



## THE EFFECT OF SELF-REGULATED LEARNING ON HIGH SCHOOL STUDENTS' SELF-EFFICACY

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### ABSTRACT

Self-efficacy takes a profound and significant effect on the initial status of reading comprehension (Louicka, *et. al.*, 2016). Within the learning motivation of the students, self-efficacy is involved, which includes personal belief of the individual to accomplish particular goal (Sitzmann and Ely, 2011). Academic self-efficacy is correlated with academic performance which constitutes as moderate factors mediating and identifying several elements such as effort regulation, management strategy, and objective orientation as well as causality which requires to be established between self-efficacy and academic achievement. (Honicke and Broadbent, 2016). The study reported in this paper sought to investigate the effect of self-regulated learning strategy on the self-efficacy among high school students. This study was a quasi-experimental study with non-equivalent groups, which includes pre and post-test design with the control group. In the present study, the researchers used covariance analysis technique to further analyze the data obtained. The findings on this present study revealed the negative correlation between self-efficacy and experiment group which obtained  $r = -0.267$ ,  $p > 0,01$ . Additionally, no interaction was confirmed between experiment and control group which was indicated by significance score above 0.05 ( $F = 0,656$ ,  $p > 0,05$ ). Using ANACOVA analysis, the average of self-efficacy on post-test ( $M = 170.5000$ ;  $SD = 10$ ) is higher than self-efficacy on pre-test ( $M = 163.8848$ ;  $SD = 13$ ). Hence, it is confirmed that self-efficacy of the students is improving after being given treatment. Additionally, this study reported that there is a difference on self-efficacy between experiment group who possess ..... self-efficacy which was indicated by  $F = 23,616$ ,  $p > 0,05$  and there is no difference between post-test and pre-test on experiment group which was indicated by  $F = 2,057$ ,  $p < 0,05$ .

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## INTRODUCTION

Self-regulated learning supports the cognitive social perspective that is understood as a reciprocal relationship, in which cognitive, personal, environmental and behavioral factors interact in a reciprocal way. Reciprocal relationships, which include the social environment and the various learning contexts, are cognition as a social fundamental. The environment take a significant impact on development, and also affects the actualization of self-regulation learning. The understanding Self-regulation learning also involves that

contextual features shape and limit the quality of student learning. However, at the same time, the way the students learn is influenced by what individuals carry out toward a particular learning situation. Therefore, self-regulatory learning is seen as an active process instead of a static student attribute (Panadero and Tapia, 2014). The understanding of self-efficacy conducted by the teacher could become a factor in the improvement toward better education, such as the schools which maximize welfare development ability and involvement of students to be succeed (NSW Department of Education and Communities, 2015). The role and function of self-efficacy in the academic context of the teacher defines as

the responsibility of the teacher in maintaining the self-efficacy of the students. Program for International Student Assessment (PISA) shows that the positive and constructive relationship of teachers and students is associated with good performance and a goal of the school to encourage students' social and emotional wellbeing. (Organization for Economic Cooperation Development, 2015). To obtain knowledge and information in school, students remain relying on the teacher. They expect teachers to facilitate students to learn, fulfill learning motivation, and achieve learning outcomes. School environments as a place for individuals to learn to develop themselves are desirable as a fun place in the learning process by eliminating negative emotions, sadness, feelings of inadequacy, feelings different from other groups, negative interactions that cause one party to be the victim of the other. There are five core elements that are considered important, the positive emotions (positive emotions), engagement (involvement), relationship (relationships), meaning (meaningfulness), and accomplishment (achievement) (Hooper, 2012). Enjoyable learning will be established when it begins from the potential, interests and needs of students. Therefore, learning strategies used should be student-centered, allowing and promoting students to be self-expressed and able to take an active role in the learning process. Bandura argues that students who possess self-efficacy will easily participate, work harder, possess persistence, and able to minimize emotional reaction the moment they encountering difficulties that hesitate his or her ability (Lunenburg, 2011). Teachers can improve the competence and self-efficacy of students, by considering at the emotional state of the student, academic skills, student behavior and changing environmental factors for the success of students, encourage students to be proactive in its development, positive feelings control over your thoughts, feelings and actions; (Thoonen *et al.*, 2012, Pan 2014). The purpose of this study was to investigate and discover the effect of self-regulation learning strategies on the self-efficacy of high school students.

