

The Effect of Self-Regulated Learning Strategies and Self-Efficacy on Academic Achievement of Primary School Students

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Abstract: A random sample of 169 students (42 males and 127 females) taken from Degol primary school participated in this study. Data were collected using different scales to assess the predictive powers of self-efficacy, self-regulation, and cognitive strategy use to academic achievement. Correlational analysis revealed that all the relationships were significant and in the expected directions. The multiple regression analysis evidenced that self-efficacy, self-regulation, and cognitive strategy use variables jointly explained 44.8% of the variances in academic achievement. The result of stepwise regression analysis (forward method) suggested that the only significant predictor variable to academic achievement of primary school students was self-efficacy. Self-regulation and cognitive strategy use were not found to be significant predictors of academic achievement. Finally, suggestions that may help alleviate the problem were forwarded.

Keywords: Self Regulation, Self Efficacy, Primary School, Academic Achievement, Student, Strategy Use

1. Introduction

Provision of quality primary education for all school aged children is the basic goal of many countries, including Ethiopia. The ministry of education has formulated and disseminated a new education and training policy in 1994. This policy demanded, among other things, providing good quality primary education as a first step to achieve universal primary education by 2015. Hence, due attention is given to the reform in the structure of education system to make education and training responsive to the country's development strategy.

Because schools are primarily responsible for the realization of the policy, curriculum reforms have been made since the formulation of the policy. The previous (the Dergu regime) curricula revision of 6-2-4 to 8-2-2 (or better 4-4-2-2) kind is implemented. That means students attend 8 years of primary education divided into two cycles, each lasting 4 years. These two cycles are considered components of basic education. It is assumed that these reforms and alterations are in harmony with the aims of the education and training policy.

In response to these concerns school improvement efforts have proliferated, aimed at many aspects of the educational system such as school structures, organization, governance,

and leadership; family and community involvement; as well as curriculum content. While all of these initiatives are important, many have been undertaken leaving some basic assumptions that have not been sufficiently informed by current understandings of factors affecting students learning.

For example, the effect of learners' Metacognitive skills and achievement beliefs were not given due concern. Without such a focus, reform efforts may run the risk of merely reforming again and again, focusing on the surface structures of schooling but leaving the central problems untouched.

Studies which provide the existence of teaching-learning problems in primary schools seem to suggest that students' academic performance is influenced by multitude of factors such as classroom teaching approaches [47], students' self efficacy beliefs [27], [28],[43], [46], [49] and students' Self-Regulated Learning strategies [1],[29],[30], [44], [45],[61].

Bandura defined Self-efficacy as a person's judgment of his/her capabilities to complete a specific task with the skills he/she possesses [6] and is usually described as being task-specific [42]. Similarly, Dembo [12] indicated that students' performance motivation is influenced by the level of their self-efficacy.

Self-efficacy is a vital process involved in self-regulation and is affected by the features of the classroom [43]. Students

generate self-efficacy judgments for specific classroom tasks, and these beliefs vary as a function of tasks or classroom features [35].

Another important variable is learner's Self-Regulated Learning Strategy (SRLS). Self-regulated learning strategy (SLRS) is recognized as an important predictor of student academic motivation and achievement. This process requires students to independently plan, monitor, and assess their learning. Nevertheless, a small number of students naturally do this well.

Recent research findings on the area has documented that Self-regulation is essential to the learning process [64]. It can help students create better learning habits and strengthen their study skills [56], apply learning strategies to enhance academic outcomes [22], monitor their performance [22], and evaluate their academic progress [9]. Teachers thus should be familiar with the factors that influence a learner's ability to self-regulate and the strategies they can use to identify and promote self-regulated learning (SRL) in their classrooms.

In line with the above ideas, various researchers noted that self-regulated learners willingly suggest answers to questions ([17], and search for additional resources when needed to master content [11]. Most importantly, self-regulated learners also operate their learning environments to meet their needs [23]. Self-regulated students are more engaged in their learning. These learners usually seat themselves toward the front of the classroom [24].

Self-regulated learning is controlled by an organized framework of factors that determine its development and sustainability [5], [33] and motivation is a critical factor in this framework [50]. For example, students' efficacy beliefs-their confidence in their ability to successfully complete tasks-play a role, especially during the forethought and planning and performance monitoring phases [62]. Research has found self-efficacy and the use of self-regulation strategies to have reflexive positive impacts on one another. Higher self-efficacy beliefs increase the use of self-regulation strategies [26] and the use of self-regulation strategies can lead to increases in self-efficacy beliefs and academic achievement [67]. In line with the above idea, researchers such as Ellis [18], Schunk [41], and Zimmerman and Martinez-Pons [67] noted that self regulated learning strategies and Self-efficacy are very much related to each other and are predictive of students' academic achievement.

From the above findings, it may be possible to conclude that enhancing students' self-regulated learning strategies and self-efficacy beliefs may be vital to their learning process and should be included in classroom teaching approaches.

