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The Influence of Exo Olo Task Learning Models Through Google Sites Towards Students' High Order Thinking Abilities in Geography Subjects

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ABSTRACT

Students in the 21st century must have 4C competency skills, which include critical thinking, communication skills, creativity, innovation and collaboration. With 4C competencies, students can develop high-level thinking skills. These abilities can be formed through learning models, one of which is the Exo Olo Task learning model. This model is designed to teach high-level thinking skills to students because in the syntax of this model students are trained to work on two types of questions, namely Exo Task (C1-C3) and Olo Task (C4-C6). The purpose of this study was to test the effect of the Exo Olo Task learning model on students' high-level thinking skills in geography subjects. The researcher used a quasi-experiment with a pretest-posttest control group design. The data in this study were primary data and secondary data. This research was conducted at SMAN 1 Tumpang class XI on population dynamics material. Based on the results of the study, students' high-level thinking skills were influenced by the Exo Olo Task Learning Model assisted by Google Sites. The significance value of the t-test results is 0.003 ≤ 0.05, so it can be concluded that the Exo Olo Task Learning Model assisted by Google Sites has an effect on students' ability to think at a high level.

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1. INTRODUCTION

21st-century learning is learning that changes the approach from teacher-centered to student-centered. Students in 21st-century learning must be able to develop and empower all skills to form superior character (Rahayu et al., 2022). Apart from that, 21st-century learning also requires innovative and imaginative individuals to adapt according to current developments. Apart from that, education must also be able to develop the competencies that have been raised by the world of Indonesian education, namely the 4C competencies critical thinking, communication skills, creativity and innovation, and collaboration (Nofrion, 2018a). These 4C competencies can help students get used to thinking systematically when solving problems (Partono et al., 2021).

One of the characteristics of 21st-century learning is collaboration, which requires students to be able to solve a problem through group discussion. Nature learning collaboration is active learning starting from small groups to improve learning outcomes and respect differences between students by developing communication and creating a comfortable learning atmosphere (Rifani and Lobja, 2020). Collaborative learning provides opportunities for successful learning because it requires students to be more active in class and minimize differences (Nofrion, 2018c). Students will have high-level thinking abilities if learning is carried out in groups or discussions (A. R. Saputra and Rahmat, 2023).

High-level thinking skills are crucial in the context of 21st-century learning. This is because students will learn from the knowledge or experience they gain independently. This argument is in line with Nofrion's research, which found that having broad insight and high-level thinking abilities is necessary to adapt to changing times (Nofrion, 2018b). Critical, creative, metacognitive, and logical thinking abilities are examples of higher-order thinking aspects. Meanwhile, Megawati explained that high-level thinking abilities include the ability to analyze, evaluate, and create (Megawati et al., 2020). According to Bloom's taxonomy, there are two types of high-level thinking abilities: low-level abilities such as remembering, understanding, and applying, and high-level abilities such as critical thinking, evaluating, and creating (Ariyana et al., 2018).

Higher-order thinking skills (HOTS) are tools used to assess and develop students' higher-order thinking abilities through challenging assignments. The ability to recall, restate, remember, and recite will be improved by providing questions or assignments that fall into the HOTS category. The questions or assignments given are useful for 1) helping measure students' ability to transfer knowledge from one idea to another, 2) helping in applying information received during the learning process, 3) requiring students to look for connections from various sources, 4) testing students' ability to utilize information to solve problems, and 5) encouraging students to examine information critically (Nofrion, 2018b). According to S.M.Brookhart, (2010) his book reveals that high-level thinking abilities are divided into three different parts, namely: 1) the ability to transfer learning results; 2) the ability to think critically; and 3) students' ability to solve problems.

The results of observations at SMAN 1 Tumpang show there are problems with geography learning. Students are not used to answering questions at the Higher Order Thinking Skill (HOTS) level, and teachers use less diverse learning media. This problem is because students are used to answering low-level (LOTS) and medium-level (MOTS) questions in textbooks, so students at SMAN 1 Tumpang have low-level thinking abilities. Problems that happen there, such as the students not yet accustomed to answering HOTS questions, giving assignments without explanation, and learning methods that have not been followed with appropriate learning media, will hamper 21st-century learning activities (Hadi and Nofrion, 2021).

