Self Efficacy: A View from Junior High School Students and Its Gender Interaction

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Abstract. Self-efficacy is an essential factor in the learning process of a student. Self-efficacy is the belief in their skills to complete tasks or achieve targets. Many studies on self-efficacy have been carried out, but there are still few that examine the self-efficacy of junior high school students and how gender influences it. Therefore, it is crucial to examine the self-efficacy of junior high school students and investigate differences in student self-efficacy by gender. Data were collected from research respondents 168 students, with 95 female students and 73 male students. This research adopted a quantitative design as data were collected from questionnaires. Results show that in general students' self-efficacy is in the high category. In addition, students' self-efficacy in terms of gender, male and female students both have high self-efficacy. Furthermore, the results of the ANOVA test showed that there was a significant difference between the self-efficacy of female and male students. The average self-efficacy of female students is higher than male students. Studies show that even though male and female students have high self-efficacy, there are still students who have low or even very low self-efficacy. Therefore, it is highly recommended that schools provide bombing and counseling services for these students.

Keywords: gender difference; gender interaction; junior high school; self-efficacy.

INTRODUCTION:

Education is the beginning of determining one's career, meaning that life as a student is preparing for entering life in a particular job. Education has an important role in human life because education can shape humans to have the knowledge, skills, and personality to live independently in solving problems. In education, students will learn so that there is a change in attitude and behavior, understanding, and skill improvement from what they do.

Learning is a relatively permanent change in behavior that occurs due to experiential training (Santoso & Subagyo, 2017). Learning will bring students to a behavioral change, actual or potential, and will have new life skills (Suryabrata, 2008). In achieving learning
success, student self-regulation is needed. Students' ability to self-regulate in learning includes factors to achieve learning goals (Amelia & Taufik, 2021).

Winne explained that self-regulated learning is the ability to generate and monitor one's thoughts, feelings, and behavior to achieve a goal (Santrock, 2007). Self-regulated learning refers to learning that is fostered by one's metacognition, strategy adaptability, and motivation (Blackmore et al., 2021). Three things influence a person so that they carry out self-regulated learning, namely individuals, behavior, and the environment (Zimmerman & Martinez-Pons, 1990). Things that can affect self-regulated learning in individual factors is self-efficacy.

Students who have good self-efficacy will apply self-regulated skills learning which includes setting goals for performance, planning and managing time, having positive beliefs about their abilities, paying attention and concentrating on instructions, organizing effectively, repeating and coding information, defining the environment conducive environment, utilize social resources effectively, focus on positive influence, make attributions of failure and success (Santrock, 2007).

Bandura states that self-efficacy is an individual's belief about his ability to organize and complete a task needed to achieve certain results. The personality structure proposed by Bandura consists of four aspects, namely the self-system, self-regulation, self-efficacy, and collective efficacy. Self-efficacy is a personal (cognitive) factor that plays an important role in Banduras' learning theory (Lasilolo, 2018).

Bandura explains self-efficacy as self-confidence (self-confidence) in one's own ability to perform behaviors that will lead to the expected results (LN & Nurhisan, 2011). Self-efficacy is often associated with outcome expectations, which are estimates that the behavior performed by oneself will achieve certain results. Duncan & McKeachie (2005) stated that self-efficacy is mostly referred to as one's confidence or belief in having the knowledge, skills, and abilities needed to perform well in a specific course or on a specific task.

Self-efficacy is developed through reciprocal causation, where one’s skill in a task and self-efficacy influence each other to develop success through action (Blackmore et al., 2021). Self-efficacy is a critical psychological construct that has a substantial impact on students’ learning experience and global well-being (Tan & Cutumisu, 2022). Self-efficacy comes from four things (Bandura, A., Freeman, W. H., & Lightsey, 1997), that is a). Performance experience is an achievement that has been achieved in the past, b). The vicarious experience is the experience gained through social modeling, c). Social persuasion, and d). Emotional state.