## MATERIALS AND METHODS

This study was a quasi-experimental study with non-equivalent group, which includes pre and post-test design with control and experiment group. Since this study aims at discovering the effect of self-regulated learning on the self-efficacy of high school students, self-efficacy questionnaire which is the development of Self-Efficacy for Learning Form (SELF) suggested by Zimmerman was administered. In the instrument development Self-Efficacy for Learning Form (SELF) gained 55 items of question which was considered as valid and reliability determine by the Cronbach's alpha of 0.750. In addition to Questionnaire, Treatment guidelines for teacher were also administered and prepared to guide teachers in implementing self-regulated learning strategy. The data in this study were students who had low self-efficacy. The data were collected by distributing questionnaires to students while the data analysis technique used is to use a test analysis of covariances.

## FINDINGS

This present study was set out to determine whether self-regulated learning contributes on the self-efficacy of high school students. Upon the findings discovered in this study, it was revealed negative correlation between self-efficacy and

experiment group which obtained  $r = -0.267$ ,  $p > 0,01$ . It was also revealed that there is no interaction between both research groups (experiment group and control group) which was indicated by significance value score above 0,05 ( $F = 0,656$ ,  $p > 0,05$ ). Additionally, the average score of self-efficacy on post-test was confirmed higher than self-efficacy in pre-test. It was indicated by the value of  $M = 170.5000$ ;  $SD = 10$  in post-test, while the pre-test results was  $M = 163.8848$ ;  $SD = 13$ . Hence, it is argued that students experienced an improvement on self-efficacy after being treated by self-regulated learning strategy. In addition, upon the difference of self-efficacy among experiment group who possess ....self-efficacy, it was confirmed that the result of  $F = 23,616$ ,  $p > 0,05$ . In other words, the difference was occurred. At last, no difference also occurred between post-test and pre-test in experiment class which was indicated by the score of  $F = 2,057$ ,  $p < 0,05$ .

## DISCUSSION

In accordance with the findings obtained in this study, it can be argued that there is an effect on the implementation of self-regulated learning strategy on the students' self-efficacy. Bandura's conceptual underpinning upon self-efficacy provides beneficent hypothesis to predict the behavior of the students, yet it provides no legitimate claim upon the cause of particular behavior. Self-efficacy is believed as an element that established motivation within the students that understand how expectancy influences the students' academic achievement. In general, self-efficacy belief could explain 25% from academic predictors variance (Said, 2013). Social cognition theory suggests the determination of feed-back as imperative and primary factors within both learning and motivation. In regard with this perspective, the environment or circumstance, individual behavior, and individual characteristics (including emotional knowledge and cognitive development) are both influenced and influencing by each two other components. Self-efficacy is defined as students' belief in taking any action which enables the students to accomplish a particular goal as well as self-regulated on goal setting, plan development, commitment on plan implementation, actual implementation of plan, and further approach and effort from reflection and modification or social cognitive perspective diversion on motivation. Students' characteristic is defined as individual quality aspects and meaningful learning they experienced which are established by correlating new knowledge obtained and initial knowledge possessed by the students (Degeng, 2013). Several theorists define and interpret self-regulated learning which intervenes their theory orientation exposed a similar way of interpreting and defining self-regulated learning. Several similar elements or conceptual regarding self-regulated learning are:

First, all theoretical perspective from the theorist similarly argue that self-regulated learning takes a role as active part on learning process. In this context, cognitive and metacognitive factors are not the only elements involved in self-regulated learning, yet motivation and behavior are also needed to be taken into account as well as emotional influence which involves in the process of students' regulation.

**Cognitive:** Cognitive structure construes organizational structure inhabiting in the individual's memory which integrates a separated knowledge elements on particular conceptual unit. A study conducted within the field of cognitive psychology predominantly take into account on the

concept of new knowledge obtaining and its retention belongs to the function of cognitive structure which is possessed by the learners (Degeng, 2013).