Many researchers in the field propose that in order to endorse self-regulated learning in classrooms, teachers have to teach students the self-regulated processes that assist learning. These processes frequently include: goal setting [54], planning [63], self-motivation [55], attention control [21], flexible use of learning strategies [48], and self-monitoring [10].

This study therefore was designed to provide a description of the current levels of primary school students' self-efficacy

beliefs and self-regulated learning strategies and to study how these constructs are related to primary school students' academic achievement.

1.1. Self-Regulated Learning Strategies and Self-Efficacy: An Academic and Policy Framework on the Early Years

There is growing evidence that a broad set of skills in the early years contributes to adjustment in school and subsequent academic performance. Among these, self-regulation strategies and self-efficacy encompass a key set of capabilities, which are recognized in policy design.

For example, Anderson [3] has shown that the early childhood years are important for the development of self-regulation abilities such as attention, inhibition and working memory and these early skills provide the foundation for positive classroom behavior [7].

In line with the above findings, Prey [31], reported that not only are young children able to regulate their own engagement in learning, but it is also possible to foster these skills during the early years, with positive benefits for their academic self-belief and achievement [19]. The acquisition of these skills can have long-lasting effects. For example, Alexander et al [2] have examined the relationship between early classroom adjustment and school performance and found that the child's interest and active participation in classroom activities, as well as good attention spans, were positively associated with subsequent attainment in reading and mathematics tests.

The research result of Liew et al [25] is also consistent with the view that early self-regulatory abilities and skills will foster academic competence as well as school-related confidence in the early school years. Their results support the belief that early efforts to promote children's self-regulatory capabilities would enhance future academic self-beliefs and achievement [19].

Researchers such as Eccles et.al [16] and Wigfield and Eccles [53] have become into consensus that as children mature cognitively, they become better at regulating their behavioral investments according to their interests and consequently, [13], and the relationship between elements of self-regulation-such as interest, motivation, effort, self-competency beliefs – and task-choice becomes increasingly complex.

Zimmerman, Bandura, and Martinez-Pons [65] also reported that as with earlier years, self-regulated learners make greater use of learning strategies and achieve better than do learners who make little use of self-directed learning strategies. Zimmerman[59] found that skilled self-regulated learners exhibit a high sense of efficacy in their capabilities; this influences the knowledge, skill, and goals they set for themselves, along with their commitment to fulfill these challenges [59]. Research here similarly demonstrates that students with a high sense of academic efficacy display greater persistence, effort and intrinsic interest in their academic learning and performance [40].

With regard to self-efficacy, Pajares and Valiante [28]

stated that the beliefs that young people hold about their endeavors are vital forces in the subsequent success or failures they attain in these endeavors. They added that, these self-efficacy beliefs provide the foundation for motivation, well-being, and personal accomplishment in all areas of life. This is because unless young people believe that their actions can produce the results they desire, they have little incentive to act or to persevere in the face of the difficulties that inevitably ensue.

One of the hallmarks of research into self-regulated learning is a focus on self-concepts, motivational feelings and beliefs, as well as on learning strategies and Metacognitive skills (i.e. the knowledge and control that individuals have over their own thinking processes). For example, Zimmerman [60] has urged researchers to expand their view of self-regulation beyond Metacognitive knowledge and skill, to encompass 'an underlying sense of self-efficacy and personal agency and the motivational and behavioral processes to put these self beliefs into effect [60]. Self-regulation is therefore not just concerned with 'thinking skills' in a narrow sense; it also encompasses questions about the role of emotion, motivation and self-concept in learning.

In sum, High self-efficacy may lead to more positive learning habits such as deeper cognitive processing, cognitive engagement, persistence in face of difficulties, initiation of challenging tasks, and use of self-regulatory strategies [33]. At any level of ability, students with high perceived self-efficacy are more successful in school activities and use more effective learning strategies [60], [45]. More specifically, students who believe that they are capable of performing academic tasks tend to use more cognitive and Metacognitive strategies for achieving learning objectives and persist longer than those who do not hold such positive beliefs [57]. Strategic action to effectively monitor and regulate learning and problem solving processes is considered as an essential component of self-regulated learning and it is critical for successful performance [52].

The researcher believed that a growth in the capacity for any or all of these skills is likely to increase the time during which children are engaged and participating in academic endeavor. And children who are engaged, interested and paying attention spend more and higher-quality time on learning-related tasks. It is therefore not surprising that there is a growing level of policy interest in these areas.

1.2. What Strategies can be used to Improve Self-Regulation and Self-Efficacy?

Research shows that Self-regulation can be improved through appropriate guidance, modeling of effective strategies and creating supportive and challenging contexts [32]; engaging in challenging and collaborative learning experiences and making their own decisions [19]. Many of these strategies develop from early childhood well into adolescence [8].

