

Application of Flipped Classroom Learning Model Based on Task Exo Olo Using Story Articulate Media

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ABSTRACT

This study aims to determine the learning outcomes of students who are taught using the Flipped Classroom model based on Exo Olo Task with Articulate Storyline media. The design of this research is the Nonequivalent Control Group Design. sampling using a simple random sampling of 30 samples. The test instrument used is multiple choice questions. Conclusions were drawn based on the results of data processing and analysis using t-test and two-way ANOVA with SPSS 24.0. Based on the results of the analysis and discussion, in this study it was concluded that the Flipped Classroom learning model based on Exo Olo Task assisted by Articulate Storyline was effective compared to the Direct Instruction learning model.

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1. INTRODUCTION

Education in the 21st century requires learners to have skills, knowledge and abilities in the fields of technology, media and information, learning skills and abilities innovation, as well as life and career skills. This makes education even more important, to ensure that students have these skills (Wijaya et al., 2016). Education in essence prioritizes knowledge transfer activities or teaching and learning or learning processes. In order for the learning process to have creative conditions, active and can improve the ability of students, then learning must be able to make students able to learn, think and seek information (Diani et al., 2018). The ability of learners can be reflected in the realization of learning outcomes. Basically, learning outcomes can be used to see the extent of learners' achievements in learning materials and compare students' skill levels with each other. Of course, this will be the basis for students to continue to a higher level. For educators, learning outcomes can be used to measure the success of the learning process (Hadi & Nofrion, 2021).

The right model or method in the learning process is a combined method with a model or model combined with a media that can support the learning process in the classroom. One of the learning models offered by researchers is the Flipped Classroom learning model based on Exo Olo Task assisted by Articulate Storyline media (Oliver, 2013). Flipped classroom itself is a model that in the teaching and learning process is not like in general. and can be useful for all subjects, where learners learn the subject

matter at home before class starts and teaching and learning activities in the classroom in the form of doing tasks, and problem solving that has not been understood so that they can consult directly with friends and educators so that they can more efficiently time and learning in the classroom can be more effective and active (Green et al., 2016).

This model has been used in several studies, including the application of the Flipped Classroom Learning Model to improve the thinking skills achieved by students after exploring the material optimally outside of face-to-face hours with the help of learning videos and assisted by Instagram-based learning media (Supiandi, 2018). The independence of students in online learning in understanding mathematical concepts and working on math problems through the flipped classroom learning model is good. (Widodo et al., 2021). The application of the Flipped Classroom learning model with the help of Power Point and Audio Visual media can improve students' cognitive learning outcomes (Chrismawati & Septiana, 2021). The use of the flipped classroom learning model is effective on students' mathematical critical thinking skills (Nasution et al., 2021). Flipped Classroom Research: Learning Models to Realize 21st Century Skills According to the 2013 Curriculum, the results of this study are reverse classroom learning according to the learning principles in the 2013 curriculum (Yulianti & Wulandari, 2021).

2. METHODS

This research method uses the Pretest Posttest Nonequivalent Control Group Design research design, which is a design that provides pretest before being treated, and posttest after being treated in each group (May, 2012). The method of data collection is carried out by providing a test sheet of learning results in the form of multiple choice questions totaling 20 numbers. A test is a tool or procedure used to find out or measure something in the atmosphere by means and rules that have been determined (Yunita & Jumiayanti, 2020).

The population in this study is the entire class VIII junior high school students from grade VIII A to VIII D class with a total of 112 people. The sampling method used for sampling is Simple Random sampling, every element of the population has an equal chance of being taken (Arieska & Herdiani, 2018). The sample number of 30 people divided into 2 classes, namely the experimental class and the control class. The instruments used in this study are the observation sheet of learners and teachers, the learning implementation plan (RPP), the learner response questionnaires, the multiple choice question sheet of motion and style (Hugaerts et al., 2021). The data is obtained from multiple choice test answers scores of motion materials and styles for learning outcomes. Then the data is analyzed with descriptive analysis, normality test, homogeneity test, learning outcome effectiveness test and independent sample t-2 laboratory inferential analysis (Arikunto, 2021).

3. FINDINGS AND DISCUSSION

The results of hypothesis test using the t-test of 2 independent samples obtained t-count of 4.663 while the value of t-table was 1.701. Thus it can be seen that t count > t table. So it can be concluded that H0 is rejected and H1 is accepted. This shows that the results of learning physics of learners who are taught using the Flipped Classroom learning model based on Exo Olo Task assisted by Articulate Storyline media are different from the results learning physics of learners who are taught using the Direct Instruction learning model.

