



THE EFFECTIVENESS OF ANDROID-BASED INTERACTIVE MULTIMEDIA IN IMPROVING JUNIOR HIGH SCHOOL STUDENTS ENGLISH LEARNING OUTCOMES AND LEARNING MOTIVATION

by

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Abstract:

Android-based interactive multimedia based on articulate storylines three is starting to be used to improve student learning outcomes and learning motivation. This study examines how interactive media is used in English lessons for junior high school students. This study aims to determine a) whether Android-based interactive multimedia effectively improves students' English learning outcomes, b) explain how Android-based interactive multimedia can increase students' Motivation in their English learning, and c) how students perceive implementing Android-based interactive multimedia in English learning. This study employs experimental research methods. A quasi-experimental design shows how Android-based interactive multimedia for English subjects can improve student learning outcomes and Motivation. The researcher used documentation, tests, and questionnaires as instruments research gathered to measure the aims of the study. As it was a quasi-experiment, the sample used was 66 students, including 33 students in the control class and 33 students in the experimental class. The findings revealed that a) using Android-based interactive multimedia effectively improves students' English learning outcomes, b) Android-based interactive multimedia increases students' Motivation for English learning, and c) Android-based interactive multimedia is appropriate for learning English. In conclusion, implementing Android-based interactive multimedia is worth doing in English learning, especially in junior high school. From these findings, choosing the suitable learning media can influence student learning achievement. Likewise, students' Motivation to learn influences their outcomes in English. Students with high learning motivation certainly have better learning achievements than students with average or low learning motivation.

Keywords: Android-based interactive multimedia, English learning outcomes, Motivation

Abstrak:

Penggunaan multimedia interaktif berbasis android dengan menggunakan Articulate Storyline 3, mulai dipergunakan dalam meningkatkan motivasi dan hasil belajar siswa. Penelitian ini mengkaji bagaimana

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media interaktif digunakan dalam pembelajaran bahasa Inggris untuk siswa SMP. Penelitian ini bertujuan untuk mengetahui a) Apakah multimedia interaktif berbasis Android efektif dalam meningkatkan hasil belajar bahasa Inggris siswa, b) Apakah multimedia interaktif berbasis Android dapat meningkatkan motivasi siswa dalam belajar bahasa Inggris, dan c) bagaimana persepsi siswa terhadap penerapan multimedia interaktif berbasis Android dalam pembelajaran bahasa Inggris. Penelitian ini merupakan bagian dari penelitian kuantitatif yang menggunakan metode penelitian eksperimen. Desain quasi eksperimental menunjukkan bagaimana multimedia interaktif berbasis Android pada mata pelajaran Bahasa Inggris dapat meningkatkan hasil belajar dan motivasi siswa. Peneliti menggunakan dokumentasi, tes, dan angket sebagai instrumen penelitian yang dikumpulkan untuk mengukur tujuan penelitian. Karena merupakan eksperimen semu, maka sampel yang digunakan adalah 66 siswa, meliputi 33 siswa pada kelas kontrol dan 33 siswa pada kelas eksperimen. Hasil penelitian menunjukkan bahwa a) penggunaan multimedia interaktif berbasis Android efektif meningkatkan hasil belajar bahasa Inggris siswa, b) multimedia interaktif berbasis Android meningkatkan motivasi siswa dalam belajar bahasa Inggris, dan c) multimedia interaktif berbasis Android sesuai untuk pembelajaran bahasa Inggris. Kesimpulannya, penerapan multimedia interaktif berbasis Android layak dilakukan dalam pembelajaran bahasa Inggris khususnya di Sekolah Menengah Pertama. Berdasarkan hasil dari penelitian dapat terlihat bahwa media pembelajaran yang tepat berpengaruh terhadap hasil belajar dan motivasi siswa. Siswa yang memiliki motivasi belajar tinggi mempunyai prestasi belajar yang lebih baik dari pada siswa yang memiliki motivasi belajar sedang maupun rendah.