Classrooms high in self-regulated learning practices are those in which teachers engage students in complex, open-ended activities, involving them in evaluating their own and

others' work [31], [32].

Teachers in these classrooms ensure that students acquire both the subject and strategy knowledge needed to complete tasks independently. Teachers encourage the pursuit of more challenging goals, and present errors as important opportunities for learning. Continuity between children's home and school learning environments is important.

Students in learning classrooms which emphasize self-regulation exhibit high levels of concentration and attitudes directed towards educational and personal progress [11]. Even low-achieving students exhibit relatively high self-efficacy – they believe that they can learn and improve, and they do not shy away from the more challenging tasks. On the other hand, in classrooms where teaching practice largely involves simple, closed activities, focusing on a narrower range of skills, low-achieving students actively avoid challenging tasks and reveal perceptions of low ability [34].

From the above findings, it may be possible to conclude that home and school are the primary settings in which self-efficacy beliefs and self-regulation strategies are developed and maintained, and the use of these strategies and beliefs are intimately connected both with social and academic success and with the positive self-beliefs that accompany success.

So far, attempts have been made to show the effect of such variables on students' academic achievement. However, most of the existing studies that examine the relationship between the above mentioned studies and students' academic achievement are comprised of adolescents [37], or college students career choice [38]. Equally attention seeking factors are effect of primary school students' Self-regulation learning strategies and self efficacy beliefs that might imply a positive or negative outcome in the teaching learning process. However, there is a paradox that there had been very little study of primary school students' Self-regulation strategies and self-efficacy beliefs related to their academic achievement. The situation in my country, Ethiopia, is even very surprising as the researcher hardly comes across any local work on primary school students' self-regulation learning strategy and self-efficacy contribution to their academic performance.

In the light of the above arguments and the fact that no research of this kind has been made on our school system, the assessment into self-regulation strategies and self-efficacy beliefs seems in order. This study is therefore, designed to investigate contribution of self-regulation strategies and self-efficacy beliefs on primary school students' academic achievement.

Researchers recommend that if we are to develop models of student motivation and self-regulated learning that are relevant for much of the academic work in classrooms, then it is important to examine these variables in relation to primary school students' academic performance [35].

This study, therefore, is intended to examine whether self-regulation strategies and self-efficacy beliefs contribute to primary school students' academic achievement. Accordingly, the following questions were developed:

1. Are there significant Intercorrelations among Self-

regulated learning strategies, self-efficacy, and academic achievement of primary school students?

2. Do Self-regulated learning strategies and self-efficacy variables predict primary school students' academic achievement? If so, which independent variable(s) has /have the highest predictive value?

The answers to these questions, it is hoped, would provide additional evidence in the Self-regulated Strategies and self-efficacy research literature and promote the development of a comprehensive view on the benefits of academic Self regulated strategies and self-efficacy beliefs. Schools at large and teachers and parents in particular could also get the chance to look into their practices and make necessary improvements based on the findings. Above all, the study would help to break the ice and initiate other research work and discussion on the issues in my country, Ethiopia.

2. Methods

2.1. Participants

The subjects of this study were grade 8 students randomly selected from a large population of Degol primary school in Wereda Raya Azebo. A total of 180 questionnaires were distributed. Out of this 169 questionnaires were properly completed and returned. One student didn't indicate her/his sex. 9 students did not fill the questionnaire appropriately and were avoided. Therefore, 169(42 males and 127 females) students were included in the study.

2.2. Instruments

Self-report items were adapted from Pintrich and DeGroot [34] and developed by different researchers used to assess student academic self-efficacy beliefs and self-regulated strategies.

Three measures were employed in this study. The first one is the "self-efficacy scale used to measure the general academic self-efficacy beliefs of primary school students" developed by Eccles [15], and Schunk [39]. It was used with little modifications on its direction and scaling. It contains 9 items. Its reliability, according to chrombach alpha, was 0.89. Answers were given on a 5-point scale from 1 (Not at all true for me) to 5 (Totally true for me).

The second measure, known as "self regulated learning strategies" which contains two cognitive scales (cognitive strategy use and self-regulation) was developed by Eccles [15], Harter [20], and Weinstein, Schulte, and Palmer [51].

The cognitive strategy use scale consists of 13 items with a reliability of 0.83 pertaining to the use of rehearsal strategies (e.g., "When I read material for science class, I say the words over and over to myself to help me remember"), elaboration strategies such as summarizing and paraphrasing (e.g., "When I study for this English class, I put important ideas into my own words"), and organizational strategies (e.g., "I outline the chapters in my book to help me study").

