Super-Item Learning Model-based E-Learning for Alpha Generation in Makassar

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Abstract

The Super Item Learning Model is a learning model that is carried out by giving assignments to students in stages from simple to complex, in the form of problem-solving. Through this learning model, students can easily solve a problem from the teaching material provided. This super-item learning model is synergized with e-learning-based learning so that students, especially the alpha generation, are more motivated and interested in following the learning process. This study used a quasi-experimental method. The population of this study was fifth-grade students in several elementary schools in Makassar city in the academic year 2020/2021. This study uses cluster random sampling. The sample in the study consisted of 60 students who were in two groups; 30 students in the control group and 30 students in the experimental group. The research data were collected using tests, interviews, and questionnaires which were analyzed descriptively and inferential statistics through the SPSS version 22 program for Windows. Based on the results of data analysis, it was found that the adoption of the e-learning-based super-item learning model could improve student learning outcomes and motivation in the learning process. The results of this study can be used by teachers, principals, and stakeholders with an interest in education development to find other ways in terms of increasing student learning outcomes and increasing student motivation in learning.

Keywords: Super-Item, Learning Model, E-Learning, Alpha Generation

Abstrak

Model Pembelajaran Superitem merupakan model pembelajaran yang dilakukan dengan cara memberikan tugas kepada siswa secara bertahap dari yang sederhana hingga ke komleks, berupa pemecahan masalah. Melalui Model pembelajaran ini siswa dapat dengan mudah memecahkan suatu permasalahan dari materi ajar yang diberikan. Model Pemebelajran superitem ini disinergikan dengan pembelajaran berbasis e-learning sehingga siswa khususnya generasi alpha lebih termotivasi dan berminat mengikuti proses pembelajaran. Penelitian ini menggunakan metode kuasi eksperimental. Populasi dari penelitian ini adalah Siswa kelas V di beberapa SD di kota Makassar pada tahun ajaran 2020/2021. Penelitian ini menggunakan Cluster random sampling. Sample dalam penelitian terdiri dari 60 siswa yang terdapat dalam dua kelompok; 30 siswa di kelompok kontrol dan 30 siswa di kelompok eksperimen. Data penelitian dikumpulkan dengan menggunakan tes, wawancara dan angket yang dianalisa secara deskriptif dan statistic inferensial melalui program SPSS versi 22 untuk Windows. Berdasarkan hasil analisis data diperoleh hasil bahwa penerepan model pembelajaran super-item berbasis e-learning dapat meningkatkan hasil belajar dan motivasi siswa dalam proses pembelajaran. Hasil penelitian ini dapat dimanfaatkan oleh guru, kepala sekolah maupun stakeholder yang berkepentingan dalam pengembangan pendidikan memeroleh cara lain dalam hal peningkatan kemampuan hasil belajar siswa dan meningkatkan motivasi siswa dalam belajar.

Kata kunci: Super-Item, Model Pembelajaran, E-Learning, Generasi Alpha

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INTRODUCTION

The teacher as a profession requires the mastery of various abilities and skills to teach. However, most teachers today use fewer learning methods to explore the thinking abilities of students, especially those in the Alpha Generation category. For the Alpha generation, technology is something that is so closely related to life. They easily connect with technology and use it as a means to get information and communicate instantly. This has an impact on the creation of a learning environment that is less conducive, in the sense that it is not able to stimulate students' curiosity and understanding so that they are actively involved in the teaching and learning process so that the way most students learn is to memorize without understanding the concept taught.

The problem now is how to find a good way to convey it various concepts are taught so that students can use and remember longer the concept. How the teacher can open up diverse thinking insights from all students so that they can learn various concepts. Embedding abstract ideas or concepts is a problem that is not easily implemented in teaching and learning activities if not balanced with appropriate teaching methods, models, and approaches to students' cognitive abilities. This is where the teacher's ability to choose and is demanded to apply existing learning strategies to increase mastery of concepts in mathematics. Some of the problems that occur in the learning process are caused by the learning model used being less effective. Thus the achievement of learning objectives will be difficult to materialize. And teachers should develop a learning model considered good, in the sense that it can direct students to achieve their learning goals expected. Therefore, a super-item learning model will be implemented. Model Super-item learning is learning that uses super-item tasks, namely learning that starts with simple tasks and increases to more complex ones. In an era of Industrial Revolution 4.0 which was marked by the use of encouraging digital technology automation and data exchange in manufacturing technology.

According to Atika (2019), this Alpha generation is believed to be able to grow and develop into a generation that is smarter than previous generations. But keep in mind that technology, which is part of human life, apart from providing convenience, is also feared to have a negative impact on children related to their cognitive, motoric, and affective development. So the duties of families, parents, and schools in raising and accompanying this generation also have their challenges.