Kata kunci: *Multimedia interactive berbasis android, Hasil Belajar, Motivasi*

INTRODUCTION

Studies on how to improve learning outcomes and learning motivation have proliferated. Several researchers studied how student learning outcomes can be improved and how student motivation influences student learning outcomes. Budiariawan (2019) and Abroto et al. (2021) studied the influence of Motivation on student learning outcomes, where there is a positive influence of learning Motivation on student learning outcomes. Various methods and media are used to improve learning outcomes, as stated by Tampubolon et al. (2021).

A recent study on the use of articulate storyline three multimedia was carried out by Neliati (2022), who studied the articulate storyline three learning media for high school and vocational school students. Her research aims to improve learning outcomes, train students' independence, and help them not get bored while learning during the pandemic. Agustina et al. (2021) discussed multimedia interactive articulate Storyline development relating to students' learning outcomes. The current study aims to create interactive multimedia for social studies learning in fifth-grade elementary schools aided by articulate storylines. This study aims to determine a) whether Android-based interactive multimedia effectively improves students' English learning outcomes, b) explain how Android-based interactive multimedia

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can increase students' Motivation in their English learning, and c) how students perceive implementing Android-based interactive multimedia in English learning. The 4D Thiagarajan model is used in the media development process. The student response questionnaire analysis revealed positive responses to the developed media. Thus, the creation of interactive multimedia with compelling storylines can be used as an alternative to improve students' cognitive learning on the content of the social studies subject Efforts to Maintain Indonesian Sovereignty in class V.

Sinaga's research (2021) on establishing Interactive Multimedia-Based Learning Media in English Subjects on Transportation Materials claims that interactive multimedia-based learning media can boost student interest and Motivation. Djabba et al. (2019) discussed the impact of interactive multimedia learning based on Microsoft PowerPoint on fifth-grade students' scientific learning results. The study aimed to see how interactive multimedia (Microsoft PowerPoint) affects learning outcomes in students in class V for science. According to the study's findings, interactive multimedia learning based on Microsoft PowerPoint influences fifth-grade scientific learning outcomes. The study discovered improved student outcomes based on the pre-test and post-test data.

Nurmawati et al. (2020) did their research to see if there was a significant difference in the results of Manyaran students in class IV who were taught utilizing interactive multimedia vs those who were taught conventionally. The study's findings revealed that interactive multimedia influenced students' improvement of mathematical understanding. The improvement was shown in students' learning outcomes. Khusnah et al. (2020) also conducted a study on developing the JiMat learning medium utilizing the class VIII articulate storyline. This study applied the Research and Development (R&D) technique and the ADDIE development model. This study included class VIII students, validation sheet research instruments, and instructor response questionnaires. The data collection results reveal that the JiMat learning media uses an articulate, valid, practical storyline that fits the minimum standards. As a result, JiMat material can be used for further education.

Arwanda et al. (2020) studied the development of articulate storyline learning media for the 2013 curriculum based on the Competence of 21st-century students in seventh-grade elementary school. This study employed the Research and Development method and Thiagarajan's (1974) TPS (Think-Pair-Square) research design. The outcomes of expert

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validation, teacher response, and student response questionnaires were analyzed for data. Articulate Storyline learning media theme 7 using TPS (think, pair, and square) models can promote 4C competencies. The competencies are critical thinking and problem solving, creative and innovative, collaborative, and communicative by 21st-century learning objectives.

In the same year, Setyaningsih et al. (2020) conducted the study. The study focused on interactive media storylines articulated based on students' Motivation for learning outcomes. The research investigated the impact of using articulate storyline-based interactive learning media on learning Motivation and social studies learning outcomes. Data analysis revealed that the experimental class students' learning motivation improved by 60% compared to the control class. Similarly, student learning results improved by 70% in the experimental class. The experimental group uses interactive learning media with articulated stories, whereas the control group uses traditional approaches with no learning media. The data reveals that interactive learning media based on plot articulation improves learning motivation and outcomes.

