The important of self-efficacy and self-regulation in learning: How should a student be?

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Abstract. Self efficacy and self regulation are important for a student in learning activity. This study aims to describe students’ self efficacy and self regulation. Using mix method, this study involving 22 students of senior high school. The results showed students’ self efficacy abilities are categorized as good and students’ self-regulation are categorized as excellent. Correlation test results showed that self efficacy and self regulation inversely correlated (r2 = -0.451), means that the lower the students' self-efficacy, the higher the students' self-regulation. Based on these results, it can be concluded that the ability of self-efficacy and self-regulation is important owned by students, because it will indirectly assist in achieving learning objectives. Teacher’s roles and strategies are needed to build self-efficacy and student self-regulation.

1. Introduction

Education at this time should prioritize efforts to build self efficacy and self-regulation in students. The great influence of the environment will of course have an impact on the student's personality. Good self efficacy and self regulation are important for students today. Self efficacy that students have will help do the tasks well. Students who have good self efficacy tend to be proactive, competitive and creative so that it can have an impact on improving learning outcomes [1-3]. Self efficacy is a hierarchical construct that can exert a positive influence on the students, with self efficacy owned by students making it easier for students to make decisions and make choices, with students' self-confidence increasing [4-6]. Students who have good self efficacy tend to work diligently and finish well, while students with low self efficacy tend to avoid difficult tasks [7]. Bandura explains that self efficacy is a belief having the ability to process and perform actions to achieve goals that are closely related to self-concept, and achievement of self-adjustment is a life aspect of self efficacy that has an important role in academic to complete learning tasks with a predetermined target someone.

The role of teachers is very important in building student self efficacy. Teacher's skill and planning in effort to build self efficacy of student is needed. Teachers can design and use various approaches or methods in establishing student self efficacy, for which a competent teacher is needed [8, 9]. In addition to students, teachers should also have a good self-efficacy in learning, establishing good reciprocal relationships with students [10-12]. Building student self efficacy can be done by the teacher with a conceptual mapping approach that is useful to aid learning progress [13]. Self efficacy can be built with self-learning, can use the web, computer or other software [14-16]. Based on some opinions can be
concluded that self efficacy is a belief that each student has in the learning process, where a student who has a high level of self efficacy then the level of stress / burden is low as well as students who have low self efficacy level then has a high burden / stress to set himself in the learning process and do a task.

In addition to self-efficacy, students must have good self-regulation because it will help to solve the problem well. Students' ability to conduct self-regulation effort is an important activity in student learning process which is very closely related to social cognitive learning theory from Bandura. Self Regulated learning is the ability possessed by a student in managing his own learning without being dependent on others. Low learning self-learning pattern as one of the factors that weaken the quality of student learning process. Self regulation is a dynamic, dynamic learning process requiring regular steps that can improve the skills to overcome various predictors in learning [17, 18]. Students who have good self regulation will have an awareness of the importance of learning, controlling emotions so as to enhance the learning process and learning outcomes [19, 20]. Self regulated helps students to assess their own performance [21]. Students with a high degree of independence are usually able to organize their own learning process, doing tasks and homework without relying on teachers, parents, or friends. Consciously he is very independent in learning because they want to achieve high achievement. Conversely, students with low levels of learning independence are highly dependent on others in learning. Self-learning is an essential component of college readiness [22, 23]. So that the learning achievement was not optimal. Social support becomes the influence of self regulation learning. Social support from family will improve self regulation learning. High family social support will receive emotional, awareness, instrumental and informative support from the family. It affects self regulation learning to be high because it is able to effectively process their own learning experience in various ways so as to achieve optimal learning outcomes. Building self-regulation of students in learning can be done with various approaches and methods, web-based learning, using multimedia, familiarize students writing and learning online [24-27].

2. Method
This research uses mix method, data collection is done qualitatively and quantitatively. Qualitative data obtained through questionnaires, quantitative data obtained from the analysis of qualitative data shown by the score. Research subjects involving 22 students of class XI IPA. This research was conducted in SMA Pasundan & Bandung. Quantitative data is processed by using SPSS software. The collected data is classified into two groups of quantitative data in the form of numbers and qualitative data expressed in words or symbols. Correlation analysis using Pearson Product moment. A correlation test is needed to see the relationship between student’s self-efficacy and self-regulation

3. Results and discussion
3.1. Self efficacy and self regulation
The result of the research that has been obtained will be explained in the form of relation between self efficacy and self regulation done by student after finished learning reproduction system. In this study obtained the results data that is a score with scale 4. Apart from self efficacy and self regulation, this study also reveals matters relating and affect both components of self-efficacy and self-regulation is the use of strategies used by teachers during the teaching and learning system reproduction.