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Therefore, to improve students' high-level thinking abilities, an appropriate learning model is needed.

The success of students' high-level thinking abilities is influenced by the learning model used in the classroom. The Exo Olo Task Learning Model is one model that can be used to grow 4C competencies. In this model, there is collaborative learning, which aims to develop students' thinking abilities. This model is caused by two questions, the Exo Task and the Olo Task, through discussion in pairs and groups. This model consists of four steps, including: 1) concept strengthening; 2) examination-oriented task, or Exo Task (C1-C3); 3) olympiad-oriented task, or Olo Task (C4-C6); and 4) reflection (Nofrion, 2019).

The learning model, Exo Olo Task, has a purpose in its application in the classroom. This learning model for students aims to train students to collaborate and communicate in pairs or groups and to have high-level thinking skills, while for teachers it is to train the teacher's ability to create questions or assignments in categories LOTS, MOTS, and HOTS (Misra and Rahmi, 2022; A. R. Saputra and Rahmat, 2023). Apart from that, models Exo Olo Task also have advantages, including being able to attract students' attention with challenging learning activities, simple learning syntax, and the results of the development of constructivist learning theory, which can train students' understanding (Nofrion, 2019; Nofrion and Novriyani, 2018).

The results of previous research by (Rizqiyah et al., 2023) found that high-level thinking abilities were influenced by the Exo Olo Task learning model, with an average test score of 75.08 in the trial class and 68.28 in the control class. The results of these statistical tests have strengthened the learning model Exo Olo Task, which can influence the students' way to reach the stage of high-level thinking abilities. The difference in scores between the trial class and the control class is not too big, namely 6.8. This is caused by differences in geography learning time. In the control class, geography learning was carried out in the first hour, while in the experimental class, it was carried out in the last hour.

This research uses technology-based learning media because, in the 21st century, advances in science and technology are rapidly impacting the world of education. The technology used is one of the features Google has, which is Google Sites. Google Sites can be used to create page-level websites more easily. The election of Google Sites as a learning medium has many advantages: 1) In their use, Google Sites can be combined with images, video, audio, and text from various other sources, such as YouTube, Google Drive, Google Slide, and features from Google, among others; and 2) they can be used to create learning media that is easy to use (Mukti et al., 2020). Other advantages are that Google Sites are easy to use (flexible) and free of charge (free), provide large storage capacity, and can be accessed using a computer, laptop, or computer cell phone wherever and whenever (Nugroho and Hendrastomo, 2021; Nuraeni et al., 2023).

Based on the description above, this research aims to find out how students' higher-level thinking abilities, especially in geography subjects, are influenced by learning models Exo Olo Task with the help of Google Sites.

2. METHODS

This research uses a quasi-experiment design using the trial class (experiment) and the control class. The design of this research is a pretest-posttest control group design. There is a pretest and a posttest. In this way, researchers can see the differences and influences that

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arise in the two classes that are given different learning treatments. The experimental research design can be seen in **Table 1.**

Table 1. Experimental Research Design

Subject	Pretest	Treatment	Posttest
Control	O	-	O
Experiment	O	X	O

Source: Processed Primary Data (2024)

The research was conducted at SMAN 1 Tumpang, with eleventh-grade students as the population. The determination of experimental and control classes is taken using the purposive sampling technique, provided that the average value is equivalent to or close to the number of students. The subjects of this research are class XI F as the control class and classes such as observation, interviews, and documentation.