From some of the previous studies above, multimedia in learning has quite an effect on motivation and learning outcomes (Nurmawati et al., 2020). Some studies use PowerPoint media, and some use Articulate storylines as learning media with significant results. In this study, the media used an articulate storyline previously used in subjects other than English. In previous studies, several multimedia were used in learning, but only some used Articulate Storylines 3 as learning media; moreover, it is only developing the media. Some use Articulate storylines as learning media for the elementary level rather than for English subjects. As a result, this study is still regarded as comparable. However, this study differs from research conducted by researchers regarding people, research items, research places, and research designs. This distinction drew researchers' attention to using the articulate storyline application as a learning medium in English. In this study, researchers used Articulate storylines as learning media in English with complete content. In Articulate storylines as learning media, there will be material, exercises, and some vocabulary practice exercises so that students can study independently using Android. Therefore, the study wants to see how using Articulate storylines in learning affects student motivation and learning outcomes, as

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stated by Siregar & Sudrajat (2018) and Puspitarini & Hanif (2019) that multimedia increases not only students' learning motivation but also their learning outcomes.

Based on the explanation above, the study investigates the efficacy of interactive multimedia learning material based on Android in increasing English learning outcomes, examines the efficacy of using interactive multimedia learning material based on Android to boost student learning motivation, and describes how students perceive the use of Android-based interactive multimedia in English instruction. The findings of this research are expected to be used as a source of information in developing knowledge, especially regarding multimedia learning and learning motivation. This research can be used as reference material or comparison material so that Android-based interactive multimedia can be used as a reference learning media and implemented in English learning material. Meanwhile, the research questions are as follows:

1. Is the Android-based interactive multimedia effective in improving students' English learning outcomes?
2. Can Android-based interactive multimedia increase students' Motivation in their English learning?
3. How do students perceive the implementation of Android-based interactive multimedia in English learning?

METHOD

Design

This study is part of quantitative research that employs experimental research methods. According to Cresswell cited in (Sugiyono, 2021), an experimental method determines a treatment's effect on a study's results. Experimental research aims to test the cause-and-effect relationship between the independent and dependent variables by manipulating one variable in one or more experimental groups versus the unmanipulated control group. A quasi-experimental design in this study shows how Android-based interactive multimedia for English subjects can improve student learning outcomes and Motivation. In the current study, the independent variable is Android-based interactive multimedia applied in the experimental class, while the dependent variables are students' English learning outcomes and Learning Motivation. The design employs class VII-B and

class VII-C, where both classes consisted of 33 students. Students in class VII-B are treated using teacher-centered and discussion models as a control class, and students in class VII-C, as an experimental class, are treated using Android-based interactive multimedia as learning media.

Participant

In this study, 7th-grade students at one junior high school in Garut West Java comprise the population. The study sample is 66 students, comprising 33 for the control and experiment class. The design is initiated by giving a pre-test to two groups to measure the initial conditions of the research sample. After that, the experimental group will use interactive learning media based on an articulate storyline. In contrast, the control group will continue to use conventional learning without assistance in learning Media. The post-test is given in the experimental and control groups' final stages to prove the effectiveness of the learning media on learning motivation and student learning outcomes in learning material.

Instrument

According to Arikunto (Zaenal & Nik, 2020), the research instrument is the breath of the research, so it is crucial in researching to obtain data. The research instrument must follow the variables studied. In the current study, the instruments used are pre-test and post-test to measure students' English learning outcomes and questionnaires to know the students' perception of android-based interactive multimedia in English learning and learning motivation. Instruments in questionnaires and test questions were validated through two stages. The first stage was tested on students in grade VIII who had learned the materials before and then tested for content validity using AnatesV4. The second stage is discussed with a judgment expert as the evaluator to see the validity. The judgment is a lecturer at STIE Yasa Anggana and a supervisor arranging English question exams. This research used Google Forms to collect data, both questionnaires and pre-test and post-test questions. The students were informed about the aims of the research before deciding their willingness to be selected as respondents.

Data collecting technique.