Self-efficacy is the ability to influence oneself with motivation and action to achieve results or goals and also how long to endure these difficulties (Bandura, 2010). Self-efficacy in learning and academic motivation is taking recognition in the academe (Coros & Madrigal, 2021). Self-efficacy is a person's belief in being able to master the situation and produce positive results (Santrock, 2003).

According to Bandura, there are three dimensions of self-efficacy: magnitude/level, strength, and generality (Gist, 1987; Pajares, 2003). “Magnitude refers to how difficult a person finds it to adopt a specific behavior. Strength reflects how certain a person is in being able to perform a specific task. Generality refers to the degree to which self-efficacy beliefs are positively related, either within a behavioral domain, across behavioral domains or across time” (Bandura, 1978). The difference in these dimensions is different for each person and causes a person's self-efficacy to be different from others (Hairida, 2017). Self-efficacy in learning concerns students’ cognitive appraisal” of their innate abilities and capacities whether or not he or she can succeed or achieve competence in a prospective academic task (Zimmerman, 2000).

Junior high school students are students with a mass transition from childhood to adolescence to then into adulthood. They interact with other students, their teachers, school management and staff of the school. Safety and happiness of the students and their social and psychological development are important for their academic success (Eres & Bilasa, 2017). Three things that distinguish adolescents from other age groups, are the onset of puberty, the development of thinking skills, and the shift to new roles in society (Hill, 1983). According to McNeely dan Blanchard (2009), from a teenager's point of view, puberty puts the spotlight on body image. The psychological effects of biological, cognitive, and social changes that occur in adolescents are shaped by
the environment in which these changes occur (Bronfenbrenner, 1979). In this period, they become aware of their own and others’ characteristics and develop a sense of global self-value (Yüksel, 2013).

During this transition period, the level of self-control is still low. This can be seen from the level of emotional control that has not been stable. Their characteristics begin to appear in tandem with the behaviors they show. As a result of unstable student emotions, student self-efficacy in the learning process is certainly different for each student. This different self-efficacy will also cause different learning motivation and self-regulation learning. So that student learning achievement can also be affected. Individuals with low general self-efficacy to find vicarious experience information significantly less beneficial for their self-efficacy in completing a set task when compared to others with high general self-efficacy (Wilde & Hsu, 2019).

Although there have been many studies on self-efficacy, research on the self-efficacy of junior high school students is still rarely done. The aims of this study were to 1) examine the actual self-efficacy of students and the self-efficacy of students in each dimension of self-efficacy. 2) Investigate the differences in student self-efficacy based on gender. This needs to be done as a basis for improvement for teachers and schools in terms of improving services to students.

METHOD

This type of research is quantitative with descriptive and correlation types. The descriptive research methodology aims to make accurate, factual, and systematic descriptions of certain facts. The participants in this study were 168 junior high school students with 95 female students and 73 male students. The students came from three different junior high schools in Langke Rembong, Manggarai Regency. The sampling technique uses purposive sampling based on school achievement, namely the order of passing grades for the 2019 national exam (because from 2020 to 2023 there will be no national exams). The three schools are distinguished by high, moderate, and low categories.

Data collection was using survey techniques. The research instrument is a self-efficacy questionnaire with a Likert scale. 1 represents the strongest disagreement and 5 represents the strongest agreement. The questionnaire was compiled based on Bandura's self-efficacy dimensions, namely magnitude/level (task difficulty), strength (strength/belief), and generality. The validity test showed 18 valid items from the total 35 items tested so only 18 items were used in the study. While the results of the reliability test show Cronbach's Alpha value of 0.865. This shows that the items on the questionnaire are in the high category, which means the item is reliable or consistent.

Data were analyzed using descriptive techniques with categorization based on a scale of 5: very high, high, moderate, low, and very low (Azwar, 2015). The descriptive analyses were used in summarizing and organizing the data and described the characteristics of the sample in population. Meanwhile, to analyze self-efficacy based on gender was analyzed using the one way Anova test.