Another scale, called self-regulation, consists of 9 items with reliability of 0.74 was constructed from Metacognitive

and effort management items. The items on Metacognitive strategies, such as planning, skimming, and comprehension monitoring (e.g., "I ask myself questions to make sure I know the material I have been studying," "I find that when the teacher is talking I think of other things and don't really listen to what is being said," and "I often find that I have been reading for class but don't know what it is all about,") were adapted from Weinstein, Schulte, and Palmer [51] and Zimmerman and Martinez-Pons[66]. Effort management strategies were adapted from Zimmerman and Martinez-Pons [66] and included students' persistence at difficult or boring tasks and working diligently (e.g., "Even when study materials are dull and uninteresting, I keep working until I finish" and "When work is hard I either give up or study only the easy parts,"). Answers were given on a 5-point scale from 1 (I never do it) to 5 (I always do it).

The third measure is academic achievement. This variable signified students' academic achievement for the year 2013/14 first semester exam. It is a combination of scores taken out of 100% that students obtained in classroom tests and assignments for each subject. It was determined by averaging all academic achievements of the semester scores. Normally, the range of scores is from 0-100%. All students in the primary school take the same number of exams and the same subject matter with no elective course. All the teachers in the school used an individualistic, criterion-referenced system that allowed all students the possibility of receiving a 100 on an assignment or exam (i.e., none of the teachers used an explicit "grading curve" to assign grades). All the three achievement scores (tests/ quizzes (30%), assignments (20%), and the semester grades (50%) were summed and converted to a percentage figure for each child before data analysis. The exam results were collected from the students' roster.

2.3. Procedures of Data Collection

Participants were instructed to read and fill-in the questionnaires carefully. Both questionnaires were administered as the participants received their final exam results. This helped to get better information about the 'fresh' impressions the students had about their results. The instruments were presented in their mother tongue (Tigrigna) in order to avoid language difficulties on the part of the respondents as the medium of instruction in the primary schools of Ethiopia is given by their mother tongues. The translated questionnaires were edited by language experts in the field.

2.4. Data Analysis Techniques

After the data were collected, correlation analysis was performed to examine the simple relationship between the variables. To investigate the joint (composite) contributions of the causal variables linear regression analysis was employed. Finally, to identify the best predictor from among this group of variables (i.e., self-efficacy, self-regulation, and strategy use), a stepwise regression analysis (forward method) was run.

3. Results

Table 1. Descriptive statistics and Intercorrelations among the variables treated ($N = 170$).

Variables	Mean	SD	1	2	3	4	5
1 Sex							
2 SE	143.572	29.599	-0.269**				
3 SRS	183.094	42.193	-.0143	0.788**			
4 CSU	102.572	21.609	-0.277**	0.778*	0.825**		
5 Ach	150.124	32.578	-0.120	0.772**	0.680**	0.706**	

** $P < 0.001$ level (2-tailed), sex code = 0 for female & 1 for male

The correlation among the variables revealed that sex related significantly and negatively with self-efficacy (SE) and cognitive strategy use (CSU). The other variables did not relate with sex. This represented that the females more than males tend to perceive that they have high self-efficacy beliefs about their achievements and are good in cognitive strategy use during their primary schools. The Intercorrelations among the variables viz., self-efficacy (SE),

self-regulation strategy (SRS), cognitive strategy use (CSU), and academic achievement (Ach) were significant and in the expected direction. High correlations were observed among all the variables.

To investigate the consistency of the relationships among the variables, further analysis was conducted for each sex group independently. The results in Table 2 showed astonishingly similar patterns for male and female students.

Table 2. Summary Statistics and Intercorrelations for Female ($n = 42$) and Male ($n = 127$) Students.

Variables	Female		1	2	3	4	Male	
	Mean	SD					Mean	SD
1. SRS	193.857	41.121		0.707	0.833	0.66	179.961	42.021
2. SE	157.501	30.173	0.701		0.714	0.761	139.110	28.131
3. SU	111.192	22.691	0.799	0.896		0.642	99.858	20.595
4. Ach	156.929	33.721	0.710	0.810	0.865		147.913	32.137

$P < 0.001$, the values under the diagonal are for female students

Since simple association and/or correlation do not show the variables that predict or influence a criterion variable, a multiple regression analysis was carried out. The criterion variable was academic achievement and the predictor

variables were self-efficacy (SE), cognitive strategy uses (CSU), and self-regulation (SR). The results in Table-3 showed that the variables jointly explained 44.8% of the variance in academic achievement ($R = 0.669$, $R^2 = 0.448$).

Table 3. Multiple Regression analysis of the effect of SE, CSU, and SR on Academic Achievement.

Variables	b	Std.error	Beta	t	P	
Constant	0.450	0.519		0.867	0.387	$R = 0.669$
SR	-0.001	0.003	-0.056	-0.473	0.637	$R^2 = 0.448^*$
SE	0.466	0.062	0.516	7.565	0.000	Adj. $R^2 = 0.424$
CSU	-0.001	0.006	-0.010	-0.084	0.933	

* $F = 18.800$, $df_1 = 3$, $df_2 = 165$, $P < 0.0001$

To identify the best predictor from among this group of variables, a stepwise regression analysis (forward method) was run. The only significant predictor of academic

achievement was found to be Self-efficacy, which accounted for 44.2% of the variance. The other values did not reach the level of significance. The results are presented in Table 4.