There are three data sources for this research. The first data is Observation and documentation. The documentation in this study aims to obtain data on students' names and

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find empirical initial ability data obtained through a list of English final exam scores in the first semester for the 2022/2023 academic year. In addition, researchers used documentation techniques for research data implementation. The documents are also in photos and videos during the research process. Besides, a checklist as an observation tool is used after the research in the form of test scores for English subjects. Researchers use this technique to obtain English subjects' data about grades VII-B and VII-C.

The second is a test. This study's test administration technique employs a pre-test and post-test to collect data on student English learning results following the administration of English topics. The test instruments are arranged based on the goal from Chapter 1, Units 1 and 2, which are developed into four indicators and result in 20 objective questions. For each item, there are four alternative answers that students will choose. The instruments arranged are a grid and objective test sheets totaling 20 items, each with 5 points totaling 100 scores. The study was conducted in several meetings between July 24 and August 5, 2023.

The third instrument is questionnaires, written questions designed to elicit information from respondents via personal reports or knowledge. The type of questionnaire employed in this study is constructed as multiple-choice questions. The instruments to assess learning motivation and students' perceptions of Android-based interactive multimedia are based on Uno's (2017) indicators, which took three indicators. The three indicators assess a solid desire to study, fun learning activities available, and a conducive learning atmosphere so kids can learn effectively. Each indicator is arranged into five questions so that the total number of questions is 15.

Data analysis technique

As previously stated, there are three data for research. Firstly, Observations and documents are used as supporting data and evidence of the research process. The data will be compiled and used as research data and references in the form of student lists, student grades, photos, and videos of research activities. Students' pre-test and post-test learning outcomes were analyzed statistically using the IBM SPSS Statistic 24 to test the normality, homogeneity, and hypothesis test. The hypothesis test uses the Mann-Whitney test to see the Effectiveness of Android-based interactive multimedia in improving students' English learning outcomes. Meanwhile, student responses from the questionnaire are data to see student motivation and perceptions of learning media. The data is collected and displayed in a

frequency distribution table of average scores and a frequency distribution table of frequency distribution values.

RESULT AND DISCUSSION

Result

Students' English learning outcomes.

This study aims to discover the differences in how learning using Android-based interactive multimedia improves student learning outcomes in English learning with the "About Me" theme in class VII Junior High School students. The analysis used is a non-parametric test because the results obtained from the Normality Test show an abnormal distribution, as shown below:

Table 1 The Normality Test Result

Students' Learning Outcomes	Statistic	df	Sig.	Result
Pre-test in Experimental Class	0,942	33	0,078	Normal
Post-test in Experimental Class	0,865	33	0,001	Abnormal
Pre-test in Control Class	0,863	33	0,001	Abnormal
Post-test in Control Class	0,953	33	0,160	Normal

Source: IBM SPSS Statistics 24 program

According to the table above, the experimental and control classes had different findings for pre-test and post-test data on learning outcomes. The experimental class's pre-test and control class's learning outcomes post-test have sig > 0.05, indicating that the data group is Normal. While the learning outcomes post-test in the experimental class and pre-test in the control class both exhibit sig 0.05, it is possible to conclude that the data group is abnormal. The results of the homogeneity test are:

Table 2 The Homogeneity Test Result
Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.	Result
Students' Learning	Based on Mean	2.398	1	64	0.126	Accepted
	Based on Median	2.405	1	64	0.126	Accepted

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Outcomes	Based on the Median and with adjusted df	2.405	1	58.696	0.126	Accepted
	Based on trimmed mean	2.491	1	64	0.119	Accepted

Source: IBM SPSS Statistics 24 program

The homogeneity test shows that the significant value of Based on Mean, Based on Median and Based on Median and with adjusted df is 0.126, and Based on the trimmed mean is 0.119. From the results of the significant level for pre-test or post-test data greater than 0.05 (sig > 0.05), it can be concluded that the data in this study have a homogeneous variance.