Before being given to the trial and control classes, the test questions will be tested to ensure they are valid and reliable. The research validity test was carried out using correlation techniques by Karl Pearson with an if statement, and then the question item was declared valid. Meanwhile, the formula Cronbach Alpha is used to carry out reliability tests in research, with the statement that if the reliability coefficient value is > 0.6, then it is declared reliable. The results of the validity test of the high-level thinking ability test are presented in **Table 2.**

Table 2. Question Validity Test Results

Subject	Question	r_{count}	r_{table}	Descripption
Pretest	1	0,746	0,553	Valid
	2	0,700	0,553	Valid
	3a	0,637	0,553	Valid
	3b	0,955	0,553	Valid
	4a	0,593	0,553	Valid
	4b	0,773	0,553	Valid
	5	0,900	0,553	Valid
Posttest	1	0,727	0,553	Valid
	2	0,648	0,553	Valid
	3a	0,672	0,553	Valid
	3b	0,594	0,553	Valid
	4a	0,596	0,553	Valid
	4b	0,798	0,553	Valid
	5	0,706	0,553	Valid

Source: Processed Primary Data (2024)

The results of the reliability test show that all high-level thinking ability tests in **Table 3** are classified as reliable.

Table 3. Question Reliability Test Results

Subject	Cronbach's Alpha Value	Description
Pretest	0,869	Reliable
Posttest	0,781	Reliable

Source: Processed Primary Data (2024)

Analysis of research data using SPSS 23 for Windows to carry out statistical tests such as normality, homogeneity, and hypothesis tests. This research's normality test uses the technique of Kolmogorov-Smirnov, with the statement that if the significance value is > 0.05, it indicates the data is normally distributed, whereas if the value is significant. < 0.05, then the data is not normally distributed. Researchers use techniques from Levene's Test to test the homogeneity of the data with significance values. > 0.05, then the two variants are declared homogeneous, whereas if the value is significant < 0.05, then the two variants are

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declared not homogeneous. The final step is testing the hypothesis using a formulaic independent sample t-test, which has the following statement:

H_1 : The learning model Exo Olo Task helps Google Sites influence higher-level thinking abilities in geography subjects.

The criteria for t-test results at a significance level of 0.05 (2-tailed) are as follows:

a. H_1 accepted if the sig value. (2-tailed) ≤ 0.05 and the mean value of the trial class is higher than the control class.
b. H_1 rejected if the sig value. (2-tailed) > 0.05 and the mean value of the trial class is lower than the control class.

This research uses the TestGain Score, calculated from the difference in value between the posttest and pretest. Test Gain Score It is useful to find out whether there is a significant increase in higher-level thinking abilities after the learning process. The TestGain Score can be calculated using the formula below:

$$N\ Gain = \frac{S.Posttest\ -\ S.Pretest}{S.Ideal\ -\ S.Pretest}$$

3. RESULTS AND DISCUSSION

The research was conducted at SMAN 1 Tumpang for three weeks. In the first week, a trial process of questions was carried out in the pretest and posttest in the upper class, namely 12 IPS. Meanwhile, learning activities in the trial and control classes were carried out in the second and third weeks. Within these two weeks, there were six meetings, so the total was 10 hours of lessons. The learning topic studied in this research is Chapter 3 of Environment and Population in Class XI, with the sub-material of population dynamics. The researcher chose classes XI H as the test class and XI F as the control class, with 36 students each.