Based on Table 1 by using frequency calculation, student self efficacy data after following learning process teaching reproduction system. Given the minimum value and maximum value, obtained the average value of the total questionnaire scores that are in the range of 68.87 are in either category. On average all high school students Pasundan 7 Bandung can follow the learning well. Based on the results of self-regulation research obtained total score after learning reproduction system is completed which illustrates self efficacy students. Scores obtained from self-regulation questionnaires containing student self-regulation statements during classroom learning on reproduction system materials. Given the maximum value of self regulation 86 and the minimum value of 65. Once known
the maximum and minimum value, obtained an average value of 76.77 with the distribution of data 5.74. Showing self regulation in students is very good or high.

Table 1. Recapitulation of self efficacy and self regulation values of students based on several components.

| Components            | Self Efficacy | Self Regulation |
|-----------------------|---------------|-----------------|
| number of students    | 22            | 22              |
| average               | 68.87         | 76.77           |
| minimum Score         | 57.70         | 65              |
| maximum Score         | 76.70         | 86              |
| standard deviation    | 5.26          | 5.74            |

3.2. Correlation test

The correlation test to find out whether the data from both self efficacy and self regulation components has a very strong relationship or not. Recapitulation of the relationship between self-confidence and self-regulation in reproduction system material can be seen in Table 2. The relationship between self efficacy and self regulation is negative and significant (P <0.05).

Table 2. Correlation test of students’ self efficacy and self regulation.

|          | SE       | SR       |
|----------|----------|----------|
| Pearson Correlation | 1       | -.451*   |
| Sig. (2-tailed)      | .035    |          |
| N                   | 22       | 22       |
| Pearson Correlation  | -.451*  | 1        |
| Sig. (2-tailed)      | .035    |          |
| N                   | 22       | 22       |

Based on Table 2 it shows that self efficacy and cell regulation significant value 0.035 <0.05 meaning there is significant correlation, and got negative at r value that is -0.451 show that correlation between self efficacy and self regulation inversely proportional it shows that more low self efficacy students the higher self-regulation owned by the students. Data from both there is a significant correlation.

Self efficacy in learning reproduction system is the highest value is in the range of 57.7 and the lowest value is in the range of 5.26. Having known the maximum and minimum values, obtained overall average value of self efficacy is at 68.67 of the 100 scale that fall into either category. This means that most students are able to follow the learning of the reproductive system in accordance with the level of self efficacy it has. Self efficacy is a hierarchical construct that can exert a positive influence on the students, with self efficacy owned by students making it easier for students to make decisions and make choices, with students' self-confidence increasing [4-6]. Students who have good self efficacy tend to work diligently and finish well, while students with low self efficacy tend to avoid difficult tasks [7].

Self regulation obtained from the value of questionnaire scores obtained the highest value with a range of 86 and the lowest value with a range of 65. Once known the maximum and minimum value, obtained an average score of 76.77 which is in very good category. Almost all students are good / excellent on all aspects of self-regulation. Only a small number of students who are still lacking good self regulation, which is less good in some aspects, namely: aspects of information seeking, aspects of practicing and remembering, aspects of seeking help, and aspects of re-examination of test results.

Almost all students already have good / excellent self regulation, teacher interaction when studying in the classroom. The teacher gives a very interesting apperception about the reproductive system, so
students are motivated to learn. Self regulation is a dynamic, dynamic learning process requiring regular steps that can improve the skills to overcome various predictors in learning [17, 18]. Students who have good self regulation will have an awareness of the importance of learning, controlling emotions so as to enhance learning and learning outcomes. [19, 20] Self regulated helps students to assess their own performance [21]. The results showed that, the group who was given the training of SRL had higher academic achievement than the group that was not given the training of SRL. Significant correlation test results are less than 0.05 and the correlation coefficient is negative (-) which means that the relationship is inversely proportional. In other words, the higher self efficacy contributes to self regulation, so it can be said that the lower self efficacy can improve self regulation. Thus, the difference in self efficacy in each individual lies in the aspect of the difficulty level of the task, the strength of belief and generality. Each of these aspects has important implications in individual performance.

Further research is needed at all levels of education. This study has the limitations of using only one school with 22 students as research subjects. This research can be developed and implemented in some schools in the future. Develop appropriate methods to build self efficacy and self-regulation of students. Of course we can benefit from this research one of which supports government programs in building character education. We believe that self efficacy and self regulation will indirectly shape the character of the students. For this purpose, the research needs to be continued in a wider scope.

4. Conclusion
Based on the results of data analysis can be concluded that the self efficacy of students with the highest value of 76.92 and the lowest score of 57.70 obtained the average value in the range of 68.87 which is in either category. That is self efficacy owned by students in the learning process in good category. On average all high school students Pasundan 7 Bandung can follow the learning well. Self regulation students with the highest score of 86.00 and the lowest score 65.00, obtained an average score of 76.77 which is in very good category. Almost all students are good / excellent on all aspects of self-regulation. This means that the student's self regulation during the learning process is very good, inversely proportional to the confidence that students have. The lower the self efficacy that the student has the higher self-regulation he has. The relationship of self efficacy and self regulation based on signification correlation test is smaller than 0.05 and negative correlation coefficient (-) which means that the relationship is inversely proportional, that is, the lower self efficacy that the student possesses high self regulation owned by the student.

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