RESULTS AND DISCUSSION

Result

Students’ self-efficacy in general

The measurement of students’ self-efficacy is done through the conversion of the actual scale. The results show that 29.8% of students are in the very high category, 47.0% of students are in the high category and 20.8% of students are in the medium category. Meanwhile, students in the low and very low categories have a percentage of 1.8% and 0.6%. This data shows that in general students’ self-efficacy is in the high category. The graph of student self-efficacy can be seen in figure 1.

After obtaining the student self-efficacy, data in general. Then measured the achievement of student self-efficacy, from the dimensions of magnitude, strength, and generality. The result shown in table 1. Data in table 1 shows students have very high self-efficacy on the generality dimension compared to the other two dimension. Meanwhile, on the same dimension, students also have very low self-efficacy with quite a large number compared to the other two aspects. On the dimensions of magnitude and strength, most students have high self-efficacy.
Table 1. Student self-efficacy from each dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very High</td>
</tr>
<tr>
<td>Magnitude</td>
<td>26.2%</td>
</tr>
<tr>
<td>Strength</td>
<td>20.8%</td>
</tr>
<tr>
<td>Generality</td>
<td>47.6%</td>
</tr>
</tbody>
</table>

Students’ self-efficacy in terms of gender

Student self-efficacy based on gender needs to be done to see the difference between male and female students. Statistical descriptives (table 2) show that the average self-efficacy obtained by female students is higher than that of male students. The average value for female students is 56.23 and for male students is 51.8.

One way Anova’s analysis in table 3 shows that there is a significant difference between the self-efficacy of male and female students. This can be seen from the significance value of p-value = 0.000 at a confidence level of 0.05%.

Measurement of actual self-efficacy with a 5-scale categorization between male and female students found that the self-efficacy of male and female students was in the same category as the high category. However, the percentage of male students is higher than female students. When viewed from other categories of self-efficacy, female students dominate in the very high category. On the other hand, the other three categories were dominated by male students.

The percentage of self-efficacy of male students is 20.5% very high, 49.3% high, 26% moderate, 2.7% low, and 1.4% very low. Meanwhile, the percentage of female students' self-efficacy was 36.8% in the very high category, 46.3% in the high category, 15.8% in the moderate category, 1.1% in the low category, and none of the female students in the very low category. The results are shown in figure 2.

Self-efficacy based on gender is also seen for its tendency in each dimension. Table 4, shows the analysis each dimension of self-efficacy. The data shows that both male and female students have high self-efficacy in the magnitude dimension. However, in the other two dimensions, differences were found. Interestingly, a large number of male students fall into the very high category on the strength dimension. This means that they believe in their own strength in achieving goals in learning. Meanwhile, most of the female students had very high self-efficacy on the generality dimension.

Looking further at the very low category, the data shows that female students have better self-efficacy than male students. This is evident
from the absence of female students who have very low self-efficacy on the dimensions of magnitude and strength.

Table 2. Descriptive statistics of male and female students

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>51.86</td>
<td>7.374</td>
<td>29</td>
<td>68</td>
</tr>
<tr>
<td>Female</td>
<td>56.23</td>
<td>6.397</td>
<td>40</td>
<td>70</td>
</tr>
<tr>
<td>Total</td>
<td>54.33</td>
<td>7.155</td>
<td>29</td>
<td>70</td>
</tr>
</tbody>
</table>

Table 3. ANOVA test results based on gender difference

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>787.798</td>
<td>1</td>
<td>787.798</td>
<td>16.849</td>
<td>0.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>7761.535</td>
<td>166</td>
<td>46.756</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8549.333</td>
<td>167</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. The difference in self-efficacy of male and female students

Table 4. Male and female student self-efficacy from each dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Very High</th>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
<th>Very Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% M</td>
<td>% F</td>
<td>% M</td>
<td>% F</td>
<td>% M</td>
</tr>
<tr>
<td>Magnitude</td>
<td>19.2</td>
<td>31.6</td>
<td>39.7</td>
<td>53.7</td>
<td>30.1</td>
</tr>
<tr>
<td>Strength</td>
<td>47.9</td>
<td>42.1</td>
<td>12.3</td>
<td>27.4</td>
<td>30.1</td>
</tr>
<tr>
<td>Generality</td>
<td>32.9</td>
<td>58.9</td>
<td>24.7</td>
<td>20</td>
<td>26</td>
</tr>
</tbody>
</table>

