=.41$, $p<.01$) was found to be significant.

From the results, one can understand that uses of self-regulated learning strategies are significant correlates of critical reading performance. This result is in agreement with the assumption that self-regulated learning strategies enhance one's academic performance (Zimmerman and Martinezpons, 2004).

In the process of examining the independent contribution of each of the variables treated as predictors of critical reading, as depicted in Table 2, use of behavioral self regulated learning strategies (for example, self-evaluation, task analysis, questioning, and self-feedback) was found to be the best predictor of critical reading performance, because it was found to account for 34%

of the variances in students' critical reading performances ($\beta=.34$, $t=7.26$, $p<.01$). Use of personal self-regulated learning strategies (for example, goal setting, planning, keeping records, organizing and transforming information) was also found to be a good predictor of critical reading performance ($\beta=.27$, $t=6.82$, $p<.00$). In other words, 27% of the variances in critical reading performance are accounted for by personal self regulated learning strategies. This result agrees with the research findings of various studies; for instance, Harris et al (2011), maintained that self-regulated learning strategies determine, to a great extent, performances in writing tasks. Similarly, use of environmental self-regulated strategies ($\beta =.23$, $t=4.02$, $p<.01$) significantly contributed to students critical reading performance, and thus it seems that the use of each of the three groups of the self regulated learning strategies plays a significant role in projecting students' performance in critical reading tasks.

The group effects of the self-regulated learning strategies were found to account for 52% of the variances in students' critical reading performance ($R=.52$, $F_{(3,136)} = 30.33$, $p<.00$), and therefore, this result seems to inform that it is very important to take actions that could enhance uses of self-regulated learning strategies, which could in turn contribute a lot to the development of critical reading skills. This finding is similar to the findings of previous studies (for example, Pintrich and De Groot, 1990; Zimmerman and Martinezpons, 1986, cited in Wolters, et al., 1998) that conclude, highly successful students use not only personal self regulated strategies, such as rehearsing and memorizing, but also behavioral self regulated learning strategies, for instance, task analysis and self evaluation. In sum, students' self-regulated learning strategies were found to be significant predictors of their achievement in standardized tests (Zimmerman, and Martinzpons, 2004).

CONCLUSION

It is evident that students' self-regulated learning strategies predict their performances in critical reading tasks. This seems to be an indication of the need to pay attention to these predictor variables if students are to improve their critical reading skills.

The results seem to imply primarily that distance education material developers need to be concerned with not only the selection of relevant contents of critical reading course but also the integration of self-regulated learning strategies.

Given that self regulated learning strategies are significant predictors of performances in critical reading, students and tutors should place a balanced emphasis on use of self regulated learning strategies for different purposes.

Above all, it seems also worth designing projects that could be of great help to facilitate the development of

students' self-regulated learning strategies, which are likely to help students improve their critical reading skills.

REFERENCES

- Alemu H (2004). An Evaluative Study of ELT Practices in Secondary Schools in Ethiopia. 1994-2004. PhD Thesis. Central Institute of English and Foreign Languages. India.
- Bandura A (1991). Self Regulation of Motivation Through Anticipatory and Self reflective Mechanisms. In: Dienstbier R (Ed.). Nebraska Symposium on Motivation. 38, pp.69-164. University of Nebraska Press. (1986). Social Foundations of Thought and Action: A social Cognitive Theory. Englewood Cliffs, NJ: Prentice Hall.
- Bekele B (2013). Enhancing Self-regulated Learning in teaching Spoken Communication: Does it Affect Speaking efficacy and Performance. *El. Jour. F. Lang. Teach.* 10, 1, pp. 96-109.
- Bekele B (2007). The Relationship between First Year English Major Students' Preparatory School Performance, College Entrance Exam Scores, and their Gender and Communicative English Performance: Bahir Dar University in Focus. *E. J. Educ.* 27(2):65-90.
- Bergin S (2005). Examining self regulated learning on introductory programming performance. Proceedings of the 1st international workshop on computing Education Research. <http://doi.acm.org/10.1145/1089786.10897994>.
- Chan KS, Youlden AJ (1992). The Self Regulated Learning Strategies Scale. New Castle, Australia: The University of New Castle. Cited in Cole and Chan, 1994.
- Good T, Brophy J (1995). *Cont. Educ. Psycho. USA*: Longman.
- Harris K (2011). Self-regulated Processes and Children's writing. In: Zimmerman BJ and Schunk DH (Eds.), *Handbook of self-regulation of Learning and Performance* pp.187-202. New York: Taylor and Francis.
- Pintrich PR, De Groot EV (1990). Motivational and Self-regulated Components of Classroom Academic Performance. *J. Educ. Psychol.* 82:33-40.
- Pintrich PR (2000). The role of Goal orientation in self-regulated learning. In: Boekaerts M, Pintrich PR and Zeidner M (eds.). *Handbook of self regulation*, San Diego, California: academic press.
- Schunk DH, Zimmerman BJ (2003). Self Regulation and Learning. In: Reynolds WM and Miller GE (Eds.) *Handbook of Psychology*, pp. 59-78. New Jersey: John and sons Inc.
- Schunk DH (2001). Social Cognitive Theory and self regulated learning. In: Zimmerman BJ and Schunk DH (Eds.), *Self regulated Learning and Academic Achievement: Theoretical Perspectives* pp.125-151. Hillsdale, NJ: Erlbaum.
- Zimmerman B (2000). Attaining Self-regulation: a Social Cognitive Perspective. In: Boekaert M, Pintrich PR and Zeidner M (eds.). *Handbook of Self Regulation*. San Diego, California: Academic Press.
- Zimmerman B (1994). Dimensions of Academic self regulation: A Conceptual Framework for Education. In: Schunk DH and Zimmerman BJ (eds.), *Self Regulation of Learning and Performance: Issues and Educational Applications*, pp.3-21. Hillsdale, NJ: Erlbaum.
- Zimmerman B (1989). A social cognitive View of Self Regulated Academic learning. *J. Educ. Psychol.* 81(3):329-339.
- Zimmerman BJ, Martinez-pons M (2004). Pursuing Academic Self Regulation: a 20-Year Methodological Quest. In: Ee J, Chang A and Tan O (eds.). *Thinking about Thinking: What Educators Need to Know*. Singapore: Mc Graw Hill.
- Zimmerman BJ, Martinez-pons M (2001). Achieving Academic Achievement: A Self regulatory Perspective. In: Boekaerts M, Pintrich PR and M. Zeidner (eds.), *Handbook of Self-regulation* pp.451-501. San Diego, CA: Academic Press.
- Zimmerman BJ, Martinez-pons M (1986). Development of Structured Interview for Assessing Student use of Self Regulated learning Strategies. *Am. Educ. Res. J.* 23:614-628.