

Application of Smartphone-Based Quizizz Application as Learning Media

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Abstract

Learning media is a tool used to facilitate the delivery of material so that learning concepts can be conveyed to students. The use of instructional media is expected to be able to keep abreast of technological developments. Based on the results of a survey conducted at PGRI Madiun University, it was found that there are still many lecturers who have not utilized learning media using smartphones in the learning process. Lecturers are still using conventional learning media in the form of powerpoints and their evaluation tools are still using paper tests that are felt to be less effective and efficient. The development of technological tools in the world of education, researchers developed using a smartphone-based quizizz application as a learning medium by utilizing Wi-Fi network facilities in the PGRI Madiun university environment. The main objective of this study is to find out the application and contribution of smartphone-based quizizz applications as learning media in the University of PGRI Madiun environment. The method used in this research is descriptive qualitative. Data analysis technique used is an interactive method, which is the process of collecting data, reducing data (compiling data in patterns, categories, specific issues), presenting data (compiling data in the form of matrices, graphs, networks, certain charts) and drawing conclusions. This research was conducted at the University of PGRI Madiun. The subjects of this study were students in Accounting and Economic Education. The results showed that the application of smartphone-based quizizz applications as learning media can make students enthusiastic in participating in learning, so students can focus and maximize the use of smartphones as a fun learning media. The concept of maximum learning will have an impact on improving student learning outcomes.

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INTRODUCTION

In teaching and learning activities, there are five important components that can be used for ongoing learning activities, these components include the objectives, materials, methods, media, and evaluation of learning. These five aspects affect each other. The choice of one particular teaching method will have an impact on the type of learning media that is appropriate, without forgetting three other important aspects, namely the objectives, material, and evaluation of learning. According to (Falahudin, 2014) states that one of the main functions of learning media is as a teaching aid that also influences, motivates, conditions, and the learning environment. In line with the revealed research (Hanifah, Mulyadi, & Tanuatmodjo, 2017) the use of instructional media has a positive effect on student motivation in Accounting. From some of these opinions it can be concluded that learning media is used as a motivation for students who have an impact on improving student learning outcomes.

Based on the results of the National Survey of Internet User penetration of the total population conducted by the Indonesian Internet Service Providers Association in 2018 internet users in East Java based on field data from March 9 to April 14, 2019 ranks fifth with 58.9% internet users 41.1% not internet users after DKI Jakarta in the first position, DI

Yogyakarta in the second position, Central Java in the third position, East Java in the fourth position, West Java in the fifth position. Penetration of internet users based on education and occupation levels 92.6% of internet users and 7.4% of non-internet users. This shows the high enthusiasm of teenagers in using information technology. Technology can support education and improve the effectiveness of student learning. Students become more comfortable and not saturated.

The general description of learning based on a survey conducted at PGRI Madiun University, especially in the Economics and Accounting study program, obtained 41% results, 7 lecturers using smartphone-based learning media and 59% equivalent to 10 lecturers who still do not use smartphone-based learning. So that when learning in class there are still students who use their cellphones for activities outside of learning, this is because the learning used by some lecturers is still conventional where students still lack an active role in the learning process and the use of information technology is still not optimal. Internet-based learning has not been used maximally as an internet, but is only used as a support in the teaching and learning process, not as a medium for learning. Along with the development of technology, it also has a big influence on the development of education in Indonesia.

The use of e-learning is very possible in the current digital era learning process. Utilization of internet-based e-learning learning in the learning process at the University of PGRI Madiun especially accounting and economics education program which is still not optimal makes students not free to use their cellphones for learning activities. Students are more cool to use their cellphones with games, and various social media applications that sometimes do not support the learning process. As an educator must always be sensitive to changes in development as one example is the use of mobile phones that are not well targeted. The use of appropriate media is expected to improve learning outcomes and increase student motivation. According to (Wilson & Bolliger, 2013) mobile learning aims to facilitate learning learners anywhere and anytime in accordance with the time available. Virtual learning can be accessed virtually anywhere, by providing access to the delivery of material. Previous studies have been carried out using the quizizz application. The research was conducted by (Wulansari, 2019) with the title Effect of Cooperative Learning Model Type Student Teams Achievement Division (STAD) Assisted by Quizizz in the Subject Subjects of History of the Material of the Proclamation of Indonesian Independence to the Learning Outcomes of Students of Class XI IPS 4 of SMA Negeri 5 Tasikmalaya in Academic Year 2018 / 2019. The results showed that the Quizizz-assisted Student Teams Achievement Division (STAD) cooperative learning model affected student learning outcomes. This is

evidenced by the average learning outcomes of students who use the cooperative learning model type Student Teams Achievement Division (STAD) aided by Quizizz at 82.50 while the average learning outcomes of students who use the lecture method is 72.18.