M: Male; F: Female; %: percentage

Discussion

The results showed that most students had high self-efficacy, but there were still students with moderate, low, and very low self-efficacy. The level of self-efficacy predicts how people are functioning, in terms of choice behavior, effort expenditure, and persistence, thought patterns, and emotional reactions (Van der bijl & Shortridge-Baggett, 2001). Chowdhury & Shahabuddin (2008) explain that high self-efficacy is beneficial to student’s motivation and learning experience, while students with low self-efficacy are associated with many mental and behavioral problems (Tahmashian & Moghadam, 2011).

Self-efficacy is a very important factor in the learning process. Self-efficacy is also
important, for all aspects of life (Bandura, 2010). Students with high self-efficacy are confident to understand lessons, solve educational problems, and choose the most difficult courses. (Bandura, 1978) found that students with high self-efficacy were able to complete complex tasks. Students with high self-efficacy can understand and solve math problems compared to students with low self-efficacy, also students with high self-efficacy are planning to study complex subjects in the future (Schwarzer, 1992; Zajacova, Anna; Lynch, Scott M; & Espenshade, 2005; Ahmad & Safaria, 2013). In biology and chemistry lessons, self-efficacy also has a positive and significant relationship with student learning outcomes (Marneli et al., 2020; Harahap, 2016). Structural equation modeling revealed positive effects of mathematics self-efficacy on mathematics achievement and of reading achievement on reading self-efficacy. In addition, self-efficacy also has a very significant positive relationship with self-regulated learning (Adicandro & Purnamasari, 2011).

It has been explained previously that self-efficacy determines a person's success in the learning process. This shows that self-efficacy is an important thing in supporting student achievement. Self-efficacy has been shown to greatly influence students' results (Capron Puozzo & Audrin, 2021). Hwang et al. (2016), find that there is a reciprocal relationship between self-efficacy beliefs and academic achievement was seen, such that the effect of past academic performance on self-efficacy beliefs was larger than the effect of self-efficacy beliefs on academic achievement.

High or low self-efficacy combines with a responsive and unresponsive environment to produce the following four most predictable variables: (1) When self-efficacy is high and the environment is responsive, the most predictable outcome is a success. (2) When self-efficacy is low and the environment is responsive, people can become depressed when they observe others completing tasks they find difficult. (3) When high self-efficacy meets an unresponsive environmental situation, humans will try hard to change their environment, (4) when low self-efficacy combines with an unresponsive environment, humans will feel apathy, give up easily and feel helpless” (Bandura, 1997). Consistency of interests, one of the subscales of grit, was found to be positively related to exam attempt and study progress after controlling for academic self-efficacy, self-esteem, and the grit subscale perseverance of effort but the consistency of interests was not a significant predictor of academic performance (Neroni et al., 2022).

The results of the analysis with a categorization scale show that the self-efficacy of male and female students is in the high category. This also occurs in the strength and magnitude dimensions. Meanwhile, on the generality dimension, male and female students have very high self-efficacy. This means that students believe that they can complete several different tasks at the same time.

However, the results of the ANOVA test showed a significant difference between male and female students. This is following Bandura's (2010) statement that factor that affects the level of self-efficacy is culture and gender. The results of previous studies showed significant differences in self-efficacy between male and female students (Ifdil et al., 2016) and the main effect of gender was significant for self-efficacy (Ullah et al., 2019). It was also found that female students have higher academic self-efficacy than their male colleagues in biology (Ahmed et al., 2022). Self-efficacy significantly affects academic performance and, hence, the gender-personality orientation may reveal an important relation to self-efficacy and academic performance (Fallan & Opstad, 2016).

