

Utilisation of Android-based Learning Media in Motivating Economics Education Student Learning

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ABSTRACT

The purpose of this study was to determine the use of Android-based learning media in learning accounting practice, the learning motivation of odd semester students for the 2021 / 2022 academic year, and the effect of using Android-based learning media on learning motivation as shown by the achievement of learning outcomes in the accounting practice course for students of the Economic Education Study Program. Through this research, it is hoped that the average test score results will be known as a reflection of the effectiveness of Android-based learning media. This is based on the results of learning motivation which are considered less than optimal and many are still incomplete because teachers are used to using conventional media in learning. The selection of Android-based learning media as a way of teaching materials for presenting data because it has better features than just ordinary conventional media images. This research was conducted on 35 students of the Economics Education Study Program, Faculty of Economics and Business, Jenderal Soedirman University. The results of this study present the average learning motivation as shown by the achievement of learning outcomes in classes using Android-based learning media of 88.65. In other classes, the average student learning outcomes in classes using conventional media images obtained an average result of 75.59. The conclusion from these results is that classes using Android-based learning media are more effective than classes using conventional image media.

Keywords: Utilisation; Android-based Learning Media; Motivation; Economics Education.

1. Introduction

Education is the most important need for every human being, especially in today's modern era. With education, human beings who have morals, skills, and knowledge will be formed. Universities have an important role in giving birth to a generation of young people with character and high competitiveness who will later become game changers in the midst of the challenges and changes currently being faced by the world community. High adaptability and competitiveness are the main prerequisites that need to be possessed by today's young generation. The learning process in higher education is currently required to be adaptive to technological advances. Educators in higher educations are required to be able to package an

interesting and effective learning process in order to realise the optimisation of course learning outcomes.

Through this progress, teacher educators and lecturers can use various media according to the needs and learning objectives. The learning process is a communication process. In a communication process, it always involves three main components, namely the message sending component (educator), the message receiving component (students), and the message component itself which is usually in the form of subject matter. Sometimes, in the learning process, communication failures occur. To avoid all of that, educators can develop learning strategies by utilising various media and learning resources.

What's more, changes in learning strategies whose paradigm shifted after we were in the conditions of the COVID-19 pandemic, of course, must lead us to the use of learning media that are not only used jointly by educators and students, but which can also facilitate independent learning for students. Mastery of this technology can be used by educators to utilise learning media which will make it easier to convey material in learning. What's more, this pandemic condition requires teachers to use technology as a medium so that education and learning can be saved and continue. However, in reality, there are still many lecturers who have not utilised technology to use instructional media in the teaching and learning process for students. In fact, from the results of interviews with several third semester students, it was found that some lecturers only gave assignments during online learning.

Based on these problems, there are several things that should be developed in line with the pandemic conditions and technological developments in today's digital era. Distance learning requires the use of technology in education, especially the learning process, namely by using technology as a learning medium to be able to assist educators in conveying subject matter through a distance teaching and learning process to achieve learning goals. These changes make learning media more interactive with the help of technology using computers as the main device.

Learning media continues to experience development along with the development of the world of information and technology. Ahmadi (2010: 36) said that new technologies, especially multimedia, have an increasingly important role in the learning process. Many people believe that multimedia will be able to lead to learning situations where learning with effort can be replaced by learning with fun. So, a fun, creative, and not boring learning process will be the right choice for teachers.

Based on the characteristics of students in the accounting practicum class, then an alternative Android-based learning media is one of several media that seems appropriate to apply because it has advantages in sound, images, and also supporting the flexibility of students to study independently by installing it on their smartphones. By using Android-based learning media, it can increase student learning achievement and motivation (Kuswanto & Radiansah, 2018).

Android-based learning media that can combine elements of images and sound will make students more interested in the learning and teaching process. The correct selection of learning

media can support teachers in delivering material, as a result the learning and teaching process becomes more effective and the material explained can be thoroughly understood by students. The attractiveness of the physical appearance greatly influences the learning process. The more attractive the media display, the more motivated students are to learn so that it affects student learning outcomes (Resiani et al., 2015). Learning media can make students not passive in the learning and teaching process, this results in better learning outcomes (Sudjana, 2013: 2).

The development of these learning media is based on several considerations: a) they can be used as independent learning media for students both at school and outside of school, and b) they can be used by educators as learning media in the teaching and learning process. On the basis of the problems above, a study was carried out which had the aim of describing the effectiveness of Android-based learning media and image media on learning outcomes for class V student data presentation material.