The use of smartphones with the quizizz application as learning media is considered suitable to be applied to learning within the scope of the University of PGRI Madiun because of adequate Wi-Fi facilities and infrastructure that supports learning is expected to support the learning process, so that the concept of providing material can be maximally distributed by students.

The purpose of this study was to analyze the application of smartphone-based quizizz applications as learning media in the University of PGRI Madiun environment, and to find out smartphone-based quizizz applications effectively applied to learning in the University of PGRI Madiun environment.

Based on the description above, the researcher intends to conduct research related to the application of Smartphone-Based Quizizz Application as Learning Media of PGRI Madiun University.

LITERATURE REVIEW

Learning Media

Understanding Learning Media

According to (Depdiknas, 2003) the term media comes from Latin in which is a plural form of "medium" which literally means an intermediary or introduction.

The general meaning is anything that can distribute information from information sources to recipients of information. Teaching and learning process is basically also a communication process, so the media used in learning is called learning media. Learning media is part of learning resources which is a combination of software (learning materials) and hardware (learning tools). The Association for Education and Communication Technology (AECT) defines the word media as all forms and channels used to process information. The National Education Association (NEA) defines media as anything that can be manipulated, seen, heard, read or talked about along with the instruments used for these activities.

Meanwhile, (Hamalik, 2003) argues that the media is a human extension that allows it to influence others who do not have direct contact with him. In accordance with this formulation, communication media include letters, television, films and telephones, that roads and railways are media that enable one to communicate with others.

Furthermore (Hamalik, 2003) distinguishes the notion of media into two, namely in the narrow sense and in the broad sense. In the narrow sense, teaching media only covers media that can be used effectively in a planned teaching process, whereas in a broad sense, media does not only cover complex electronic communication media, but also includes simple tools, such as slides, photography, diagrams, and teacher-made charts, tangible objects, and out-of-school visits. In line with this view, teachers are also considered as a medium of presentation, in addition to radio and television because they both need and use a lot of time to convey information to students.

According to (Hamalik, 2003) the

teaching media formulates "... as the carries of messages, from some transmitting sources (which may be a human being or an intimate object), to the receiver of the messages (which is our case is the learner) . As for (Djamarah & Zain, 2002) defines the media as a tool that can be used as a vehicle for channeling learning information or channeling messages to achieve learning objectives. In the context of media as a source of learning, then broadly the media can be interpreted with humans, objects, or events that enable students to gain knowledge and skills. In essence the various restrictions stated above contain the same basic understanding. In communicating we need media or means. In general, the meaning of the media is anything that can distribute information from information sources to recipients of information. So the learning media is "software" (software) in the form of messages or educational information that is presented by using an equipment (hardware) so that the message / information can reach students. Here it is clear that media differs from equipment but both are interrelated elements in an effort to convey educational messages / information to students. Thus it can be concluded that (a) the media is a container of messages that the source or channel wants to forward to the target or recipient of the message, and (b) that the material to be conveyed is a learning message, and that the goal to be achieved is the learning process . Learning media is every person, material, tool, or event that can create conditions that enable students to receive knowledge, skills, and attitudes (Sri Anitah, 2010) Media is a tool or a medium as an intermediary to deliver instructional learning materials to students. The purpose of learning media according to (Karo-Karo & Rohani, 2018) is to make the learning process more clear and interesting, the learning process

6 becomes more interactive, efficiency in time and effort Improving the quality of student learning outcomes, allowing the learning process to be carried out anywhere and when course, fostering positive student attitudes towards the material and learning process, changing the teacher's role to be more positive and productive direction.

Criteria for selecting instructional media.

As an educator w⁶ must be able to choose learning criteria in accordance with class learning, because the use of instructional media that is less precise will have an impact on the less optimal teaching and learning process. The selection criteria that must be considered include the intended use, media user objectives, media characteristics, time, cost and availability. (Falahudin, 2014). While some principles that must be considered by educators in this study are lecturers to choose and use instructional media according to opinion (Sri Anitah, 2010) among others, must be able to adjust to the existing curriculum, provide broad opportunities for students to interact and provide significant motivation , supports learning materials, is easy to use and provides clarity to students about the material being studied, how media works does not contain conflicts or technical problems and is easy to install and repair.