As the Normality test shows abnormal, the non-parametric test used is the Mann-Whitney test using IBM SPSS Statistics 24. The test determines whether there is a difference between two independent samples. The Mann-Whitney test is a non-parametric test alternative to the t-test. This test shows the difference between the control and experimental classes. Here are the test results:

Table 3 The Mann-Whitney Test Result in Experimental and Control Class

Ranks				
	Class	N	Mean Rank	Sum of Ranks
Learning Outcomes	Control Class	33	20.23	667.50
	Experimental Class	33	46.77	1543.50
	Total	66		

Source: IBM SPSS Statistics 24 program

From the output table above, the mean Rank of the control class group is 20.23, and the experimental class group is 46.77. The experimental class has a higher Mean Rank than the control class. There is a difference between the experimental class and the control class. For more details, we can look at the statistical analysis significance test:

Table 3 The Mann-Whitney Test Statistics Result in Experimental and Control Class

Test Statistics	
Learning Outcomes	
Mann-Whitney U	106.500
Wilcoxon W	667.500
Z	-5.655
Asymp. Sig. (2-tailed)	.000
a. Grouping Variable: Class	

Source: IBM SPSS Statistics 24 program

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From the analysis results, the Mann-Whitney u value was 106.500, Z is -5.655, and Asymp Sig (2-tailed) 0.000 with $p < 0.05$. From the result, H_0 is rejected because the value of 0.000 is less than 0.05. H_a is accepted, indicating that there is an average difference between the learning outcomes of the Post-test in the Experimental class and the Post-test in the control class, implying that there is a different value in learning outcomes between learning using teacher-centered and discussion models and Android-based interactive multimedia on English learning outcomes. It implies that implementing Android-based interactive multimedia effectively increases students' English learning outcomes.

Students' responses about motivation in English learning

Learning motivation can emerge from both intrinsic and extrinsic causes, according to Uno (2017). First, the want and desire to succeed, as well as the drive for learning needs, and second, the hope for ideals" are the fundamental variables that determine learning motivation are intrinsic causes. The extrinsic elements that enhance learning motivation are appreciation, a conducive learning environment, and exciting learning activities. Variables influencing inner and extrinsic Motivation must be considered in obtaining high levels of learning Motivation in students. This study investigates how using Android-based interactive media as an extrinsic factor can boost students' Motivation to learn English. Based on student responses to the questionnaire, it was stated that the teacher's appreciation of students positively responded to student learning motivation. This positive response can be seen from the average percentage of student answers to the questionnaire below:

Table 4 The Percentage of student responses to Motivation from Exciting activities for learning

No	Questions	SD	DG	N	A	SA
1	I like it when the teacher uses engaging learning media	0%	0%	0%	30%	70%
2	Learning by using interactive multimedia helps me make it easier to understand complex material	3%	0%	0%	52%	45%
3	Interactive multimedia helps me to learn independently	3%	6%	6%	45%	39%
4	The learning media used by the teacher is exciting and appropriate	0%	0%	9%	42%	48%
5	The interactive multimedia helps make me enthusiastic about learning complex material	0%	12%	0%	61%	27%

SD (Strongly agree), DG (Disagree), N(Neutral), A (Agree), and SA (Strongly agree)

Source: Dewi Nurlaela (2023)

From Table 4, as much as 39% of students agree, and 36% strongly agree on the teacher's treatment of giving appreciation to students. Through the appreciation that the teacher gives, student motivation increases. The second factor is enjoyable learning activities related to Android-based interactive multimedia. Some student responses are optimistic about the use of the media. Teachers who employ engaging learning media excite their students. The results can be seen in student responses, which show that 30% agree and 70% strongly agree. 52% of students agree, and 45% strongly believe that learning through interactive multimedia helps them understand complex topics. Interactive multimedia motivates students to learn independently. The responses show that 45% agree, and 39% strongly agree. The statistics demonstrate that 42% agree and 48% strongly agree that the learning media used by the teacher is entertaining and acceptable. Student responses are also more precise when using interactive multimedia, contributing to their enthusiasm for learning complex information. This incentive can be evident in the fact that 61% agree and 27% strongly agree.

