

# Self-Regulated Learning and Academic Achievement Among Elementary School Students

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**Abstract**—Education does not only give students knowledge and change in behavior but enable them to become lifelong learners who are able to develop. Learning will be effective if students have active and initiative role in learning by possessing self-regulated learning ability. This study was aimed to obtain empirical data about the correlation of self-regulated learning to academic achievement of elementary school students in 2017/2018 academic year. The method used correlational study. Population in this study were students of class IV SDN Pelita with total of 134 students. Sampling technique used purposive sampling technique with total of 100 students. Data collection method was done by using questionnaire for self-regulated learning and documentation study for students' academic achievement. Data analysis technique was aided by SPSS version 20. The study result showed that there is significant correlation of self-regulated learning to academic achievement among elementary school students that is 0.340. It showed that self-regulated learning contributes 34% to students' academic achievement. Therefore, there should be effort to guide students to be able to enhance self-regulated learning so they can enhance their academic achievement. Hence, educating students to be able to self-regulate their learning will arouse their intrinsic motivation to learn.

**Keywords**—academic achievement; elementary school students; self-regulated learning

## I. INTRODUCTION

Students need to possess cognitive ability in order to understand the strategy of learning material content, the strategy to believe in the important meaning of learning material content, and its application and are able to absorb the values contained in that learning material [1]. Therefore, cognitive ability in learning activity is one strategy in learning to achieve success so students can have academic achievement. Academic achievement according to social cognitive perspective is seen as complex relation between individual ability, self-perception, assessment of task, expectation for success, cognitive strategy and self-regulation, gender, parenting style, socioeconomic status, individual's performance and attitude toward school [2]. Therefore, academic achievement is indicator of learning success which describe that high learning outcome is able to achieve learning goal successfully. To control cognitive aspect of learning and facilitate the development of academic goal, students should

assess their own understanding effectively in managing cognitive resource such as attention and learning strategy [3]. Self-regulated learning direct cognitive and affective process which is base for academic achievement [4]. Therefore, academic achievement can be produced among other by ability in self-regulated learning.

Self-regulation learning refer to experience generated by the self, feeling and action which is in accorded with achievement and personal goal [1]. Based on that, undoubtedly that self-regulated learning is strongly related to academic achievement. Academic achievement will increasingly enhance if self-regulation learning is good.

Self-regulated learning is one's ability to develop knowledge, skill and attitude to be able to self-control in learning process with full responsibility and perseverance in fulfilling learning demand and supported by positive belief in doing it despite of difficulty and to direct his or her cognition and motivation to achieve learning goal successfully [2]. The term *self-regulated learning* can be used to describe learning which is guided by metacognition (think about people think), strategic action (planning, monitoring and evaluating personal progress toward standard), and motivation to learn [4]. Therefore, someone who possess self-regulation has opportunity to take challenging task, practice their learning, develop deep understanding about learning material, and expend his or her effort to generate academic success. The study result of [5] explained that self-regulated learning has direct effect which is very important to academic achievement and students can monitor their understanding by measuring their learning progress.

Self-regulated learning is strongly correlated to achievement variable, that is, metacognition measurement and learning outcome achievement [6]. Self-regulated learning is positively correlated to motivation to use planning, organization, and self-monitoring strategy in doing a task [7]. Self-motivation belief is self-efficacy, expectation outcome, interest or intrinsic value. Self-regulation learning strategy (mastery goal orientation) is strong predictor to self-efficacy and subsequently influence achievement [8]. Another result study showed that according to social cognitive, self-regulated learning not only determined by personal process but this process is influenced by environment and reciprocal behavior

[9]. Therefore, it can be concluded that individual can have good achievement if she or he possess good self-regulation.

The fact obtained from the result of observation and interview with teachers of class IV in SDN Pelita, Lengkong Sub-District, Bandung City showed that students achievement is still low, that is 70. It is because most students cannot achieve learning accomplishment standard. Self-regulated learning is one internal factor to achieve certain outcome. Therefore, a study is needed to examine the internal factors which effect on student achievement academic, that is self-regulation.

