

## THE EFFECT OF SELF-EFFICACY AND SENSE OF COMMUNITY ON HIGHER ORDER THINKING ABILITY OF STUDENTS SCHOOLGY- ASSISTED LEARNING

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### Abstract

*This study aims to determine the effect of self-efficacy (SE) and sense of community (SC) on the ability to think of high-level students in learning Newton's law material about gravity aided by Schoology. The research design used was Non-Equivalent Pretest Posttest Control Group Design. Data were tested by single linear regression and multiple linear regression tests. Based on the results of the Higher Order Thinking Skills (HOTS) single linear regression test with SE correlation coefficient of 0.035 so that both do not have a significant relationship. HOTS with SC correlation coefficient of 0.013 so that both do not have a significant relationship. Multiple regression test The results of the regression analysis above shows the price coefficient of determination equal to 0.003. This value means that 0.3% change in the variable HOTS can be determined by SE and SC while 99.7% is explained by other variables not examined in this study. This shows that there is no positive and insignificant relationship between Blended learning assisted by Schoology to higher level thinking skills seen from students SE and SC.*

**Keywords:** *Blended Learning, Higher Order Thinking Skills (HOTS), Self-Efficacy (SE), Sense of Community (SC)*

### INTRODUCTION

Learning outcomes are measures of success in the physics learning process that is influenced by several components. The assessment system in the 2013 curriculum is not only oriented towards the final assessment, but there are also other assessments, such as assessment in the learning process, which must be paid close attention to, so that the term assessment in the learning process is very much needed. According to Herrington (2006), "Authentic assessment involves the ability to solve problems and higher-order thinking skills". Higher order thinking skills (HOTS) are thinking abilities that test at a higher level, so students not only memorize and remember, but are also required to be able to analyze, synthesize, and evaluate during learning. Higher order thinking skills have 4 forms of reasoning namely analysis, comparison, inference, and evaluation.

Utilization of information and communication technology in learning that is the learning process can be shifted that is centered from teacher to student centered. Fauziah (2015) said that information and communication technology can improve the quality of education, and ways to enrich education by integrating technology into traditional classrooms. Technology can also be used as a resource for teachers and students to support

the learning process as it progresses, especially for generations of high school students, most of whom are more interested in technology (social media). It is hoped that students who study physics using technology will further enhance student confidence in the learning process.

SE is very important in the learning process during the learning process. Bandura (1997) said that self-efficacy is very important for students because SE can be used for problem solving in learning physics. So the learning process can achieve success. Mustaqim (2008: 21) says that SE is one's belief in self-motivation, and can take the necessary actions to meet the demands of the situation at hand. That is, with high SE, students will be confident in the classroom so students can get good results. Student SE is highly expected because SE is used to value life skills in the learning process at school, but so far it has not been implemented properly so that most students lack good SE. Besides the factors that cause low SE of students because there are irregularities during the learning process, for example the form of irregularities during the implementation of learning is a core activity that has not been carried out to the maximum or has not been able to fulfill the process of exploration, elaboration, and confirmation. And also students are only required to memorize concepts and write or record what is explained by the teacher during the learning process (Wirtha & Rapi, 2008).

A positive social environment can be like a discussion group where the expectations of each member must have a feeling of belonging to each other so that each member can get the same goals as getting a satisfying result. Connectedness shows the level of care and satisfaction among group members, while learning shows active construction and social knowledge generated from a developing learning community. Jaabaren and Zilberman (2017) say that age, financial status. Education, income, ownership status, duration of stay long in a place are significantly and positively related to sense of community.

Strong SC will also have an impact on the sense of comfort in the learning process, a sense of comfort to connect (communicate) between other students, a sense of comfort in developing oneself, responsible for academic life, can seek help from friends or teachers when experiencing difficulties, and benefit from interaction. Students who have a strong SC encourage motivation and satisfaction to learn so that students can complete their academic work properly or optimally. That is, with a strong SC in students it is assumed that a strong SC can have a positive influence on students' high thinking abilities. If the two variables are combined, namely SE and SC, then the alleged SE and SC have a positive effect on students' higher-order thinking skills.