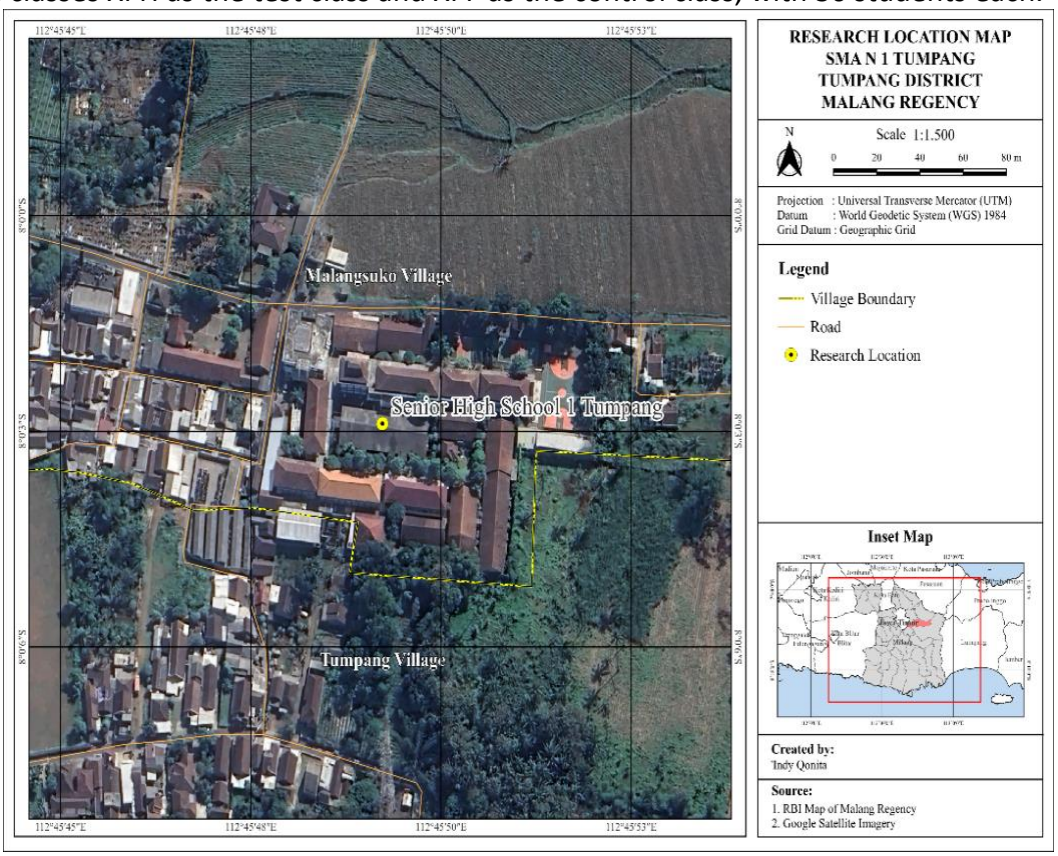

Figure 1. Location of State Senior High School 1 Tumpang

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Figure 2 shows the difference in the mean scores of test and control class students. The trial class earned a pretest score of 52, while the control class got a score of 50. Then the posttest score for the trial class was 64, and the control class got a score of 59.

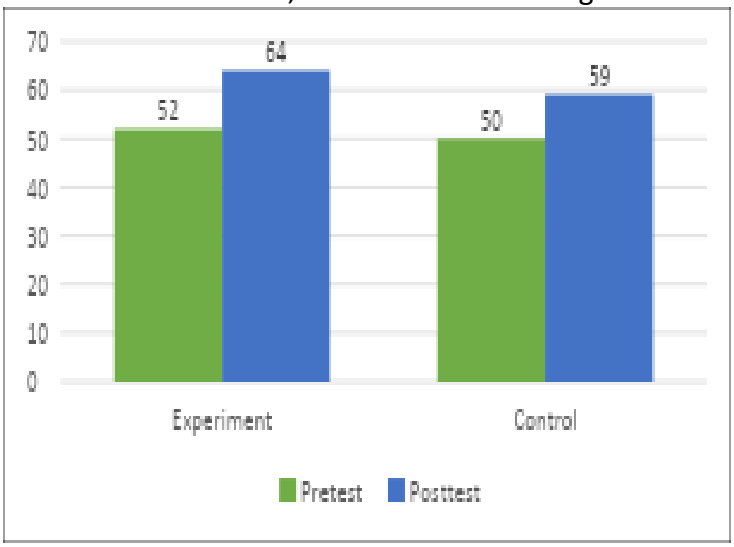

Figure 2. Graph of Average Score for Experimental and Control Classes

The scores between the test and control classes are similar, namely 5.61. This is due to several factors, including students in the trial class who still need to get used to working on questions that have categories HOTS, so in the process they experience difficulties. In the process, students rely more on memorizing textbook answers, and new models are applied, so it takes a long time for students to get used to answering HOTS questions. In geography subjects, most students still like to learn by rote. This way of learning can influence students' ability to think. Students tend to refer to textbooks, affecting student learning achievement (Suarsini et al., 2020). Students' high-level thinking, problem-solving, and analysis abilities can also be influenced by the environment, strategies, and awareness when learning (Ariyana et al., 2018).

