The Differences of Self Regulated Learning in Senior High Schools Students in Terms of Gender and Class Specialization

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ABSTRACT

This research aims to examine methodologically and empirically the differences in the level of self-regulated learning of senior high school students in science class and Social class, seen from a gender perspective. The research variable consisted of:(a)the level of self-regulated learning,(b)class specialization, and (c)gender that was measured using modified Likert scale and using self-regulated learning level. This research is quantitative. The population is the second-year students of SMA Negeri 1 Menganti Gresik. The research sample obtained is 80 samples consisting of 40 samples from 20 males and 20 females of Natural science class, and 40 samples from 20 males and 20 females of Social science class. The data analysis used the two-way ANOVA technique. ANOVA test using the help of a computer program(SPSS19.0forwindows) is used to test two variables or more and determine whether the two variances are the same or not. After conducting the different tests using two-way ANOVA with the help of SPSS 19.0, the research results gained average Natural science class and Social science class of 103.21. The results showed that the Natural science class and Social science class students were seen from the gender.

Keywords: *Self-Regulated Learning, Senior High School, Gender, Class Specialization.*

1. INTRODUCTION

Self-regulated learning in the covid-19 era is a concept that needs to be considered in students: particularly for Senior High Schools students. *Self-regulated learning* contributes to students' learning success since it is an individual's internal capability to learn self-management [1]. Furthermore, it explained that *self-regulated learning* would regulate, analyze, and control students' learning patterns to reach expected outcomes [2].

Self-regulated learning refers to students' expectations of learning outcomes[3]. Self-regulated learning is formed by the influence of self-efficacy, motivation, and goals to be achieved. However, the contemporary point out that self-regulated learning is also affected by Social factors around the individual.

A study showed that each individual commonly has a different level of self-regulated learning which can be categorized into a high and low level of self-regulated learning[4]. The number of students in a class could distinguish the students based on their achievements and activities in school. This study has conducted a preliminary study by observing and interviewing some

students in the Public Senior High School 1, Menganti. The interview also included guidance and counseling teachers in charge of Natural sciences and Social sciences classrooms. According to them, 85 percent of science students are more active than Social students. On average, four out of five students in a Social science class felt less focused on their studies, were late in submitting assignments by the due date, only studied during the exam, and perceived themselves as less disciplined.

Self-regulated learning is an essential part of individual success. Therefore, the school should provide sufficient space to form self-regulated learning. For this reason, it is necessary to learn how to create learning which prompts the development of self-regulated learning so that students can develop self-management in learning to get academic achievements. There is a difference in students' self-management in learning to achieve academic achievement between Natural science and Social science classes. Students of Natural science class will feel proud because they can be accepted in Natural science class. On the other hand, they also get the pressure to maintain their achievements to remain in the top position during the covid-19 pandemic.

Meanwhile, the Social science class students feel insecure received in the Social science class because the prejudice is not good from the teacher and surrounding environment. On the other hand, Social science class students are also required to excel academically. It is why different regulations between students happen in school. Students with high self-regulated learning will tend to have good learning time management, while students with low self-regulated learning will have messy learning time management.

Male and female adolescents have different self-regulated learning; 85% of female students in science class tend to be more disciplined and active in learning, but 75% of male students in science class remain disciplined but less enthusiastic in learning[5]. High self-regulated learning can be interpreted as the ability of an individual to stay persistent, tenacious, and diligent in learning. Low self-regulated learning will make individuals tend to give up easily on complex assignments and make less effort to get a better result. High self-regulated learning in students positively impacts their academic achievements[6]. Self-regulated learning will make them actively participate in online and offline learning at this time. In contrast, low self-regulated will make students less concentrated and be lazy to understand the lessons.

It is interesting to examine the different levels of self-regulated learning seen from the gender perspective as in the phenomenon taken from senior high schools in SMA 1 Menganti Gresik regarding the differences in self-regulated learning level; for instance, there were many female students finished their tasks earlier than the male students during a covid-19 pandemic. The school counselor who handled both classes stated that most of the times during the online learning, it was the female students showed active participation [7]. The class teacher added that female students expressed their opinions more and were actively participating in learning activities.

Based on the background above, it raises the question of whether there is a difference in the level of self-regulated learning in senior high school students regarding gender and class specialization or not.

2. METHOD

A quantitative method was applied in the research design. This research is a two-way ANOVA research analysis, which attempts to determine the various coefficients of two variables comprising of two classes at the same time. Purposive random sampling was used to get the research sample. This study did not include all populations; instead, it employed 80 samples, including 40 from a Natural science class of 20 men and 20 women and another 40 from a Social science class of 20 men and 20 women in senior high schools.The Likert scale is applied to measure the data collection instrument. This study's instrument employs two forms of validity. It entails obtaining indicators and items stated in the study instrument using content validity and professional judgment. Because the instrument covers issues that have been described as dimensions and elements that explain the notion, this validity is applied. Professional judgment is used to determine if the items in the research instrument are on a good and proper scale based on the objectives and measuring and writing standards. The degree to which measuring instruments can be trusted or consistent is reliability. [8] (2001). Internal consistency reliability approaches are a series of tests administered to individuals just once. Then, the estimated reliability of the test is calculated using the Cronbach Alpha method by SPSS 19.0 (2008) [9].

Data collection of self-regulated learning levels was carried out using a closed questionnaire using a self-regulated learning scale. The closed questionnaire in this form of self-regulated learning level scale consists of 4 multiple choices to which the research subject will respond by choosing one of the four choices directly. Dara collection is done online using google form because of pandemic COVID-19. The data analysis of this research employed a statistical analysis technique using two-way ANOVA to test the hypotheses of the difference between two or more samples. Each sample consisted of two or more types simultaneously. Tests were carried out using the help of SPSS for Windows version 19.0. Before doing the calculation using two-way ANOVA, it was necessary to test assumptions as follows: 1) Normality Test, 2) Homogeneity Test, and 3) Two-way ANOVA Analysis Technique.