Based on previous studies on SE have controversies such as differences in research results where, Pajares (2005) and Astika (2018) say that there is a positive relationship between SE and learning outcomes. However, according to Ahriana (2016) the results of his research showed that there is no relationship between SE and physics learning outcomes and it is not yet known whether SE affects the ability to think at a high level in physics learning. Research on SC according to Wendt and Szapkiw (2015) SC has a positive relationship with academic achievement but it is not yet known whether SC affects the ability to think at the high level of physics learning and the lack of research on SC. Based on the description above, researchers feel the need to conduct research on the effect of SE and SC on students' high-level thinking skills in schoology-assisted learning.

## **METHOD**

This study uses two variables, the dependent variable and the independent variable. Independent or independent variables are variables that affect or are the cause of changes

or the appearance of the dependent variable. While the dependent variable is a variable that influences or is due to an independent variable. In this study, the independent variable (X) is SE and SC while the dependent variable (Y) is the ability to think at a higher level in Newton's law material about gravity.

The data in this study are quantitative data which means that the data can be obtained through the assessment of learning outcomes, and also the results of the SE and SC questionnaires completed at the end of the learning process. HOTS assessment analysis of students is done using quantitative analysis techniques. Data collection is done after the process of learning activities. The steps in this research are the process of collecting data by distributing assessment of learning outcomes, which are used to see the results of learning in the form of students' cognitive scores obtained from giving HOTS questions. After the learning process, each student is divided into a SE and SC questionnaire with several questions to find out students' SE and SC.

The research instrument used in this study is about HOTS questions in the form of multiple choices and C4-C6 cognitive levels that refer to Nur Syamsiyah with 15 items, SC scale with 21 questions that have been adapted from Roberts et al. (1995), Rovai (2002), Rovai et al. (2004), a SE scale with 21 questions that have been adapted from Lin et al. (2015).

## RESULT AND DISCUSSION

### Result

Blended learning learning is seen from the SE of this variable students can be measured using the SE scale that has been given to students of class X MIPA1 and MIPA2 in the 2019/2020 school year at Xaverius Pringsewu High School. Based on the scale given to 49 students, the highest value obtained was 95.29 and the lowest score was 30.29 and the mean 60.29 and the standard deviation of 14.98. Data on HOTS student frequency results are shown in Table 1.

**Table 1.** Distribution of Students' SE Trends

Interval	F	Persentase	Category
0-20	0	0	Very Low
21-40	3	6,1	Low
41-60	26	53,1	Enough
61-80	17	34,7	High
81-100	3	6,1	Very High
Amount	49	100	

Blended learning learning is seen from the SC students of this variable can be measured using the SC scale that has been given to students of class X MIPA1 and MIPA2 in the 2019/2020 school year at Xaverius Pringsewu High School. The scale given to students is given treatment with blended learning. Based on the scale given to 49 students, the highest value obtained is 97.86, the lowest score is 38.50 and the mean is 60.11 and the standard deviation is 10.89. Data on students' HOTS frequency results are shown in Table 2.

**Table 2.** Distribution of Students' SC Trends

Interval	F	Persentase	Category
0-20	0	0	Very Low
21-40	1	2,0	Low

<b>41-60</b>	26	53,1	Enough
<b>61-80</b>	20	40,8	High
<b>81-100</b>	2	4,1	Very High
<b>Amount</b>	49	100	

HOTS students can be measured using questions that refer to the research results of the development of Nur Syamsyah. This variable can be measured using HOTS questions that have been given to students of class X MIPA1 and MIPA2 in the 2019/2020 school year Xaverius Pringsewu High School. The questions are given after the students are treated with blended learning. ). Data on the frequency of students' High Ability Thinking results is shown in Table 3.