Table 1: Calculation of the N-Gain Score Test for Learning Outcomes.

No	N-Gain Score Experiment Class	Control Class N-Gain Score
1	0.69	0.21
2	0.90	0.23
3	0.82	0.25

4	0.69	0.47
5	0.50	0.50
6	0.54	0.40
7	0.56	0.53
9	0.67	0.31
10	0.43	0.42
11	0.80	0.60
12	0.67	0.46
13	0.75	0.27
14	0.67	0.38
15	0.77	0.33
Average	0.66	0.39
Min	0.43	0.21
Max	0.9	0.6

Based on the results of the N-gain Score test calculation above shows that the average N-gain Score for experimental classes (the use of Exo Olo Task-based Flipped Classroom learning models assisted by Articulate Storyline media) is 0.66 in the effective interpretation table according to Hake, R.R, 1999 belongs to the medium category. With a minimum N-gain score of 0.43 and a maximum of 0.9. While the average N-gain score for the control class (the use of the Direct Instruction learning model) is 0.39 belongs to the medium category. With a minimum N-gain score of 0.21 and a maximum of 0.6.

The value of learners' physics learning outcomes that are taught using the Exo Olo Task-based Flipped Classroom learning model assisted by Articulate Storyline media and those taught using the Direct Instruction learning model has a significant difference. This is evidenced by the results of the analysis on the statistics of the inferential test, especially the independent test of the variant separated, which shows that the value of $t\text{-count} > t\text{-table}$ where $t\text{-count}$ is 4.663 while the $t\text{-table}$ value is 2.160 which means that H_0 is rejected and H_1 is accepted. So that there is a difference in the results of learning physics learners who are taught by using the Flipped Classroom learning model based on Exo Olo Task assisted by Articulate Storyline media and learners who are taught using the Direct Instruction learning model.

From the explanation above can be drawn a conclusions by applying the Flipped Classroom learning model based on Exo Olo Task assisted by Articulate Storyline media, in addition to training students' high-level thinking skills, also developing dialogue, interaction and collaboration in the form of mutual care between learners, and developing positive characters among learners such as honesty, responsibility, confidence and discipline and mutual care and trust. The results obtained are in line with research conducted by (Syabri & Elfizon, 2020) which states that the use of Articulate Storyline media in learning is very practical and valid. This is also supported by research conducted by (Damayanti et al., 2020) showing a significant improvement in creative thinking skills by applying the Flipped Classroom model both collaborated with Problem Based Learning and also traditional learning. As well as research conducted by (Fariha, 2020) which showed an increase in students' high-level thinking skills after the implementation of the Exo Olo Task learning model. These results are in line with the goals of this Exo Olo Task Learning Model (Hadi & Nofrion, 2021):

1. Developing learner learning activities in learning both basic learning activities (basic learning activity) and advanced learning activities (advance learning activity).
2. Facilitate students to learn individually, in pairs and groups in order to develop social values and attitudes between them.
3. Provide space for learners to interact and collaborate to achieve success in learning together and sustainably.

4. Train educators' ability to design LOTS, MOTS and HOTS questions.
5. Develop learners' high-level thinking skills

The advantages of Exo Olo task learning model are as follows (Nofrion, 2019):

1. Developed on the basis of constructivism learning theory and collaborative learning relevant to the 21st Century and IP-2CSS learning frameworks and in accordance with curriculum learning 2013.
2. Have syntactic or learning steps that are simple and easy to understand educators and learners.
3. Develop dialogue, interaction and collaboration in the form of mutual care.
4. Train learners to hone high-level thinking skills (Higher Order Thinking Skills/HOTS) and have cognitive strategies.
5. Develop positive character among learners such as honesty, responsibility, confidence and discipline and care for each other and trust each other.

4. CONCLUSION

There are significant differences in physics learning outcomes between learners who are taught using the Exo Olo Task-based Flipped Classroom learning model assisted by Articulate Storyline media and learners who are taught with the Direct Instruction learning model. Based on the independent sample t-test table on Sig. (2-tailed) contained in equal variances assumed obtained a value of 0.000. Sig. Value it is smaller than 0.05 (sig. < 0.05).

From the results of the effectiveness test with the N-Gain Score obtained an average score of 0.66 with a medium category interpretation, meaning that the Exo Olo Task-based Flipped Classroom learning model assisted by Articulate Storyline media is effective compared to the Direct Instruction learning model.

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