2. Literature Review

Learning Media

Rayandra (2012: 8) suggested that learning media can be understood as anything that can convey or channel messages from sources in a planned manner, resulting in a conducive learning environment in which recipients can carry out the learning process efficiently and effectively. Based on the expert's opinion, it can be concluded that learning media is anything that can be used as a channel for messages in order to achieve learning objectives effectively and efficiently. Effective and efficient means achieving a goal by choosing the right, fast, and appropriate method as well as using the minimum effort but with maximum results.

The use of teaching media will greatly help the effectiveness of the learning process and delivery of information (messages and lesson content) at that time. Thus, it can be concluded that the presence of media in learning functions as a tool in increasing student motivation and interest in learning, so that students will be more interested and more easily understand the material presented. These tools will influence emotions (interest, desire, determination, actions, and attitudes) in the teaching and learning process in order to achieve learning objectives.

Types of Learning Media

In line with technological developments, learning media is also experiencing rapid development. Based on these technological developments, the types of learning media according to Arsyad (2016: 29) can be grouped into four groups, namely media produced by print technology, media produced by audio-visual technology, media produced by computer-based technology, as well as media combined with printing and computer technology.

Sanaky (2011: 42) classified learning media based on their types and characteristics as follows:

1. Learning media, seen from the aspect of physical form by dividing the types and characteristics as follows:

- a. Electronic media, such as television, film, radio, slides, video, VCD, DVD, LCD, computer, internet, and others.
 - b. Non-electronic media, such as books, handouts, modules, training, graphic media, and teaching aids.
2. Learning media, seen from the aspect of the five senses by dividing into three, namely:
 - a. Audio media (hear).
 - b. Visual media (see), including graphic media.
 - c. Audio-visual media (hear-see).
 3. Learning media, seen from the aspect of the tools and materials used, namely:
 - a. Hardware, as a means of displaying messages.
 - b. Software, as a message or information.

Based on the description above, it can be concluded that the types of learning media can be divided into electronic and non-electronic-based media. In this study, learning media were developed in the form of software applications.

Android-based Learning Media

Technological advances are so rapidly affecting learning, especially in terms of the use of learning media. Android-based learning media is a new breakthrough in the world of education. This learning media is usually in the form of educational applications which contain teaching material or materials to be used in learning. Educational application products from these learning media can be downloaded and accessed on smartphones or gadgets with the Android operating system, whether or not they are available on the Google Play Store.

Android application-based learning media is included in the type of electronic learning media. It is called electronic learning media because the Android application product runs on electronic devices, both smartphones or gadgets with the Android operating system. Where, the smartphone or gadget is included in the category of electronic devices.

In developing Android application-based learning media, this study used two applications, namely Articulate Storyline and Web 2 APK Builder. Articulate Storyline is software for creating interactive presentations and courses. The Articulate Storyline application is a solution for practitioners who want to develop easy interactive learning media because it has similarities with presentation applications, both Microsoft PowerPoint and Impress (LibreOffice, OpenOffice, and Kingsot Office). According to Purnama and Asto (2014), learning media using this software are no less interesting than other interactive media.

3. Research Methodology

This study used a quantitative approach to the type of experimental research. Experimental research method was chosen as the method for conducting research. This method is part of the quantitative method. The form of the experimental design for this research is a quasi-experimental design (pseudo-experiment). Experimental research is always carried out with the

intention of seeing the effects of a treatment (Arikunto, 2010: 9). The type of design used in this study was a pre-test and post-test control group design. The population chosen in this study were all odd semester students for the 2021 / 2022 academic year of the Economics Education Study Program, Faculty of Economics and Business Jenderal Soedirman University. This class was selected as the sample in this study with a total of 17 students who studied every day using conventional image media for the control class and 18 students who studied using Android-based learning media. Test and observation sheets of learning motivation were used as instruments in this study, as well as documentation was needed as research supporting data. Based on the compiled instruments, the data collection technique was carried out using multiple choice tests and documentation. Data analysis carried out in this study used data obtained from test and observation sheets. Meanwhile, the analysis of the data hypothesis test through several prerequisite test stages, namely the normality test, homogeneity test, and t-test.

4. Results and Discussion

This study divided the groups into two, namely the experimental group and the control group. One group was given certain special treatment, and another group was not given any treatment. The experimental group was the group that received treatment, namely by using Android-based learning media during learning. Meanwhile, the control group used conventional learning models (lectures) and picture media which were also conventional.