Students' perceptions on implementing Android-based interactive multimedia in English learning.

The third aim of the study is to know how students perceive using Android-based interactive multimedia in learning English. The following is a tabulation of the percentage of student responses to using Android-based interactive multimedia in learning English.

Table 5 Percentage of Students' Perception of Android-Based Interactive Multimedia

No	Questions	SD	DG	N	A	SA
1	The use of interactive multimedia helps me understand the subject matter	0%	0%	9%	61%	30%
2	Learning videos in interactive multimedia is exciting and helps me understand the subject matter	0%	3%	3%	61%	33%
3	The exercises in interactive multimedia are exciting and help me understand the subject matter	0%	0%	3%	58%	39%
4	Pronunciation practices on multimedia help me to practice pronunciation in conversation.	3%	9%	3%	30%	55%
5	This interactive multimedia is suitable for use in learning English	0%	6%	9%	30%	55%

SD (Strongly agree), DG (Disagree), N(Neutral), A (Agree), and SA (Strongly agree)

Source: Dewi Nurlaela (2023)

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In the percentage of students who responded to the student's perception of Android-based interactive multimedia above, students agreed that using Android-based interactive multimedia makes it easier for them to understand the subject matter. The students' responses show they agree 61% and strongly agree 30%. Students consider learning videos in interactive multimedia exciting and helping them understand the subject. This result can also be seen from the responses, in which 61% strongly agreed with 33%. In the interactive multimedia section, students agree that the exercises help students understand the subject matter. The response shows that 58% of students and 39% strongly agree. The available pronunciation practices on multimedia help students practice pronunciation in conversation practices. It is shown that students agree with 30% and strongly agree with 55%. Likewise, with the use of Android-based interactive multimedia, many students responded positively that Android-based interactive multimedia is suitable for use in learning English, as seen from the responses of students who agreed as much as 30% and 55% strongly agreed.

For more clarity, look at the percentage of student responses to Students' Perception of Android Based Interactive Multimedia diagram below:

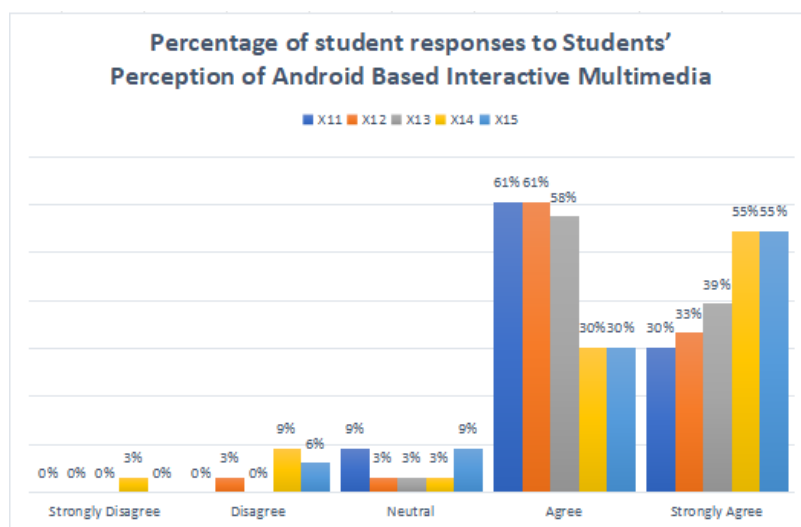


Figure 1. Percentage of Students' Perception of Android-Based Interactive Multimedia

In the percentage of student responses to Students' Perception of the Android-Based Interactive Multimedia diagram above, it is clear how positive student responses are based on the appearance of the bar chart on the right. Answers that agree and strongly agree from students dominate with much higher scores, while neutral and disagree responses are

deficient. The students' responses show positive perceptions of Android-based Interactive multimedia.