E-learning learning

In this globalization and information era the use of Information Technology (IT) based learning media has become a necessity and ¹² demand, but its implementation is not an easy thing. In using these media must pay attention to several techniques so that the media used can be utilized to the maximum and not deviate from the media's objectives. ¹According to (Hartanto, 2016) There are 3 (three) important things as requirements for electronic learning activities (e-

learning), namely: (a) learning activities carried o⁸ through network utilization, in this case limited to the use of the internet, (b) availability of service support learning that can be utilized by participants in learning, for example External Harddisk, Flaskdisk, CD-ROM, or printed material, and (c) the availability of tutor support services that can help participants learn when experiencing difficulties. From the statement above, it can be categorized that the Computer and LCD Projector media are design media which in their use are needed special designs and are designed so that they can be utilized. The hardware (hardware) that is used to inspire the media is to use a complete computer unit that is already connected to ¹² Projector LCD. Thus this media should attract the attention of students in the learning process. Computer / internet network technology provides benefits for the user to communicate directly with other users. This is made possible by the creation of a device called a modem. The computer/internet network gives participants the possibility to carry out written communication and exchange ideas about the learning activities they carry out. Computer networks can be designed in such a way that lecturers can communicate with students and students can interact learning with other students. Learning interactions using computer networks can not only be done individually, but also to support group learning activities. The use of computer networks in distance education systems is also known as the Computer Conferencing System (CCF). Usually this system ¹⁵ done via electronic mail or e-mail .. E-learning can be defined as a form of information technology that is applied in the field of education in the form of cyberspace. The term e-learning is more precisely intended as an effort to make a ¹⁸ transformation of the learning process in schools or colleges into digital

form which is bridged by internet technology (Munir, 2009).

11 Interactive Multimedia

Multimedia means "multiple media" or "a combination of media. The media can be still graphics and photographs, sound, motion video, animation, and/or text items combined in a product whose purpose is to communicate information in multiple ways. (Doering & Roblyer, 2010). Meanwhile, according to (Salam, 2011), "Interactive multimedia is a tool or a learning tool that contains material, methods, boundaries, and ways of evaluating that are systematically designed and interesting to achieve the competencies/subcompetencies of subjects expected in accordance with their level of complexity. "

There are differences of opinion of some other experts about the use of multimedia terminology related to the interactivity of the components inside. (Doering & Roblyer, 2010) states that: "The combination of media such as video and audio with text makes them multimedia. The ability to get from one makes them hypermedia another. Thus, according to (Doering & Roblyer, 2010) if only a combination of video, audio and text is called multimedia, and if it has the ability to interact, then the media becomes hypermedia. Interactive multimedia with the understanding of hypermedia, because they are both a combination of text, graphics, audio, video that has the ability to interact with one another.

Apart from differences of opinion about the definition of multimedia content, (Andi Pramono, 2006) states that "interaction is a prominent feature in multimedia that enables active

learning. Active learning not only allows students (users) to see or hear (see and hear) but also do something (do). In the context of multimedia do here can be: giving a response to a question asked by a computer or active in a simulation provided by a computer".

In line with the above opinion (Andi Pramono, 2006) states that "among other media multimedia interactivity or other media based on computers is the most real (overt). The advantage of multimedia in terms of interactivity is that this media inherently forces users to interact with the material. This interaction varies from the simplest to the most complex. Simple interactions such as the user having to press the keyboard or click with the mouse to move the page (display) or enter the answer from an exercise and the computer responds by giving the correct answer through a feedback (feedback). Complex interactions such as activities in a simple simulation where the user can change certain variables or complex simulations such as simulations of flying an aircraft".

Types of Interactive Multimedia

Learning multimedia models according to Padmanthara in (Doering & Roblyer, 2010) namely tutorials, drill and practice, simulations, instructional games, hybrid, socratic, inquiry and informational. The description of each model is as follows

a. Tutorial

Model tutorial is one type of learning model that contains explanations, formulas, principles, charts, tables, definitions of terms, exercises and branching accordingly. It is called branching because there

are various ways to move or move through learning based on students' answers or responses to materials, questions or questions.