Table 4. Stepwise regression analysis of Academic Achievement.

model	Variables	b	Std.error	Beta	t	P	R	R^2	ΔR^2
1	SE	0.572	0.054	0.633	10.603	0.000	0.633	0.401	0.401*
2	SE	0.474	0.059	0.525	8.023	0.000	0.665	0.442	0.041*
	SR	0.008	0.002	0.230	3.514	0.001			

* $F = 112.44$ ($df_1 = 1$, $df_2 = 166$), $P < 0.0001$; ** $F = 12.351$ ($df_1 = 1$, $df_2 = 166$), $P < 0.001$

The effect of self-efficacy was strong ($Beta = 0.525$) compared to the self regulation's effect on academic achievement. This can be further evidenced by the amount of variance accounted for by the two variables, 40.1% (or 90.72

or R^2) was the share contributed by self-efficacy. Self regulation explained only 4.1% of the variance in academic achievement.

4. Discussion

The purpose of this study was to explore, in a sample of eighth grade students, the extent to which academic self-efficacy beliefs, self-regulation, and Cognitive strategy use may have resulted in affecting the academic achievement of primary school students. Descriptive statistics in Table 1 revealed that sex related significantly and negatively with self-efficacy and strategy use. The other variables did not relate with sex. This represented that the females more than males tend to perceive that they have high self-efficacy beliefs about their achievements and are good in cognitive strategy use during their primary schools. This result is in harmony with those reported by many researchers [15]. Students hold expectations for their school performances that influence their academic motivation. Most children entering primary school have high expectations for success. During the early elementary school years, girls surpass boys in mathematics achievement. When asked how they will do on a task, most elementary school children assume that they will do very well [36]. This finding highlights the importance of students' self-perceptions of competence as mediators between the environmental context and actual achievement behavior.

Correlational results on the other hand indicated that there is a complex interplay between students' sense of personal efficacy in academic achievement, their self-regulation, and their cognitive strategy use when dealing with their academic learning.

Specifically, it has been demonstrated that students' self-efficacy was closely related to the self-regulatory strategies in academic learning. This finding is consistent with previous research showing that students who believe they are capable of performing academic tasks tend to use more cognitive and Metacognitive strategies for achieving learning objectives and persist longer than those who do not hold such positive beliefs [33]. The present study also showed that students' self-efficacy regarding academic learning was more closely related to the strategy use concerning Metacognition and Reflection. This finding resembles previous research findings illustrating that students' self-efficacy is significantly related to critical thinking, and Metacognitive self-regulation in traditional classrooms [34] and [62]. Thus the first research question of the study concerning the positive relationship between students' self-efficacy, self-regulation, and cognitive strategy use in academic achievement has been confirmed by the results of the study.

Since simple association and/or correlation do not show the variables that predict or influence a criterion variable, a multiple regression analysis was carried out. The criterion variable was academic achievement and the predictor variables were self-efficacy (SE), cognitive strategy uses (CSU), and self-regulation (SR). The results in Table-3 showed that the variables jointly explained 44.8% of the variance in academic achievement ($R = 0.669$, $R^2 = 0.448$).

In this research it was also found that self-efficacy predicted significantly students' academic achievement. As

indicated in Table4, the variable that directly and significantly predicted the academic achievement of primary school learners was self-efficacy. Other researchers have reported similar findings. For example, some researchers indicated that one of the most important variables that accounted for academic achievement of students was the relationship they have with self-efficacy [62], [35], [46] and [49]. This finding suggests that students who were confident of their performance tend to have better academic achievement. Specifically, students who were confident that they could do an excellent job on their tests, they could set challenging goals and maintain a strong commitment, they could understand difficult materials presented by their teachers, they could heighten their efforts in the face of failure, and they could master the skills being taught in their classes, were more likely to have better academic achievement.

The present finding also suggest that efforts are needed for promoting self-efficacy for primary school students because self-efficacy was positively associated with academic achievement. Research has indicated that self-efficacy could be increased by using the right instructional strategies [42], such as helping students to set learning goals [6]; [42], providing timely and explicit feedback [6], and using high achieving students as models [4]; [42]. Thus, the above findings suggest that self efficacy beliefs provide the foundation for human motivation, well being, and personal accomplishment.

Result of multiple regression indicated that Self-Regulation and Cognitive strategy use didn't predict significantly students' academic achievement, signifying a lack of integration of Self-Regulated Learning strategies in the study area's (Degol primary school) instruction context.

Research findings noted that learning is affected by a number of factors, of which includes a societal level of learning established by cultural values and societal norms which is reflected in students' socialization and parents' expectations [38].

The dominant classroom teaching in most schools of Ethiopia is still teacher- dominated, where students are not encouraged to develop their own strategies but instead to follow teacher's words. Most classes are characterized by a situation where students are made to listen to their teachers and copy notes from the blackboard. Learning by doing, problem solving, cooperative learning and group approaches are limited.