The era of this fourth industrial revolution refers to how technologies such as artificial intelligence (AI), robotic technology, and the internet influence human life. In this millennial era, a teacher needs to have technological knowledge that is knowledge of how to use hardware and software and connect between the two. One of the media that can be used to encourage children to get it improves student learning outcomes, namely the use of e-learning. By synergizing the use of super-item learning models with technology, especially e-learning learning outcomes and low student motivation can be overcome. Researchers believe that this e-learning will succeed based on the assumption that this medium has some usual advantages for children like, the use of media is considered practical, can be used repeatedly, interesting, innovative, and thrifty. By using e-learning students can express ideas or their opinions to solve the various problems they can with the help of the internet, be it from YouTube, Facebook, WhatsApp, or Instagram, so you can improve student learning outcomes and motivation.

Teaching using technology is such a new technique to apply since the needs of students to get new experiences to learn the real language of the native speaker are higher. The findings describe that the teachers tend to use Mobile mobile-assisted language Learning for some consideration. Accessibility is one of the considerations. With the development of technology, teachers can easily access any Mobile Assisted Language Learning from the internet. It provides all the things that teachers need.

METHODS

In this study, researchers used a quasi-experimental research design. Researcher using this type of research is due to the population that is too large so it is difficult for researchers to sample randomly. In this study, researchers divided the class into two groups, namely the experimental group which will use the model e-learning-based super-item learning in the learning process, and the control class which uses conventional teaching methods in the learning process. The research will be implemented in several elementary schools in Makassar city.

The research used was all grade VI students in several elementary schools in the city of Makassar, amounting to approximately 470 students. The sampling technique used is a Cluster Random Sampling technique. This method or technique can be carried out if analysis research tends to be descriptive and general in nature. Researchers use this technique because the population and sample in this study are homogeneous as a result of random sampling randomly, class A is obtained as a control class with a sample size of 30 students. And to the trial class was obtained by class B with a total sample of 30 students. The research instrument is a tool used to measure natural phenomena as well as social observable. As for the instruments or tools used to collect data. This research is a test instrument to measure learning outcomes and a questionnaire to find out student interest in the learning media used. The data obtained from the sample through the learning outcome test instrument and questionnaire will be used to answer questions or test the hypothesis proposed by the researcher. After the data is obtained, the next step is for the researcher to process the data using techniques of data analysis such as Descriptive statistical analysis and Product Moment correlation statistical analysis with the help of Statistical Product applications and Service Solutions (SPSS) 22.

FINDINGS AND DISCUSSION
Findings
Interpretation of Student Test Results.

This section describes the data from the pre-test and post-test results of students before and after being given treatment using Super-Item learning model-based E-Learning. This section also displays the results of a questionnaire showing student interest in using Super-Item learning model-based E-Learning.

a. *Student test results on the pretest for the experimental group and the control group.*

As previously explained after tabulating and analyzing student scores into percentages, they were classified into six levels. The following table shows the students' pretest scores and the percentage of the experimental and control groups.

Table 1 Percentage of Pre-test Value for Experiment Group & Control Group

Classification	Score	Experiment Group		Control Group	
		Frequency	Percentage	Frequency	Percentage
Very good	81-100	0	0	0	0
Good	61-80	12	40	14	47
Enough	41-60	18	60	16	53
Less	21-40	0	0	0	0
Very Less	1-20	0	0	0	0
Total		30	100%	30	100%

Based on the data in Table 1, in the experimental group of 30 students, there were no students who were in the very good category, 12 (40%) students were in the good category, 18 (60%) students were in the enough category, and there are no students who are in the poor and very poor category. Whereas in the control group, there were no students who were in the very good category, 14 (47%) students were in the good category, 16 (53%) students were in the enough category, and there were no students who were in the poor and very poor category.

b. *Mean scores and standard deviation of students' pretest for the experimental group and control group.*

Before the treatment was carried out, both the experimental and control groups were given a pre-test to determine the students' prior knowledge. Furthermore, the purpose of this test is to find out whether the experimental group and the control group are at the same level or not. After calculating the students' pretest results, the mean and standard deviation scores are presented in the following table

Table 2 Mean Score and Standard Deviation form Students Pre-Test

Group	Mean Score	Standard Deviation
Experimental	61.50	6.585
Control	59.83	9.048

Based on the classification of the test results, the mean value of the control group (59.83) is still considered low with a standard deviation of 9.048. Whereas in the experimental group, the average value obtained was 61.50 with a standard deviation of 6.585 still in the low category.

c. *Student post-test results for the experimental group and the control group.*

In this section, student scores are classified into five levels. The scores are then tabulated and analyzed into percentages. The following table is a summary of the post-test statistics of students from the two groups.

Table 3 Score Percentage of Students Post-Test

Classification	Score	Experiment Group		Control Group	
		Frequency	Percentage	Frequency	Percentage
Very good	81-100	4	13	0	0
Good	61-80	26	87	30	100
Enough	41-60	0	0	0	0
Less	21-40	0	0	0	0
Very Less	1-20	0	0	0	0
Total		30	100%	30	100%

From the classification, grade, and percentage level of the experimental group, it is illustrated in the table above that of the 30 students; there are no students who are in the sufficient, poor, and very poor category. There are 4 (13%) students in the very good category and 26 (87%) students in the good category. Whereas in the control group, there were no students who were in the low and very poor categories. There were no students who were in the sufficient category, there were no students in the very good category and there were 30 (100%) students were in the good category. Based on the description, it is

clear that there was a significant increase in the students' speaking ability in the experimental group during the study.

d. *The mean value and standard deviation of students' posttest in the experimental group and control group.*
   In the following table, the researcher presents the mean scores and standard deviation of the two groups.