3. RESULT AND DISCUSSION

3.1 Result

The normality test of the data carried out using the Kolmogorov-Smirnov Test of Normality with the help of SPSS 19.0 for windows was 0.200> 0.05, meaning that the data was normally distributed. While calculating the results of the homogeneity of variance is done using Levene. It has been found that the Levene Test (F) is 1.810 with a significance (sig.) or p-value of 0.152. Thus, the research data has a homogeneous variance or data from a population with the same variance. so that the research data is usually distributed and the Analysis Technique of Two-Way ANOVA carries out the homogeneity

The following significant values were found using the Two-Way ANOVA Analysis Technique: 1) The significance value of the between-subject effects on a class is 0.000. In terms of class status, there are multiple self-regulated learning levels. 2) The significance value for the between-subject effects on gender is zero. There are multiple self-regulated learning stages based on

gender, and 3) The significant value of the between-subject effects on class * gender is 0.016. There is a connection between class specialization and gender.

3.1 Discussion

The hypotheses test using the two-way variance data analysis technique (two-way ANOVA) showed a difference in the self-regulated learning level of students between the two classes in terms of gender. Thus, there is a difference in self-regulated learning levels between female and male students. The hypotheses result using a comparative technique by two-way ANOVA, and the between-subject effects test showed a difference in self-regulated learning level between students in Natural science class and Social science class in terms of gender. Therefore, there is a difference between male and female students. It can be seen in the significance level 0,000 on

demonstrated in an experiment conducted on some students in senior high school, in which female students were given a pile of homework and male students[12]. A few days later, female students could finish all the assignments well, while male students could not. Self-regulated learning is based on personal, behavioral, and environmental aspects. According to Bandura, the relationship of these three aspects is the cause and effect of the individual to regulate himself in self-regulated learning[13]. They explained that self-regulated learning is an individual's ability to control his learning activity, motivate, supervise the academic goals by managing the existing resource, and be an executor of decision-making in learning. Therefore, self-regulated learning is an important part of students' learning success[14].

Stated that self-regulated is a combination of

Table 1. Summary of two-way ANOVA

Sources	JK	Db	RK	F	Sig.	Interpretation
Class Specialization	40725.312	1	40725,312	766.737	.000	Significant
Gender Regulation Learning	58687.133	1	58687,133	110.426	.000	Significant
Class Status and Gender	34.,013	1	342,013	6.200	.00	Significant
Error	4036.570	76	53.155	–	–	–
Total	987747.000	80	–	–	–	–
Class Specialization	40725.312	1	40725,312	766.737	.000	Significant
Gender Regulation Learning	58687.133	1	58687,133	110.426	.000	Significant
Class Status and Gender	34.,013	1	342,013	6.200	.00	Significant

class status, significance level 0,000 on gender, and significance level 0,16 on class specialization and gender.

The statistical analysis result shows a difference in the mean value between science students, 125,78, and Social students, 80,65. It shows that science students have a higher level of self-esteem than Social students. In terms of gender, there is a difference in average scores of male and female students in the class specialization. Female students have an average score of 111,77, while male students have an average score of 94,65. It shows that female students have a higher level of self-regulated learning than male students.

Based on the previous studies on self-regulated learning, each individual has different self-regulated learning levels categorized into high and low levels [10]. The findings showed that the self-regulated learning level of men is lower than women [11]. The research was

individual self-control and academic learning skill to self-regulate in learning and get the learning outcomes as expected. In self-regulated learning, autonomy and self-responsibility are essential in a learning activity; students will build learning purposes by supervising, regulating, and controlling their beliefs, motivations, and behaviors to achieve their goals[15].

As defined, self-regulated learning will regulate, analyze, control students learning patterns to reach optimal learning outcomes[16]. Thus, students' self-regulated learning will be realized by depending on the students' internal ability to do self-management in learning to get optimal academic achievements.

The difference in self-regulated learning level of students occurred due to the interaction effects in society or environment [17]. This kind of interaction mostly occurs during social gathering at school. When people act

and treat someone in social manner and make comments about the person in question, which has a substantial impact on the creation of self-regulated learning. The competitive climate in the classroom is high for students in Natural science classes [18]. Students in Natural science are eager to pay attention in class. However, the majority of them ignore their peers and not easily distracted during classroom session.

The discrepancies are also apparent in the research conducted by observing the Science and Social class. Even though they were learning online, the environment in the class was reasonably tranquil, with most of them tending to work more and speak less. On the other hand, the Social class atmosphere was a bit out of control; when the learning process ran, they were busy with their own business and less focused. Another factor that could differentiate self-regulated learning levels on students was the environments. A comfortable learning environment with supporting facilities was another factor that determined students' self-regulated learning level.

4. CONCLUSION

This study concludes that there are differences in the self-regulated learning process between students in Natural Science and Social Science classes in SMA Negeri 1 Menganti Gresik. Natural Science class students have a higher level of self-regulated learning than Social Science class students. There are also differences in the self-regulated learning process between male and female students in SMA Negeri 1 Menganti Gresik. Female students in both classes have higher levels of self-regulated learning than the male students in both classes. A two-way ANOVA analysis obtained the research findings from a significance level of 0.16 based on gender and class specialization. Based on the findings then we can conclude that there is an relation between class specialization and gender on the level of self-regulated learning in SMA Negeri 1 Menganti Gresik.

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