Teacher- centered instruction might be advantageous for students to have good performance on examinations which focus on content knowledge; however, it is not good for students to discover the freedom they might have in developing their own ways of learning. This could also explain the small effect sizes of the relationships between participants' use of self-regulated learning strategies and their academic achievements. Even though a trend was noted that the more self-regulated learning strategies were used the higher scores students gained in exams, in this study self-regulated learning strategies (self-regulation & cognitive

strategy use) were not found to be a significant contributors for academic achievement of primary school learners. This was probably because, on average, these students rarely used self-regulated learning strategies.

Learners' self-regulated learning strategies are very important to their acquisition of the competence and knowledge. This study suggests that primary school teachers should consider incorporating self-regulated learning strategies in classroom teaching and assist the student's development of their own competence beliefs and self-regulated learning strategies. One example is creating supportive and challenging contexts and providing more group work instead of lectures since small group collaboration and a social constructivist's learning environment enhance students' use of self-regulated learning strategies [8].

5. Conclusion

Overall, the investigation has revealed that the variables treated in the study (self-efficacy, self regulation and strategy use) largely contributed to students' academic achievement. The result is supported by other researchers too.

Therefore, the implication of the study is that self regulated learning strategies, and feelings of competences that students have for themselves play a prominent role in the academic achievement of students. Parents, teachers, and other significant bodies in children's lives need to be aware that academic achievement is influenced by their self regulated learning strategies and the beliefs they have about their level of confidence to accomplish a particular task.

Consequently, Parents and teachers should enhance children's self-efficacy and self regulated learning strategies by creating supportive environments. Children can benefit more from teachers who are caring and supportive. Researchers such as Pintrich and Schunk [35] recommended that teachers should foster in students the belief that competence or ability is changeable and controllable and that expertise in any domain develops with experience, effort, persistence, and use of good learning strategies. This can be accomplished when teachers explain and show to their students' effective learning strategies and when they invite class discussions where students' approaches to a particular problem or assignment are thoroughly analyzed and evaluated. Thus, teachers should recognize students' strengths and weaknesses, treat students equally and fairly, promote respectful interactions, and listen to students and show an interest in their concerns regardless of their sexes and academic status.

Finally, it is important to acknowledge that this study has some limitations. First, although the sample size for this study was relatively big, the fact still remains that it did not represent the totality of students in the primary schools in Raya Azebo Wereda. Thus, a note of caution needs to be sounded when generalizing the study's findings. Despite this limitation, the findings of the study have provided a further need on how to improve upon the academics of students. In

particular, the study has shown that learners self efficacy and self regulated learning strategies cannot be over emphasized in academic success.

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References

- [1] Ainley, M., & Patrick, L., (2006). Measuring self-regulated learning processes through tracking patterns of student interaction with achievement activities. *Educational Psychology Review*, 18, 267-286,
- [2] Alexander, K.L., Entwisle, D.R. and Dauber, S.L., (1993). First grade classroom behavior: Its short- and long-term consequences for school performance, *Child Development*, 64, 801-14,
- [3] Anderson, P., (2002). Assessment and development of executive function in childhood, *Child Neuropsychology*, 8, 71-82,
- [4] Bandura, A. (1986). *Social foundations of thought and action*, Englewood Cliffs, NJ: Prentice-Hall.
- [5] Bandura, A., (1993). Perceived self-efficacy in cognitive development and functioning, *Educational Psychologist*, 28, 117-148,
- [6] Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman and Company.
- [7] Blair, C., (2002). School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry, *American Psychologist*, 57(2), 111-27,
- [8] Boekaerts, M. (2006) Self-regulation and effort investment, In K.A. Renninger and I.E. Siegel (Eds) *Handbook of child psychology*. Vol. 4, *Child psychology in practice* (6th Ed, pp.345-77), New York: John Wiley and Sons.
- [9] Bruin, A.B., Thiede, K.W., &Camp, G., (2001). Generating keywords improves Meta comprehension and self-regulation in elementary and middle school children, *Journal of Experimental Child Psychology*, 109 (3), 294-310,
- [10] Butler, D. L., &Winne, P. H., (1995). Feedback and self-regulated learning: A theoretical synthesis, *Review of Educational Research*, 65, 245-281,
- [11] Clarebout, G., Horz, H., &Schnotz, W., (2010). The relations between self-regulation and the embedding of support in learning environments, *Educational Technology Research and Development*, 58(5), 573-587,
- [12] Dembo, M.H. (1994). *Applying educational psychology*, 5thed, New York: Longman Publishing Group