Comparison between female and male students on each dimension of self-efficacy, shows that both of them have good self-efficacy on the magnitude dimension. This shows they have confidence in completing complex tasks. However, on the strength dimension, male students show very high self-efficacy compared to female students. This means that male students have good self-efficacy and are persistent in achieving goals. Meanwhile, on the generality dimension, female students have very good self-efficacy. So, they can complete different tasks well. However, it cannot be concluded that female students are more multitasking than male students.

Lui, et al. (2021) state that the gender difference in dual-task performance, was not mediated by the gender differences in multitasking experience but completely explained by difference in the processing speed. The findings suggest that men have an advantage in concurrent multitasking, which may be a result of the individual differences in cognitive abilities (Kelvin Ph Lui; Ken Hm Yip,
2021). Also, the study from Hirch, et al. (2019) results do not confirm the widespread stereotype that women are better at multitasking than men.

Although based on the data of this study, male and female students had high self-efficacy, male and female students still had very low and low self-efficacy. This is certainly a problem for these students, teachers, and schools. Students with low self-efficacy should receive counseling guidance be able to adapt to classroom situations. If this problem is ignored, it will have impact on character development. The progress of the lesson will also end up not achieving learning goals. Therefore school guidance and counseling services are needed in this situation.

Guidance and counseling for students with low self-efficacy will help them to deal with difficult situations, shape behavior, dare to speak, and more. If this is done, it is not impossible for students to achieve their learning goals. Fadipe et al., (2021) found that counseling services helps to boost academic performance, among science students in the area studied in Bwari area. Guidance and counseling services have positively influenced the academic performance of the students and should be strengthened to improve the students’ performance in national examinations (Ibrahim et al., 2021).

Ahmad & Zadha (2019) explained that guidance and counseling is an important educational tool in shaping the orientation in a child from negative ideas that is planted in the child by his/her peers. It is believed that guidance and counseling services in school shall develop, assess and improve educational programmes; enhance teaching and improve the competence of the teacher and reduce cost for the children (Ahmad & Zadha, 2019).

CONCLUSIONS AND SUGGESTIONS

In general, students' self-efficacy is in the high category, as well as when viewed from a gender perspective. However, if it is seen from the tendency of self-efficacy of male and female students in each dimension, it is still found that students have moderate, low, and very low self-efficacy. Both categories are dominated by male students. This is an important note for teachers to develop improvement and improvement programs. Even though the data shows that male and female students have high self-efficacy, it is necessary to carry out in-depth studies regarding the correlation of this self-efficacy with their learning outcomes.

The results of previous research stated that several factors influence self-efficacy such as; methods course, practice learning, technology, educational technology course, practicum, and observing models (John Settlage, 2000; Milman & Molebash, 2008; Gurvitch & Metzler, 2009). Therefore, Dinther, Mart Van; Dochy Filip; & Segers (2011) suggest educational institutions could also actively stimulate self-efficacy of students by providing a program that provides students with authentic tasks, requiring them to apply more frequently knowledge and skills within diverse situations. The use of learning models or methods is also very possible to be applied in the classroom to increase students' self-efficacy. Previous findings indicate the use of learning models such as guided inquiry learning, and collaborative learning has a significant relationship with self-efficacy (Ardiany et al., 2017; Law et al., 2015).

Furthermore, research by Hasanah et al., (2019) stated that the use of the 7e learning cycle model (elicit, engage, explore, explain, elaborate, evaluate, and extend), increases student motivation and activities in the learning process so that students will more easily understand the material being discussed and students' learning achievement in mathematics and confidence in their abilities also increase. The use of the NHT (Numbered Head Together) model also has a positive influence on students' self-efficacy in science subjects (Yasa et al., 2020).

Based on these facts, it is important for teachers and principals to improve services and guidance to students in schools in order to increase students' self-efficacy. The success of learning does not solely depend on students but also the teacher as a class facilitator. Appropriate and varied learning methods and models will increase student involvement to make the class more active and efficient. In addition, the use of technology and media also provides support for students and teachers during learning to achieve goals. In addition, the provision of good counselors also helps solve learning problems that ordinary teachers cannot do. The openness and seriousness of the school in solving all problems that exist between students and teachers will be able to create good relationships and an environment for learning for everyone.
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