**Table 3.** Distribution of High Level Thinking Tendencies

<b>Interval</b>	<b>F</b>	<b>Persentase</b>	<b>Category</b>
<b>&lt;39</b>	9	18,4	Very Low
<b>40-55</b>	16	32,7	Low
<b>56-65</b>	11	22,4	Enough
<b>66-79</b>	11	22,4	High
<b>&gt;80</b>	2	4,1	Very High
<b>Amount</b>	49	100	

## Discussion

The effect of blended learning using schoology on HOTS is seen from students' SE. Based on the results of the analysis that has been done, the results of this study indicate that there is no positive effect between blended learning using schoology assistance to HOTS when viewed from the results of SE students. The results of the Product Moment correlation analysis obtained rcount value of 0.035 and rtable value with a total N of 49 students measured using a significance level of 5%, the results obtained were 0.232. So the value of r count is smaller than r table value so the results of analysts show that there is no relationship and significant.

The hypothesis in this study was not proven because the research findings showed that it was not related and significant. The low SE of students occurs due to a deviation when the learning process is taking place. Examples of forms of deviation that occur during the learning process are the core learning processes that have not been able to be carried out properly or there is no process of elaboration, exploration and confirmation. Where the learning process only requires students to learn to memorize the concepts provided and record what is explained by the teacher (Wirtha & Rapi, 2008). This is also supported by the results of Ahriana's (2016) research saying that there is no relationship between SE and physics learning outcomes and it is not yet known whether SE influences higher order thinking skills in physics learning. This relationship was also strengthened by the results of interviews of 6 selected students in the experimental class where 4 students when learning blended learning felt they had no influence with their SE. They said he and his friends were not accustomed to learning to use online media so there were still friends who didn't understand and didn't work. According to them, this cannot strengthen each student's SE because confidence in working on HOTS questions will increase when students understand the material being taught. It can be concluded that the results of this study have no significant and significant relationship between SE and high-level thinking skills at Xaverius Pringsewu High School Students.

The effect of blended learning using schoology on HOTS is seen from students' SC (SC). Based on the results of the analysis that has been done, the results of the study show that there is no positive effect between blended learning using schoology assistance to HOTS when viewed from the results of students' SC. The results of the Product Moment correlation analysis obtained  $r$  count value of 0.013 and  $r$ table value with a total  $N$  of 49 students measured using a significance level of 5%, the results obtained were 0.232. So the value of  $r$  count is smaller than the  $r$ table value so the results of analysts show that there is no significant and significant relationship between SC and high-level thinking skills of Xaverius Pringsewu high school students.

The hypothesis of the study was not proven because the findings of this study showed that it was not related and significant. According to Ishida et al. (2014) revealed that an obstacle that is experienced at the development stage of the SC is the feeling of being threatened from an older or senior person, the lack of work done makes the community stagnant and undeveloped, and there are conditions where when new members join, seniors in the group already require new members to always actively participate like members who have been in the community for a long time. Another study shows that the imbalance of power between teachers and students in a school in the UK also causes students to feel less that they have influence, integration, or fulfillment of needs (integration & fulfillment of needs) in schools (Christianity, Natalya, & Linda, 2014). This relationship was also strengthened by the results of interviews of 6 selected students in the experimental class where 4 students when learning blended learning felt they had no influence with their SC. This is because when in class they are required to solve problems in groups and when online they are not ready and difficult to solve problems in groups because there are group friends who are lazy to express their opinions so that online discussions do not go well.

The effect of blended learning using schoology on HOTS is seen from the students' SE and SC. Based on the results of the analysis that has been done, the research results are obtained to test the third hypothesis which aims to determine the significance value of the correlation between SE and SC together against HOTS. The results of the analysis of the regression analysis results obtained coefficient of determination ( $r^2$ ) of 0.003. This result is equivalent to 0.3% of changes in the HOTS variable of students can be determined by the SE and SC and 99.7% explained by other variables not examined in this study. The third hypothesis in the study was not proven because the results of the study showed that there was no relationship and was significant.

It can be concluded that the third hypothesis is a new finding due to the absence of this researcher, in which there is no research that combines both variables regarding SE and SC simultaneously to determine the effect of physics learning outcomes, especially in student HOTS learning outcomes.

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