- [13] Denissen, J.J.A., Zarrett, N.R. and Eccles, J.S., (2007). I like it, I'm able to do it, and I know I am: Longitudinal couplings between domain-specific achievement, self concept, and interest, *Child Development*, 78(2), 430-47,
- [14] Education and Training Policy (1994). *New Education and Training Policy of Ethiopian Curriculum in Prospect*, Unpublished, Addis Ababa, Ethiopia.
- [15] Eccles, J. (1983). Expectancies, values and academic behaviors In J. T. Spence (Ed.), *Achievement and achievement motives* (pp. 75-146). San Francisco: Freeman.
- [16] Eccles, J.S., Wigfield, A. and Schiefele, U. (1997) Motivation to succeed. In N. Eisenberg (ed.) *Handbook of Child Psychology: Volume 3* (fifth Ed). New York: Wiley.
- [17] Elstad, E., &Turmo, A., (2010). Students' self-regulation and teacher's influence in science: Interplay between ethnicity and gender, *Research in Science & Technological Education*, 28 (3), 249-260,
- [18] Ellis, R., (1989). Second language learning and second language learners: Growth and diversity, *TESL Canada Journal*, 7, 74-94.
- [19] Fantuzzo, J., Bulotsky-Shearer, R., McDermott, P., McWayne, C., Staci, P. and Frye, D., (2007). Investigation of dimensions of social-emotional classroom behavior and school readiness for low-income urban preschool children, *School Psychology Review*, 36, 44-62,
- [20] Fredrick, J.A., Blumenfeld, P.C. and Paris, A.H., (2004). School engagement: Potential of the concept, state of the evidence, *Review of Educational Research*, 74(1), 59-109,
- [21] Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. *Developmental Psychology*, 17, 300-312.
- [22] Harnishferger, K. K. (1995). The development of cognitive inhibition: Theories, definitions, research. In F. N. Dempster & C. J. Brainerd (Eds.), *Interference and Inhibition in Cognition* (pp. 176-206). San Diego: Academic Press.
- [23] Harris, K. R., Friedlander, B.D., Saddler, B., Frizzelle, R. & Graham, S., (2005). Self-monitoring of attention versus self-monitoring of academic performance: Effects among students with ADHD in the general education classroom, *Journal of Special Education*, 39 (3), 145-156,
- [24] Kolovelonis, A., Goudas, M., &Dermizaki, I., (2011). The effect of different goals and self-recording on self-regulation of learning a motor skill in a physical education setting, *Learning and Instruction*, 21 (3), 355-364,
- [25] Labuhn, A.S., Zimmerman, B.J., &Hasselhorn, M., (2010). Enhancing students' self-regulation and mathematics performance: The influence of feedback and self-evaluative standards, *Metacognition and Learning*, 5 (2), 173-194,
- [26] Liew, J., McTigue, E.M., Barrois, L. and Hughes, J.N., (2008). Adaptive and effortful control and academic self-efficacy beliefs on achievement: A longitudinal study of 1st through 3rd graders, *Early Childhood Research Quarterly*, 23, 515-26,
- [27] Pajares, F. (2008). Motivational role of self-efficacy beliefs in self-regulated learning. In D. H. Schunk & B. J. Zimmerman (Eds.), *Motivation and self-regulated learning: Theory, research and applications* (pp. 111-139). New York: Erlbaum.
- [28] Pajares, F., & Graham, L. (1990). Self-efficacy, motivation constructs, and mathematics performance of entering middle school students, *Contemporary Educational Psychology*, 24, 124-139,
- [29] Pajares, F., &Valiante, G., (1997). Influence of self-efficacy on elementary students' writing, *The Journal of Educational Research*, 90, 353-360,
- [30] Pape, S., & Wang, C., (2003). Middle school children's strategic behavior: Classification and relation to academic achievement and mathematical problem-solving, *Instructional Science*, 31, 419-449,
- [31] Paris, S. G., & Paris, A. H., (2001). Classroom applications of research on self-regulated learning, *Educational Psychologist*, 36, 89-101,
- [32] Perry, N.E., (1998). Young children's self-regulated learning and contexts that support it, *Journal of Educational Psychology*, 90, 715-29,
- [33] Perry, N.E. and Vandekamp, K.J.O., (2000). Creating classroom contexts that support young children's development of self-regulated learning, *International Journal of Educational Research*, 33, 821-43,
- [34] Pintrich, P., (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement, *Journal of Educational Psychology*, 92, 544-555,
- [35] Pintrich, P. R., &DeGroot, E. V., (1990). Motivational and self-regulated learning components of classroom academic performance, *Journal of Educational Psychology*, 82, 33-40,
- [36] Pintrich, P. R. &Schunk, D. H. (1996). *Motivation in education: Theory, research and applications*. Englewood Cliffs, NJ: Merrill Prentice-Hall.
- [37] Pressley, M., and Christine, B (1997). *Educational psychology: learning, instruction, assessment*. Library of Cataloging-in publication Data, USA
- [38] Rupp, A. A., Ferne, T., & Choi, H., (2006). How assessing reading comprehension with multiple choice questions shapes the construct: a cognitive processing perspective, *Language Testing*, 23, 441-474,
- [39] Salili, F., & Lai, M. K., (2003). Learning and motivation of Chinese students in Hong Kong: A longitudinal study of contextual influences on students' achievement orientation and performance, *Psychology in the Schools*, 40(1), 51-70,
- [40] Schunk, D., (1981). Modeling and attribution effects on children's achievement: A self-efficacy analysis, *Journal of Educational Psychology*, 73, 93-105,
- [41] Schunk, D. H., (1989). Self-efficacy and achievement behaviors, *Educational Psychology Review*, 1, 173-208,
- [42] Schunk, D. H., (1990). Goal setting and self-efficacy during self-regulated learning, *Educational Psychologist*, 25, 71-86,
- [43] Schunk, D. H., (1991). Self-efficacy and academic motivation, *Educational Psychologist* 26, 207-231,
- [44] Schunk, D. H. (1994). Self-regulation of self-efficacy and attributions in academic settings, In D.H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 75-99). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