However, it turns out that there are other studies that show that self-regulated learning is the ability to become active participants in metacognition, motivation, and behavior in the learning process. For this reason, students should have SRL's ability to support their achievements. The instrument of this study uses a questionnaire for students. The results of this study indicate that overall the profile of Self-Regulated Learning ability of students at Padang 3 Public Middle School is at the moderate category level (71.99%) and the most prominent aspect of Self-Regulated Learning is Extrinsic Motivation (88.29%). Based on the results of the analysis, the  $r$  value is 0.10 with a very weak (uncorrelated) relationship interpretation. The contribution of Self-Regulated Learning abilities of students to students' natural science cognitive learning outcomes is only 1%. While the rest ranges from 99% of students' cognitive learning outcomes are influenced by other factors [10].

Based on that problem, the researcher is interested to conduct the study to see the correlation of self-regulation to academic achievement of class IV students in SDN Pelita, Lengkong Sub-District, Bandung City. As for problem formulation proposed in this study is "Is there correlation between self-regulated learning with academic achievement of class IV students in SDN Pelita, Lengkong Sub-District, Bandung City?" The aim of this study is to test predictive and obvious correlation between self-regulated learning with academic achievement of elementary school students.

## II. METHOD

The approach of this study was quantitative. The method used was correlational study. Population in this study were students of class IV in SDN Pelita with total of 134 students. Sampling technique by using purposive sampling with total of 100 students. Number of girls 49 and 52 for boys. Self-regulated learning instrument by using Likert scale in questionnaire items measure metacognition, motivation and behavior indicator. Students' academic achievement measured by total score obtained by students in semester exam.

Data collection technique use questionnaire to self-regulated learning and documentation study in thematic lesson for academic achievement. Because self-regulated learning data is questionnaire data by using Likert scale, for analysis, the data is converted by using MSI. Data analysis technique is done by Coefficient Correlation using by SPSS Software version 20.

## III. RESULTS AND DISCUSSION

The mean of students' academic achievement is 75.40, the minimum score is 62.50, and maximum score is 89.14. The mean score of academic achievement for girls is 76.23 whereas for boys is 74.56. Therefore, it can be concluded that in this study the mean of academic achievement for girls is higher than boys. It is in accord with the result study [11] which showed that boys and girls have significant difference in self-regulated learning and academic achievement. Girls and boys are similar in self-regulated learning in the dimensions of self-motivation, cognition and behavior but differ in environmental dimension from autonomous learning.

Based on that study, the main factor which cause difference between girls and boys is the ability to regulate their own environment to enhance their academic achievement. Therefore, good academic achievement depend on self-regulated learning aspect so students will focus on their self-motivation, cognition and development in metacognition and reformation in behaving. Based on gender, girls are shown more capable than boys in academic achievement in which they have higher passing score than male students [5].

Whereas the mean of students' self-regulated learning is 83.96, the minimum score is 69.00 and the maximum score is 97.00. For self-regulated learning, the mean for girls is 84.61 and for boys is 83.31. Therefore, it can be concluded that in this study the mean of self-regulated learning for girls is higher than boys. It is in accord with study result of Weis et al. which revealed that academic achievement, motivation and ability to behave of girls are higher than boys [12]. The direct effect of gender on mathematics achievement is mediated by children's behavioral regulation, but not by emotional regulation strategy. Furthermore, analysis of gender difference in mathematics achievement is cancelled because higher motivation of girls and ability to positive behavioral regulation. Therefore, further study analyze gender difference in mathematics achievement should consider possibility that mathematics achievement for boys is underestimated when they do not control their behavioral regulation.

Further study should investigate variable such as moderate relation threat between gender, behavioral regulation and another academic achievement. Besides, as culture influence self-regulation development, longitudinal study is needed to draw causal conclusion about context socialization effect of indifferent (for example, culture, family, school) in development of gender difference in regulated learning and academic achievement [13].