**Metacognitive:** Within the entire process of self-regulated learning, metacognitive is involved and provides a significant contribution on the effective practice of learning. Definition of metacognitive suggested by the expert of Educational Psychology, Franz E. Weinert and Rainer H Kluwe define metacognitive as a cognition of a cognition. In other words, it is a knowledge regarding self-thinking, and cognitive activity has as a process of thinking of the object itself. Metacognitive activity is paramount to monitor and control learning achievement of the learners or the students. Metacognitive knowledge considers what the students know and understand. Additionally, it refers to the individual's recent thinking, and metacognitive experience deals with individual's mental or emotional state (Platt, 2016). Metacognition is affected by mental age of the individuals (Nader-Grosbois, 2014). In the age of development, children need good and eloquent communication in translating all the desires and necessities of others. On the other hand, this communication also helps children to obtain a feedback from others who are paramount to help them understand their own cognitive abilities. The research conducted by Chernokova (2014) argues that students can obtain assistance from the others to improve his or her metacognition. Metacognition plays an important role for the individual, particularly the student, in order to attain maximum understanding in learning and obtain maximum learning outcomes. Theoretically, it has been mentioned that metacognition helps the individual in overseeing whether he or she is taking the right path or not. This helps students to obtain personal feedback regarding their progress. The similar argumentation is also stated by Mirzaei *et al.* (2012) in his research which argue that efforts to achieve learning targets will be stronger in helping students to obtain a high GPA, if it is assisted by metacognition. An effort and the achievement of learning targets encourage students to obtain a good GPA, however metacognition gives a greater opportunity to obtain a better GPA.

In addition, the research conducted by Pishghadam and Khajavy (2013) discover the magnitude of the role of metacognition in language acquisition. Their research states that although intelligence takes a great role for individuals in mastering language particularly foreign languages, yet the role of metacognition is confirmed stronger. In which, the process of monitoring as part of metacognition by individuals in the mastery of foreign languages becomes more important than intelligence itself. Similar findings are also discovered within the research conducted by Ghonsooly, Khajavy, and Mohjoobi (2014). This study discover that self-efficacy and metacognition play an imperative role in influencing learning performance exposed by individuals. The interesting thing in their research is that the role of metacognition in maximizing the outcomes is greater than self efficacy. This means confidence to be successful and get maximum results is inadequate if it is not balanced with metacognition in the learning process. Meanwhile, metacognition itself affects the self-efficacy of academic (Hermita and Thamrin, 2015). The better the metacognition ability possessed, the higher the individual self-efficacy of academic. It is certainly also very helpful for the individuals to obtain maximum academic achievement.

**Motivation:** Self-motivation consists of completely developed proactive efforts to discover and obtain benefit from learning. Learning and motivation are treated as a process of interdependence. Motivated students are characterized by willingness and eagerness to learn and committed to completing a task. Student orientation for motivation and beliefs about learning is related to three components:

- Value that includes student goals, beliefs about the importance of academic tasks and student interests in the task;
- Expectations that refer to students' beliefs about their ability to perform tasks; and
- Affective components which is related to students' emotional reactions to tasks (Keyser, 2013)

Efficacy establishes motivation that helps students in understanding how expectations affect student achievement. In expectancy-value theory, motivation is a function of expectations of success and perceived value. Attribution theory focuses on the causal attribution of learners to explain the results of an activity, and classifies in terms of their locus, stability and control. Social cognitive theory emphasizes self-efficacy as an important key of motivated action, and also identifies cues that affect the future of self-efficacy and self-regulated learning support. Goal orientation theory suggests that learners tend to engage in tasks which promotes a greater concern in mastering the content (the purpose of mastery, arising from the development of mindset about intelligence and learning) or regarding how the students perform better than others or avoiding failure (The goal of achievement, arising from a fixed mindset), the theory of self-determination explains that the optimal performance outcome of actions motivated by intrinsic value interests or integrated and internalized extrinsic values. Satisfying basic psychosocial needs of autonomy, competence and linkages increases the motivation. From the aforementioned theories, themes are repeated on competence, values, attribution, and interaction between individuals and the learning context (Cook and Artino Jr, 2016).