The normality test can be said to be normally distributed if the sig value is ≥ 0.05. This research uses the Kolmogorov-Smirnov technique for the normality test because the amount of data is 144. The results of the data normality test can be seen in **Table 4,** which shows that the data is normally distributed. The pretest and posttest scores in the trial class were 0.092 and 0.074. Meanwhile, in the control class, the pretest and posttest scores were 0.085 and 0.200.

Table 4. Normality Test Results for High Level Thinking Ability Data

Class	Test	Sig.	Description
Experiment	Pretest	0,092	Normal
	Posttest	0,074	Normal
Control	Pretest	0,085	Normal
	Posttest	0,200	Normal

Source: Processed Primary Data (2024)

The next step is the homogeneity test. Levene's test: when sig. > 0.05, then the data is homogeneous. **Table 5** displays the calculation results for the significance value of the trial and control classes, which is 0.460, which shows that the high-level thinking ability data is homogeneous.

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Table 5. Data Homogenity Test Result for High Level Thinking Ability

Result		*Levene Statistic*	*Sig*.	Description
High Level Thinking Abilities	*Based on Mean*	0,551	0,460	Homogeneous

Source: Processed Primary Data (2024)

The next stage is testing the gain score to determine the effectiveness of the Learning Model Exo Olo Task in improving students' high-level thinking abilities. The score difference post-test and pretest between the trial class and the control class is used to calculate the gain score in this research. **Table 6** shows that the average test value gain score in the trial class was 0.2514, or 25.1%, and in the control class, it was 0.1238, or 12.3%. The value-sharing gain score in **Table 7** shows that both classes have a mean value below 0.3, which shows that the value-sharing gain score of both classes is in the low category. Factors causing the low N-Gain score are the low literacy abilities of students. So that students can answer the questions, HOTS experiences difficulty. Other research states that influencing factors N-Gain low is low student literacy caused by students' interest in learning, curiosity, study habits, learning styles, and interest in reading (Sumanik et al., 2021).

Table 6. N-Gain Score Test Calculation Results

Class	Average	Minimal	Maximum
Experiment	0,2514	-0,23	0,62
Control	0,1238	-0,77	0,52

Table 7. Distribution of N-Gain Score

N-Gain Value	Category
G > 0,7	Tall
0,3 < g < 0,7	Currently
G < 0,3	Low

Source: Hake (1999)

Hypothesis test results use the formula Independent Sample T-test It can be seen that the sig value. (2-tailed) is 0.003 in **Table 8.** The significance value ≤ 0.05 indicates that the Exo Olo Task learning model supported by Google Sites affects students' high-level thinking abilities. Apart from that, the mean score of the trial class was higher than the control class. The test class had a mean score of 64.44, while the control class had a mean score of 58.83. So H_o is rejected and H_1 is accepted, which means the learning model Exo Olo Task with the help of Google Sites impacts students' higher-order thinking abilities.

Table 8. *T-test Calculation Result*

Class	N	Mean	Sig.	Sig.(2-Tailed)
Experiment	36	64,44	0,460	0,00
Control	36	58,83		

Source: Processed Primary Data (2024)

Learning model The Exo Olo Task is a model that combines two categories of questions in stages. The teacher gives questions, starting from cognitive level C1 to C6, gradually at each meeting, and students answer through discussion with their respective groups. This model implements Thorndike's theory of learning habits, namely the law of practice, which has the principle of practice or repetition to improve learning outcomes. This practice law will have a significant effect if it is carried out repeatedly, or as it is usually called, drill (Berutu and Tambunan, 2018; Sulaswari et al., 2021). Repetition or drill is a characteristic of Thorndike's learning theory by providing practice questions ranging from easy to difficult levels so that

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students become more understanding of the material taught by the teacher (Santoso et al., 2021).