The analysis of result showed that self-regulated learning variable has positive influence to students' academic achievement. The result of linear regression analysis calculation by using SPSS 20 is as follow:

TABLE I. SUMMARY OF CORRELATION MODEL

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.583 <sup>a</sup>	0.340	0.333	5.09815
a. Predictors: (Constant), Self-Regulated Learning				
b. Dependent Variable: Academic Achievement				

On the table above, R Square value or coefficient correlation is 0.340 which means that determination coefficient is 34%. It can be said that 34% of academic achievement variable can be explained by self-regulated learning variable. Whereas 66% is explained or influenced by another factors. From the result of analysis calculation above, it can be concluded that there is positive correlation o between regulated learning variable with academic achievement variable. The result of hypothesis test above give information that in order to obtain maximal academic achievement, students should possess good self-regulation learning. Therefore, the better of students' self-regulation, the better of their academic achievement. It is in accordance with study of Kusaeri which explained that self-regulated learning is strongly affect academic achievement which resulted in enhancement in students' academic achievement [14].

The result study of Kosnin explained that self-regulated learning significantly affect students' academic achievement and resource management strategy, anxiety in exam, metacognitive learning strategy and self-efficacy which become significant predictor [15]. Students who recognize themselves can be seen as a process related to metacognitive skill, acquire knowledge with cognitive skill, and ability to motivate themselves and manage their environment effectively.

Self-regulated learning assume the importance of three elements in independent learning strategy, namely self-efficacy in performance skill, and commitment for academic goal. By self-regulated learning, students will acquire academic skill such as setting the goal, choosing and preparing effective strategy and control with influencing factors, namely individual, behavior and environment [16]. Therefore, those factors are strongly affect students' self-regulated learning. Besides, there is one component of self-regulation, that is effort regulation which has relation to achievement and refer to students intention to acquire source, energy and time to finish academic task [17]. Thus, one factor which make students cannot achieve optimal academic achievement is failure in self-regulate learning. Therefore, to achieve the success in learning achievement, students need self-regulated learning to regulate activity in their learning.

In this study, self-regulation in metacognitive become predictor of attitude to academic achievement. It is in accord with previos study stated that individual develop obedience mechanism, has ability to control and awareness when they make self-regulation [18]. The mechanism developed by individual affect their attitude in doing the task. This study showed that intrinsic motivation is important factor which affect whether or not a student will success. It is in accord with previos study stated that self-regulated learning can be facilitated by intrinsic motivation factor and hindered by extrinsic motivation factor [19]. The motivation viewed in

this study showed clearly that there are certain kinds of motivation which involve adaptive belief and help promoting and supporting independent learning. Thus, self-regulated learning is not easy and automatic.

The use of wide range of cognitive and strategies of self-regulated learning can increase individual involvement. Therefore, to invest additional time and independent learning, they should be motivated to use self-regulated learning ability and self-regulated learning will has little value if students do not use their motivation to achieve the goal. Besides, learning environment will affect students' academic achievement. It is in accord with previous study said that learning environment is important factor in each learning situation [20]. Learning environment consist of teaching strategy, class activity, teacher-student interaction, and student-student interaction which will affect individual motivation in learning. Therefore, self-regulated learning involve three features namely the use of self-regulated learning strategy, individual motivation process and their responses to feedback which is oriented to learning effectiveness.

IV. CONCLUSION

Based on the result of statistical analysis, the study finding showed that the mean of academic achievement for girls is higher than boys and the mean of self-regulated learning for girls is higher than boys. In addition, self-regulated learning has significant correlation to students' academic achievement. It showed that the higher (better) of students' self-regulated learning, the higher (better) of their academic achievement. Therefore, it is important for students to possess ability in self-regulated learning to support the success of their learning process.

The implication is in order to enhance students' self-regulated learning and academic achievement, teacher should implement innovative and enjoyable learning so it will result in successful learning goal and students are able to self-regulate their learning which will arouse intrinsic motivation.

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