At the end of the study, pre-test and post-test scores were obtained from the control and experimental classes. The value of the test results is quantitative data, where the data is needed in this study. The normality test is needed to find out if the data is normally distributed or not. In the results of post-test data normality calculations in the control class, it can be seen that the Sig. value in the control class that used conventional learning models (lectures) and image media which was also conventional is equal to $0.094 > 0.05$. Furthermore, the results of post-test data normality calculations obtained a Sig. value of $0.200 > 0.05$. From these results, we could draw the conclusion that the post-test data in the control class that utilised conventional image media in the learning process and the experimental class with Android-based learning media are normally distributed.

To find out whether the two class groups have the same variance, a homogeneity test was used. We can see the calculation of the homogeneity test in the output test of homogeneity of variances. The results of calculating the homogeneity of the control class that utilised conventional image media and the experimental class that utilised Android-based learning media have a Sig. value of $0.458 > 0.05$, so that a conclusion can be drawn that the variances of the two post-test data classes are homogeneous.

After going through two prerequisite tests, namely the normality test, followed by the homogeneity test, then testing the research hypothesis was carried out. Hypothesis testing was done to find out if the hypothesis that we made is accepted or rejected by using the independent samples t-test. Based on the Sig. (2-tailed) value, 0.000 was obtained, then the Sig. value was

compared with the significance level ($0.000 < 0.05$). According to the decision making on the independent sample t-test, a conclusion can be drawn that H_0 is rejected, whereas H_a is accepted. This can be interpreted that there are differences in learning outcomes between the use of Android-based learning media and conventional image media in service company accounting recording material for students in accounting practice courses.

The results of calculating the average results from the pre-test before learning between classes that would utilise Android-based learning media is 72.21, while the average value in classes that would utilise conventional media images is 71.86. This shows that the scores of the students of the two classes before being given learning have an average that is not much different. Meanwhile, the post-test value after being given treatment obtained an average value of 88.65, then the average value of the class that used media images was obtained at 75.59.

From the description of the second data the average value obtained, it can be seen that classes that used Android-based learning media get higher scores compared to classes that used image media. So, it can be concluded that learning using Android-based learning media is actually better and more effective than learning using media images in improving student learning outcomes. According to Rohmah and Buchori (2020), the results of their research show that Android-based interactive learning media can be used as a learning resource and supporting media for distance learning which is able to increase motivation and better learning outcomes than learning outcomes that only use conventional image media. So, it can be concluded that conventional image media is not more effective than other media, in this case, Android-based learning.

5. Conclusion

Based on the results of the research, it can be concluded that learning outcomes in classes that use audio-visual media are more effective than classes that use image media. This conclusion is reinforced by the average value of learning outcomes in classes that utilised audio-visual media of 87.68 which is greater than the average value of learning outcomes obtained from classes that utilised image media of 79.59.

References

- Ahmadi, L. K. (2010). *Strategi pembelajaran sekolah berstandar internasional dan nasional*. Jakarta: Pustaka Raya.
- Sanaky, H. A. H. (2011). *Media pembelajaran*, Jakarta: Kaukaba.
- Arifin, Z. (2018). *Penelitian pendidikan: metode dan paradigma baru*. Bandung: Remaja Rosdakarya.
- Arikunto, S. (2010). *Prosedur penelitian: suatu pendekatan praktik* (revision edition IV). Jakarta: Rineka Cipta.

- Arsyad, A. (2016). *Media pembelajaran*. Jakarta: Raja Grafindo Persada.
- Kuswanto, J., & Radiansah, F. (2018). Media pembelajaran berbasis Android pada mata pelajaran sistem operasi jaringan kelas XI. *Jurnal Media Infotama*, 14(1), 15-20.
- Purnama, S., & Asto, B. I. (2014). Pengembangan media pembelajaran interaktif menggunakan software Articulate Storyline pada mata pelajaran teknik elektronika dasar Kelas X TEI 1 di SMK Negeri 2 Probolinggo. *Jurnal Pendidikan Teknik Elektro*, 3(2), 275-279.
- Rayandra, A. (2012). *Kreatif mengembangkan media pembelajaran*. Jakarta: Gaung Persada Press.
- Resiani, N. K., Agung, A. A. G., & Jampel, I. N. (2015). Pengembangan game edukasi interaktif pada mata pelajaran IPS siswa kelas VII semester genap di SMP N 7 Singaraja tahun ajaran 2014/2015. *e-Journal Edutech Universitas Pendidikan Ganesha Jurusan Teknologi Pendidikan*, 3(1).
- Rohmah, F. N., & Bukhori, I. (2020). Development of interactive learning media for Android-based correspondence subjects using Articulate Storyline 3. *Economics and Education Journal (Ecoducation)*, 2(2), 169-182.
- Sudjana, N. (2013). *Penilaian hasil proses belajar mengajar*. Bandung: Remaja Rosdakarya.