The learning model is a development of social constructivist learning theory. This theory was developed by a cognitive expert, namely Lev Vygotsky. Application in learning activities is a collaborative or group learning strategy to enhance students' ability to work together. This collaborative approach is based on the Exo Olo Task learning model, which divides students into small groups of two and large groups of four to answer issues from categories C1 to C6. Another study supports this, stating that constructivist learning is student-centered and can help students expand their knowledge and understanding of how to cope with challenges that arise (Diharjo et al., 2017; Masgumelar and Mustafa, 2021).

The first syntax for the learning model The Exo Olo Task is strengthening concepts; students are given keywords to determine a basic understanding of the material to be taught. Keywords in this research were provided by distributing a link to a Google Form totaling 10 questions, which can be accessed via Google Sites in the first material. These questions include 1) population dynamics, 2) population, 3) factors, 4) natural factors, 5) non-natural factors, 6) population census, 7) population registration, 8) population survey, 9) permanent mobility, and 10) non-permanent mobility. The first item in Google Sites contains an impression about population growth as an introduction to students. **Figure 3**shows the average value of the first syntax, namely 68. Based on this study, most students responded incorrectly to numbers 4, 5, 9, and 10. They could not distinguish between natural and non-natural factors that cause population dynamics and differences in permanent and non-permanent mobility. Therefore, at the end of the lesson, an explanation focuses more on the numbers, where there are many errors.

The second syntax in the learning model Exo Olo Task is giving category questions Exo Task (Examination Oriented Task) done in pairs with my deskmate. This question has cognitive levels ranging from C1 to C3, totaling 4 questions. These questions can be accessed via Google Sites in the second material. In this second material, Google Sites contains material about population growth, demographic bonuses, and various data sources. This stage aims to improve students' high-level thinking abilities. In this syntax, the researcher experienced problems, namely, a reduction in lesson hours because the school was going to hold an official meeting, so in this syntax, students did not work optimally on the questions. Other research states that in syntax Exo Task, this helps or acts as scaffolding to work on more difficult questions (Budiman and Nofrion, 2023).

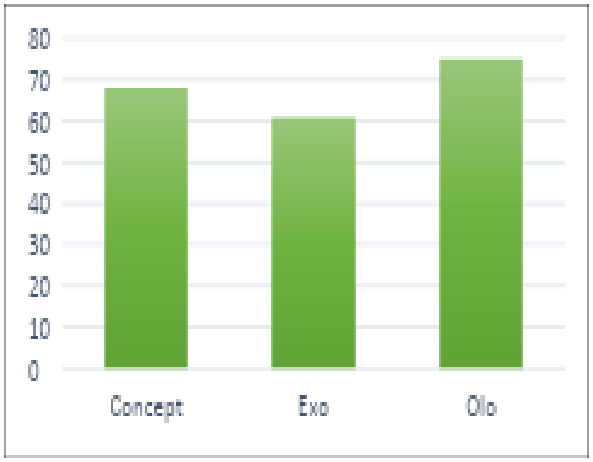

Figure 3. Value Comparison Chart Exo Task and Olo Task

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The third approach is to assign category questions to the Olo Task (Olympiad-Oriented Task) completed in groups. At this stage, students discuss with their four-person groups how to respond to questions with cognitive levels ranging from C4 to C6, consisting of three questions. These questions can be accessed via Google Sites in the third material. In this third material, Google Sites contains material on the Human Development Index (HDI) and population problems. This stage aims to train students in high-level thinking, starting with analyzing, evaluating, and creating. Apart from that, it also trains students to collaborate with a group of friends in working on questions given by the teacher. Other research that has been conducted states that with this syntax, learning activities in class become more challenging when students can solve problems (Mariana et al., 2023).