A well-designed tutorial model can provide various benefits for students and teachers. In interacting with students, the computer tutorial model is not as flexible as the teacher dealing with students, because computers have limitations compared to humans. But the computer tutorial model offers advantages that exceed a teacher's ability to interact with many students at the same time individually. In this tutorial interaction the information and knowledge presented is very communicative, as if there is a tutor who accompanies students and provides direct guidance to students.

This type involves the presentation of information. The intimate tutorial consists of a discussion of concepts or procedures with part by part questions or quizzes at the end of the presentation. Tutorial instructions are usually presented in terms of "Frames" that relate to a set of views. Depending on hardware capabilities, attractive display, text, color image or sound.

The tutorial model aims to convey or explain certain material, the computer conveys material, asks questions and provides feedback according to students' answers.

b. Drill and Practice

The drill and practice model assumes that the basic concepts have been mastered by students and they are now ready to apply formula-formula, work with concrete cases, and explore their comprehension of the material. The main function of training and practice in computer-assisted learning programs provides as much practice as possible to students' abilities.

The way this Drill and practice works consists of displaying a question or problem, receiving responses from the user and training, checking answers, and continuing with other questions based on the correctness of the answers. This type does not display an instruction, but only practices an existing concept. So this type is part of testing.

This model can be applied to students who have learned concepts (basic abilities) with the aim of strengthening the concepts that have been learned, where students are ready to recall or apply the knowledge they have.

c. Hybrid

The hybrid model is a combination of two or more multimedia learning models. An example of a hybrid model is the integration of a tutorial model with a drill and practice model with the aim of enriching student activities, ensuring mastery learning, and finding different methods to enhance learning. Although the hybrid model is not a unique model, but this model presents a different method in learning activities. The hybrid model allows the development of learning comprehensively which is to provide a complete set of learning activities.

d. Socratic

This model contains conversations or dialogs between training users and computers in natural language. If the user of the training can answer a question called the CAI Mixed-Initiative. Socratic comes from research in the field of artificial intelligence (Artificial Intelligence) compared to the world of education or the CAI field itself.

e. Problem Solving

Problem solving models are

exercises that are higher than drill and practice. Assignments that include several steps and processes are presented to students who use computers as a tool or source to find solutions. In a good problem solving program, computers are in line with students' approaches to problems, and analyze their mistakes.

Problem solving is similar to drill and practice, but with a higher level of difficulty, because students do not just remember concepts or basic material, but are required to be able to analyze and solve problems at the same time.

f. Simulations

Simulation with real life situations faced by students, with a view to gaining global understanding of the process. Simulation is used to demonstrate something (skills) so students feel like they are in the real situation. Simulations are widely used in learning material that is dangerous, difficult, or requires high costs, for example to train airplane or fighter pilots.

g. Instructional Games

This model if well designed can utilize the competitive nature of students to motivate and enhance learning. As with simulations, good learning games are difficult to design and designers must be sure that in an effort to provide a game atmosphere, the integrity of learning objectives is not lost.

This type of game is appropriate when applied to students who enjoy playing. In fact, if well designed as a means of playing at the same time learning, it will further increase student motivation.

h. Inquiry

Model Inquiry is a database system that can be consulted by students, where the database contains data that can enrich student knowledge.

i. Informational

Informational usually presents information in the form of a list or table. Informational demands little interaction from the user.

Interactive Multimedia Function

In classroom learning activities, multimedia can function as an optional supplement, complementary, or even substitute for the teacher (substitute) (Doering & Roblyer, 2010)

a. Supplements (Additional)

Multimedia is said to be a supplement (supplement), if the teacher or the rest has freedom of choice, whether or not to use multimedia for certain subject matter. In this case, there is no requirement for teachers or students to utilize multimedia. Although optional, teachers who use multimedia appropriately in teaching students or students themselves who seek to find and then use multimedia are surely going to have additional knowledge or insight.

b. Complement (Complementary)

Multimedia is said to be a complement (complementary) if the multimedia is programmed to complement or support the learning material received by students in the classroom. As a complement, multimedia is programmed as reinforcement (enrichment) or remedial material for students in participating in learning activities. Multimedia is said to be enrichment if students who can quickly master the material delivered by the teacher face to face are given the opportunity to utilize certain multimedia that is specifically developed. The aim is to further strengthen the level of student

mastery of the subject matter presented by the teacher in the classroom. Multimedia is said to be a remedial program if students who have difficulty understanding the subject matter presented by the teacher face to face in class are given the opportunity to utilize multimedia that is specifically designed with the aim that students more easily understand the subject matter presented by the teacher in class .

c. Substitution (Substitute)

Multimedia is said as Substitution (Substitute) if multimedia can replace most of the teacher's role. This can be an alternative as a learning model. The aim is that students can flexibly manage their learning activities according to the time, learning style, speed of learning of each student. There are 3 (three) alternative models of learning activities that teachers and students can choose from, namely: (1) fully face-to-face learning accompanied by multimedia use, (2) partly face-to-face and partly through multimedia (3) full learning through multimedia.