Discussion

The results of the Mann-Whitney U analysis show that Android-based interactive multimedia, namely Articulate Storyline, can improve student learning outcomes, in line with the statement of Agustina et al. (2021); Wijaya & Mariono (2022) and Nurmawati et al. (2020). According to Piaget (Djabba et al., 2019), learning outcomes can be influenced by several factors, one of which is external factors. In this case, using Android-based interactive multimedia, namely Articulate Storyline, is one of the external factors that can improve English learning outcomes. Through learning media, we can clarify the presentation of messages and information to facilitate and improve the learning process and results; this fact is also in line with Arsyad (in Nurrita, 2018) that one of the benefits of learning media is to clarify information in learning.

Using Android-based interactive multimedia, students strive to improve learning outcomes through an accessible, engaging, and efficient teaching and learning process. It helps students concentrate on learning, increases learning motivation, provides a comprehensive learning experience, and allows students to be involved in the learning process in line with expressions (Nurrita, 2018). Technology also helps teachers facilitate English language learning, as Ahmadi (Savitri & Akmal, 2023) states. Implementing Android-based interactive multimedia in learning can improve student learning outcomes. Arsyad's explanation (Azhar Arsyad, 2014) that learning media can clarify the presentation of messages and information to expedite and improve the learning process and outcomes is proven. In other words, using Android-based interactive media based on Articulate storyline is efficacious in improving student learning outcomes, especially in English subjects.

Based on students' responses, most students responded positively to using Android-based interactive multimedia, increasing their Motivation in their English learning. The conclusion is in line with Rafmana Chotimah's (2018) explanation that interactive multimedia based on articulate storylines can generate student motivation and stimulate student learning activities if users plan to use them appropriately. Based on data from research and its correlation with experts' opinions, using Android-based interactive multimedia increases students' Motivation in their English learning. Learning media is used to increase students'

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Motivation. When students feel happy and interested in learning, student motivation increases. As stated by Azhar Arsyad (Azhar Arsyad, 2014) Nasution (S. Nasution, 2003), when teachers can direct children's attention, it can create Motivation to learn; more direct interaction between students and the environment increases their learning motivation.

In this study, Android-based interactive multimedia has a Communicative function. Learning media facilitates communication between teachers and students. Students agree that using Android-based interactive multimedia makes it easier to understand the subject matter. The learning media also has a motivational function because it can motivate students to learn. As stated above, the learning media increases students' Motivation through appearances and functions. In this study, the Android-based interactive multimedia can be more meaningful: learning not only increases the addition of information but can improve students' learning outcomes. The students' post-test results have proved the increase in student learning outcomes. The learning outcomes increase because using the learning media can equate each student's perception to having the same view of the information conveyed, and students can study independently. The functions above align with Sanjaya (2014), who mentioned several functions of using learning media: Communicative function, Motivational function, Meaningful function, Equalizing perception function, and Individuality function.

Regarding its use, the learning media is practically used in English language learning (Khusnah et al., 2020). According to Wijaya & Mariono, n.d. (2021), learning media facilitates learning and improves program performance by reading accompanying material books first. Apart from that, students can also use the media individually or for independent learning. Android-based interactive multimedia is designed with several convergent media, such as mixing audio and visual aspects, having an interactive nature in responding to user responses, and having an independent nature. It provides convenience and completeness of content so students can utilize it independently. The statement also aligns with Safitri et al. (2020). Based on these facts and opinions, we know that Android-based interactive multimedia with an articulate storyline is suitable for learning English.

Apart from that, Android-based interactive multimedia Articulate Storyline 3 can foster interest in learning, which allows for increased student learning outcomes. It was also explained by Sari et al. (2021) and Yuyun et al. (2022) that "the development of student's