### Behavior

Self regulation plays an important role in student achievement. The positive influence of self-learning is not only visible in school learning outcomes for conventional subjects, but also on the learning outcomes of certain skills. The research conducted by Tsai, Lee, and Shen (2013) reveal that students with low achievement tend to have good numeracy skills in the long-run when their self-regulation learning is improved. It appears that self regulatory learning greatly assists a wide variety of students with whatever background to obtain maximum learning outcomes. The students will be very helpful in completing tasks that deals with complex skill. The research conducted by Belski and Belksi (2013) explain that there are differences in performance completion tasks requiring complex skills in students before and after students get direction to improve self-regulation learning they possess. Students' task completion performance is confirmed better after better direction was given. The findings of research conducted by Patel *et al.* (2015) explains that students who struggle harder in learning do not apply the principles of self-regulation learning in the learning process. This makes students fail to have a solution that applicable to their learning difficulties, and tends to apply a maladaptive problem-

reduction strategy to their failure in learning. Meanwhile, according to Sadi and Uyar (2013), self-regulation learning also regulates student's learning and attitudes in which includes time management related to all student learning activities at school and at home. Self-regulatory learning will affect the timeliness of classroom attendance as well as the number of attendance in the class itself (Ocak and Yamac, 2013; Torenbeek, Jansen, and Suhre, 2013). Students who have good learning disciplines in terms of attendance and attendance tend to have better academic achievement (Torenbeek, Jansen and Suhre, 2013). Second, the definition of self-regulation learning has similarities in the recognition and responses of students in self-conclusion. This is because self-regulation learning involves cyclical processes that allow students to monitor the effectiveness of their learning methods and strategies, thereby reacting to feedback starting from changes that are closely related to their perceptions of behavioral change and strategy. The third is an attempt to give a precise and detailed indication of how and why students choose to use one particular strategy or response over another. If self-regulation learning is to involve different strategies or special responses at the same time, the student's effort is to start and organize them in a proactive way and requires the process of time, preparation and customization. Teachers are expected to be good models in developing this lifelong learners by teaching students with self-regulation and caring skills to develop the motivation in studying since several perspectives on self-regulatory learning theories state that motivation as a determining element in the process of self-regulation. Motivation, therefore, is placed at the core of the pro-active process and closely connected with self-regulation. Self motivation is a fully developed pro-active effort to discover and obtain benefit from learning activities or most of the behavior of students is directed by the goals and needs of the students.

The orientation of student goals will be well-performed within class and school, from short to long term and done continuously. In the classroom, students typically show a general tendency in conducting activities that lead to a particular purpose, thus the behavior of students in the school reflects their goal orientation. Orientation motivation is theoretically based on the theory of goal attainment, assuming that people vary in the way they define achievements and perceived competency assessments. The perspective of student goals influences how individuals think, feel, and act in a state of achievement. (Stavrou, et al, 2012). The goal orientation theory is a cognitive social theory of achievement motivation that examines the reasons why students engage in their academic work. Dweck states that goal orientation is a construct for understanding behavior in education (Wigfield and Cambria, 2010). Furthermore, Wigfield and Cambria stated that the orientation of student goals is the goal to be achieved by individuals in a general or specific achievement environment. Woolfolk (2014) defines goal orientation as a pattern of beliefs about goals that lead to school performance. Research shows that student learning motivation can predict both the quality of involvement in academic learning as well as the extent to which they seek or avoid challenging situations.

The students' conceptions of goal is related to the reasons why students are involved in academic tasks. Thus, the various efforts undertaken by students to achieve in academic activities related to a goal orientation. This is in accordance

with the statement of Huff et al., (2016) which state that goal orientation can be helpful in explaining or predicting behavior in an academic setting. Two major factors affect the goal orientation of students in the classroom or at school (Schunk and Pintrich, 2014). The first factor is the individual factor. This factor is related to how students perceive their own ability. Different views cause differences in attitude and behavior to students in the learning process. Students who see themselves as someone who possesses good academic ability will tend to develop his or her motivation, seek tasks that challenge his or her ability, have a passion for mastering the material he or she wants to learn. The second factor is the situational factor. This factor relates to how students perceive their learning environment or class. Goal orientation is influenced by learning based on self-regulation and strategy used. Murray (2014) states that research on self-regulated learning shows the importance of social context. This development shows that self-regulated learning is not a sterile knowledge and individual skill from the influence of social context, but instead involves social context including peers and teachers. Along with the development of this era of globalization and information society, there are high school which demands to develop the students themselves. The increasingly tight competition among educational institutions is marked by the tight competition of superior output quality and become the people's choice. With self-regulation learning, students always have self-awareness in learning. Increased self-efficacy of students encourage students to always achieve higher, always strive to achieve the goals expected and responsible in learning. Thus, the learning done in high school becomes very important with the purpose of the school.

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