- [45] Schunk, D. H., (1996). Goal and self-evaluative influences during children's cognitive skill learning, *American Educational Research Journal*, 33, 359-382,
- [46] Schunk, D. H., & Ertmer, P. A. (2000). Self-regulation and academic learning: Self-efficacy enhancing interventions. In M. Boekaerts, P. Pintrich, & M. Seidner (Eds.), *Self regulation: Theory, research, and applications* (pp. 631-649). Orlando, FL: Academic Press.
- [47] Shih, S., & Alexander, J. M., (2000). Interacting effects of goal setting and self- or other referenced feedback on children's development of self-efficacy and cognitive skill within the Taiwanese classroom, *Journal of Educational Psychology*, 92, 536-543.
- [48] Trimble, S., & Irvin, J. L., (2003). Research-based classroom practices and student achievement, *Middle School Journal*, 35 (1), 52-58,
- [49] Broek, P., Lorch R., Linderholm, T., & Gustafson, M., (2001). The effects of readers' goals on inference generation and memory for texts; *Memory & Cognition*, 29, 1081-1087.
- [50] Voss, M. M., (2001). Building self-beliefs: A child overcomes writer's block, *Reading & Writing Quarterly*, 19, 347-361.
- [51] Wang, M.T., & Holcombe, R., (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school, *American Educational Research Journal*, 47(3), 633-662.
- [52] Weinstein, C. E., Schulte, A., & Palmer, D. R. (1987). *The Learning and Study Strategies Inventory*, Clearwater, FL: H & H Publishing.
- [53] Weinstein, C. E., Husman, J., & Dierking, D. R. (2000). Self-regulation 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.
- [54] Wigfield, A. and Eccles, J.S., (1992). The development of achievement task values: A theoretical analysis, *Developmental Review*, 12, 265-310.
- [55] Winne, P.H., (1996). A Metacognitive view of individual differences in self-regulated learning, *Learning and Individual Differences*, 8, 327-53.
- [56] Wolters, C. A., (2003). Regulation of motivation: Evaluating an underemphasized aspect of self-regulated learning, *Educational Psychologist*, 38, 189-205.
- [57] Wolters, C.A., (2011). Regulation of motivation: Contextual and social aspects, *Teachers College Record*, 113(2), 265-283.
- [58] Wolters, C. A., & Pintrich, P. R., (1998). Contextual differences in student motivation and self-regulated learning in math, English, and social studies classrooms, *Instructional Science*, 26(1-2), 27-47.
- [59] Wood, R., Bandura, A., & Bailey, T., (1990). Mechanisms governing organizational performance in complex decision making environments, *Organizational behavior and Human Decision Processes*, 46, 181-201.
- [60] Zimmerman, B., (1990). Self-regulating academic learning and achievement: The emergence of a social cognitive perspective, *Educational Psychology Review*, 2, 173-201.
- [61] Zimmerman, B. J., (1995). Attaining reciprocity between learning and development through self regulation, *Human Development*, 38(6), 367-372
- [62] Zimmerman, B. J., (1998). Academic studying and the development of personal skill: A self regulatory perspective, *Educational Psychologist*, 33, 73-86.
- [63] Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective, In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation*, San Diego: CA: Academic Press.
- [64] Zimmerman, B. J. (2004). Sociocultural influence and students' development of academic self regulation: A social-cognitive perspective. In D. M. McInerney & S. Van Etten (Eds.), *Big theories revisited* (pp.139-164). Greenwich, CT: Information Age.
- [65] Zimmerman, B., (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects, *American Educational Research Journal*, 45(1), pp. 166-183
- [66] Zimmerman, B., Bandura, A. and Martinez-Pons, M., (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting, *American Educational Research Journal*, 29, 663-76.
- [67] 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, 614-628
- [68] Zimmerman, B. J., & Martinez-Pons, M., (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use, *Journal of Educational Psychology*, 82, 51-59.