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interest in the learning system will influence student learning outcomes, the higher the student's desire for the learning system, the higher the student learning outcomes will be. When students feel that their learning is fun, challenging, and appropriate to their time, they are indirectly motivated to learn. The use of Android-based interactive multimedia Articulate Storyline 3 is appropriate to the students' era and environment, Annisa et al. (2019). Nowadays, students are very close to gadgets; they are more interested in technology. Through this approach, it is hoped that students will feel more comfortable learning because learning is adapted to their environment and time. That way, Android is not only a communication or entertainment tool for students, but students can also use it for learning. The design and features of Android-based interactive multimedia are formed like a game with some navigation, freeing users to control when multimedia parts will be displayed. The interactive multimedia is then packaged so that it becomes interactive learning media. This is related to some previous studies by Rosanti et al. (2020), Kahfi et al. (2021), Hermawati et al. (2020), and Safitri et al. (2020) belief that Articulate Storyline 3 contains various features such as material, images, animations, and even background sound interest student to learn and make the comfortable in learning. Apart from that, this multimedia is also designed to have a quiz feature in the form of practice questions to help students learn. These advantages increase students' Motivation to learn so that they are more focused and interested in understanding the material. That way, it increases not only students' learning motivation but also their learning outcomes, as the statements of Peklaj & Puklek Levpušček (2006), H. Siregar & Sudrajat (2018), and Puspitarini & Hanif (2019).

From several student responses to using Android-based interactive multimedia Articulate Storyline 3, we see that students are very interested when the learning process is varied. Students will understand the material better if presented with appropriate and varied learning media. Using this media triggers students to feel energized in obtaining lesson material. Apart from that, the use of Android-based interactive multimedia Articulate Storyline 3 allows students to study independently. As D. Safitri (2021) and Cakici (2016) stated, it can help students understand the material better. The possibilities above prove that using Android-based interactive multimedia Articulate Storyline 3 in learning is better and can improve learning outcomes and student motivation in learning English. So, Articulate Storyline 3 is suitable for English learning using Android-based interactive multimedia.

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From the three points regarding the use of Android-based interactive multimedia Articulate Storyline 3, there are several possible reasons why student motivation and learning outcomes increase due to its use. The first possibility is the research results of using Android-based interactive multimedia using Articulate Storyline 3, which has the advantage of helping teachers deliver material and making it easier for students to understand the material being presented. The material is easy to understand because it presents important ideas so that students can access information from various sources or references that are relevant to the material. The second possibility is that Android-based interactive multimedia can help students concentrate on learning so that they can adapt intelligently and freely in and outside the classroom. Students can choose which material they need and study it by opening or skipping the material they already understand. The activity helps the teacher's task so that he is not always the leading source in presenting the material being studied by students. Teachers can only act as facilitators, directors, and partners for students participating in the lesson Nurmawati et al. (2020). The third possibility is that with the features found in Android-based interactive multimedia, students can practice improving their understanding, pronunciation, and speaking skills because it contains several practice features. That way, students cannot only learn independently in class but also learn independently outside the classroom. So, students can learn material not only limited to learning in the classroom but also outside the classroom.

CONCLUSION AND IMPLICATION

Conclusion

Based on the data analysis and hypothesis testing carried out in this study, the following conclusions can be drawn:

Learning using Android-based interactive multimedia effectively improves students' English learning outcomes. The fact is proven by comparing the English learning outcomes of grade VII students comparing students' English learning outcomes who are taught using the Android-based interactive multimedia with students taught using the teacher-centered method.

Based on the results of a student survey on increasing learning motivation, using Android-based interactive multimedia increases their Motivation for English learning. This

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fact is evident from student responses, which show that almost 90% of students agree and strongly agree that using Android-based interactive multimedia in learning can motivate them.

According to a student survey, students agree that using Android-based Interactive Multimedia makes it easier to learn the subject matter. They find interactive multimedia learning videos that are both exciting and useful in understanding the topic of English learning. Students agree that the interactive multimedia exercises based on Android help them learn the material and improve their practice. They also believe interactive multimedia based on Android is appropriate for learning English.

Limitation

This study only includes data from one institution. As a study location, the author chose one of the educational institutions where the researcher lectures. The reason is to consider the research's time, aims, and rewards. As a result, this study focuses solely on one educational institution rather than all educational institutions.

Implication

Studies on using Android-based interactive multimedia in learning are still rare, especially in remote areas. Therefore, because of the limitations of the research mentioned above, the author suggests that this Media can be applied to other, more varied learning methods.

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