Table 4 Mean Score and Standard Deviation form Students Post-Test

Group	Mean Score	Standard Deviation
Experimental	76.00	6.747
Control	69.83	4.450

In the table above, it can be seen that the control group has an average value of 69.83 with a standard deviation of 4.450. Whereas for the experimental group, the average value obtained was 76.00 with a standard deviation of 6.747.

e. *Significance test (t-test).*
   The t-test is a test to measure whether or not there is a significant difference between the students' mean scores in the pretest and posttest produced by the control group and the experimental group. By using the inferential analysis of the t-test or the significance test run by SPSS Version 20, significant differences can be easier to analyze. The level of significance is (α) = 0.05 and degrees of freedom (df) = 58, N1 + N2 - 2, the number of students from both groups (30 each). The following table describes the results of the t-test values:

Table 5 The Result of the t-test for Experiment Group and Control Group

Variable	Probability Value	α	Remarks
Pre-test Control and Experimental Group	0,418	0,05	Not significant
Post-test Control and Experimental Group	0.00	0,05	Significant

Based on the results of data analysis as summarized in Table 5 of the pretest control and experimental group, the researcher found that the p-value (Value Probability value) was higher than α (0.418> 0.05) and 58 degrees of freedom. Based on the t-test value of the experimental group and control in the pretest it can be concluded that there is no significant difference. Meanwhile, the p-value of the posttest of the two groups was lower than α (0.00 <0.05) and the degree of freedom was 58. The t-test scores of the two groups at the post-test can be concluded that there are significant differences. This suggests that the alternative hypothesis (H 1) is accepted and, of course, the null hypothesis (H 0) is rejected. This shows that the use of the method significantly increases the student's ability in the experimental group.

Discussion

Based on the results of data analysis, the researcher found that the p-value (Value Probability value) was higher than α (0.418> 0.05) and 58 degrees of freedom. Based on

the t-test value of the experimental group and control in the pretest it can be concluded that there is no significant difference. Meanwhile, the p-value of the posttest of the two groups was lower than α (0.00 <0.05) and the degree of freedom was 58. The t-test scores of the two groups at the post-test can be concluded that there are significant differences. This shows that the use of the method significantly increases the student's ability in the experimental group.

The use of technology nowadays is expected to be able to help and facilitate students in learning. By utilizing existing technology it is very easy for students to learn because they can access their learning materials anywhere and anytime. Based on (Diana & Mansur, 2018) stated that the use of technology is the most needed and urgent for students whether in their present situation or their future careers.

For many of the millennial generation especially the alpha generation, technology is part of their lifestyle. Selfies, vlogs, video content, blogs, and other technology are products produced by millennials (Xiaoqing Gu et al., 2013)**.** Parents and students always hope for innovative and improvised teaching from their class teachers; otherwise, the learning process will be monotonous and boring. With the use of digital content in the learning process, students tend to have higher motivation to learn (X. Gu & Zhang, 2014).

According to (Fansury et al., 2020), the use of digital content in teaching is very helpful for students to understand the material, especially during the COVID-19 pandemic, especially the alpha generation. Using digital content, the learning process becomes easier because it can be directly integrated into various applications such as WhatsApp group, zoom, Google Meet, and so on that are used by teachers in the learning process. Learners could be engaged in more flexible, accessible learning practices without constraints on places.

Learning with e-learning is learning by utilizing internet technology to improve a learning environment with rich content with a broad range. E-learning is the use of learning media using the internet, to send a series of solutions that can increase knowledge and skills (Anwas, 2003). This is by Rosenberg's (Hanum, 2013) statement that: "within the learning and performance architecture is e-learning not e-learning as it is traditionally practiced but a broader. E-learning is the use of Internet technologies to create and deliver a rich learning environment that includes a broad array of instruction information resources and solutions, the goal of which is to enhance individual and organizational performance. " Each learning method must contain formulas for organizing learning materials, delivery strategies, and management of activities by taking into account the factors of learning objectives, learning barriers, and student characteristics, to obtain effectiveness, efficiency, and learning attractiveness. By combining e-learning with the super-item learning model, it is expected that there will be an increase in learning outcomes and student motivation in learning.

CONCLUSION

The Alpha generation is a generation that was born amid very rapid technological developments. So that this makes them have received a variety of information from a young age. The use of E-learning in the alpha generation is expected to improve student learning outcomes and motivation, especially during the COVID-19 pandemic. The use of e-learning in the alpha generation still requires the role of parents in terms of mentoring students because the parenting style given will greatly determine what this generation will be like in the future.

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