Figure 3 shows evident value differences between the syntaxes of Exo Task and Olo Task. In syntax, the Exo task has an average value of 61, while in syntax, the Olo task has an average score of 75. The difference in scores is due to collaborative learning. In the syntax Exo Task, students work in pairs, while in the syntax Olo Task, students work in groups. What is meant by collaborative learning is that students discuss with their respective groups to answer questions given by the teacher. These activities can improve student learning outcomes. In the learning process, students will be randomly appointed to present the results of the discussions that have been held. Then another group will respond to the results submitted by the previous group. This process makes the atmosphere in the class more active because of the 9 groups; there are 5 to 6 groups who always respond to each question number being discussed. At the end of the lesson, the teacher reinforces with the students the learning material that has been carried out. Other research also states that collaborative learning can encourage students to be more active in discussing, working together, appreciating differences, and accepting shortcomings between students in the class (Ningsih, 2023; Purwati et al., 2021).

The final syntax is reflection. In this syntax, students can verbally convey their learning experiences in class using the TWC technique, or Three Ways Conference, with a pattern of 3 positive things, 2 negative things, and 1 solution (Nofrion, 2019). Three positive things during the learning activities include students being more active in discussions, such as asking colleagues or teachers when they experience difficulties in working on questions, both in pairs and groups; students being more courageous in conveying the results of discussions that have been carried out, such as responding to each other's discussion results from others; and students gaining a lot of new knowledge about the demographic bonus and the Human Development Index (HDI) from the results of the discussion. Two negative aspects of the learning activities were that students were different when working on questions with HOTS levels, thus they struggled to answer questions, and some students complained that they were always given questions to work on at each meeting. The solution to this problem is to train and get students used to working on HOTS questions or invite students to think at a higher level in responding to a phenomenon. Good study habits can form new ones or improve existing ones, which can determine student success in learning (Budiana et al., 2020). Reflection is critical in enhancing the ability of actions carried out as corrections in good and sustainable action practices (Hidayah et al., 2024).

The learning process in the experimental class is assisted by learning media such as Google Sites. This learning medium includes images, videos, infographics, etc. Students can work on issues related to the materials of the environment and population using a Google Slide. Google Sites has three sub-materials: population dynamics, population growth, and population problems. Aside from that, the questions given at the concept strengthening

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stage, Exo Task and Olo Task, are also inside Google Sites. Google Sites is a website that teachers and students can use to help with learning activities in class. Other research also states that Google Sites is a simple and easy-to-use learning tool for teachers and students (Adzkiya and Suryaman, 2021).

Instructional Media Google Sites is another alternative used by teachers. Google Sites This can make it easier for teachers of various ages. This is because the results of interviews with geography teachers at SMAN 1 Tumpang show that they still have not mastered the technology to create more varied learning media. So the learning medium used by the majority is PowerPoint. Apart from that, the lack of school facilities such as projectors can also hinder students' learning activities in class because not all classes have projectors and schools only provide two projectors to be used alternately. Utilizing Google Sites as a learning platform is one of the solutions to this problem because students can access it themselves through their cell phones. Other research states that the issues that occur in schools, such as limited learning media, limited teachers in making media, and limited facilities and infrastructure, can be solved by creating learning media in the form of Google Sites because it can be designed more attractively and does not use applications (Purwita and Zuhdi, 2023).

4. CONCLUSIONS

The results of the data analysis indicate that the Learning Model Exo Olo Task, with the help of Google Sites, influences students' higher-level thinking abilities. Lack of student understanding of HOTS questions, the new learning model used in the class, and limited research time are the factors causing the small difference in scores between the trial and control classes. Based on the findings, it is concluded that students' abilities in higher-level thinking can be influenced by the learning model Exo Olo Task helps Google Sites. This is because students are trained to be able to work on questions in the categories Exo Task (C1–C3) and Olo Task (C4–C6). Apart from that, learning carried out collaboratively can also improve student learning outcomes.

5. RECOMMENDATIONS

Following the findings and results of research at SMAN 1 Tumpang, researchers provide recommendations for future researchers, namely paying attention to time when conducting research. This is because the Learning Model Exo Olo Task takes quite a while for students to get used to higher-level thinking. Apart from that, you can add variables or replace them with other learning media. This aims to find out the advantages of the Learning Model Exo Olo Task when used with other variables.

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