Benefits of Interactive Multimedia

The use of media in learning can help provide meaningful experiences to students, because the use of media can facilitate students in understanding something abstract to be more concrete. Edgar Dale classifies children's learning experiences ranging from the most concrete things to the things that are considered the most abstract, starting from students participating in real experiences, then towards students as observers of real events, followed by students as observers of events that occur presented with the media, and finally students as observers of events are presented with symbols. This concrete-abstract level is indicated by

a chart in the form of a cone of experience (cone of experiment).

Quizizz application

Quizizz with Smartphone is an application designed to enable classroom learning. This learning Smartphone is highly recommended because the process used is to use Quizizz learning media with Smartphones. the use of games also fosters student character according to (Irwan, Luthfi, & Walidi, 2019). Quizizz is a web tool in the form of an online quiz game that can be used as a formative assessment in learning (Chaiyo & Nokham, 2017). The use of Quizizz is quite easy, the quizzes that have been compiled can be directly added to Quizizz and can be arranged in either an image, background or an optional option. Quizzes can be shared with code to students. Quizizz provides statistical data from the results of student quizzes that can be downloaded as Excel spreadsheets. The use of Quizizz is quite flexible because there are time settings in administering the quiz. Various facilities and strengths in Quizizz enable Quizizz to become a medium in the analysis of students' understanding concepts in the material of mechanical waves (Yana & Antasari, 2019). Meanwhile according to According to (Ju & Adam, 2018) Quizizz Is one of the e-learning based evaluation tools which is very suitable to be used to evaluate quickly and directly give results to the teacher to take action to students. Following are the steps to use Quizizz learning with a Smartphone.

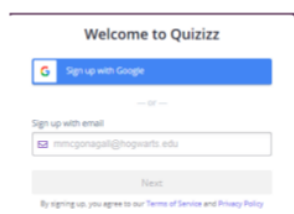
Step 1

open <https://quizizz.com/>

Step 2

Click sign up

We can sign up using a google account, or by entering our email.



Step 3

After successfully signing up, please click on a teacher.



Step 4

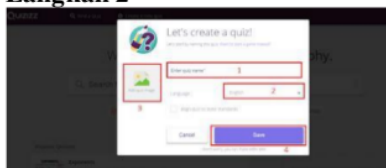
1. Select country.
2. Enter the zip code.
3. Enter the name of the school manually by clicking can't find your organization.
4. Click add organization.
5. Click continue

After completing the account, the next step is to create quizizz.com.

Step 1

click open quiz creator

Langkah 2



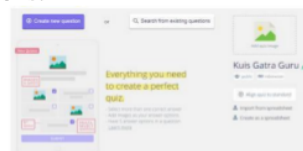
Information :

1. Enter the name of the quiz that will be created. For example "Gatra Teacher Quiz"
2. Select the language used in the quiz.

3. Enter the picture for the quiz. This image may or may not be filled.
4. When finished, click save

Step 3

Click create new question to start creating questions.



Step 4

We will be taken to a page like the one below. Please fill in accordance with the information below!

Information :

Single answer is a problem with one correct answer.

Multy select, is a problem with more than one correct answer.

1. To make questions
2. For choice 1
3. For choice 2
4. For choice 3
5. For choice 4
6. To clear the selection, just press the trash can icon. For the correct answer, please click the check mark on the left until it is green.
7. To add answer options
8. To set the answer time can be selected 5, 10, 15, 20, etc. (time in seconds)
9. When everything is finished, click save.

The screen display on the right is a display of questions that will appear on student smartphones.

Step 5

Create as many questions as desired. If already, please click finish quiz later fill in the grade and choose relevance subject.

Grade: For what grade students choose relevance subjetc: please choose our quiz about what

METHODS

Research Types and Approaches

This type of research is descriptive-qualitative. Qualitative research is research that uses a natural setting, with the intention of interpreting phenomena that occur and is carried out by involving various existing methods (Moleong, 2012). This research uses a case study approach. This model refers to the paradigm that seeks the truth of the phenomena in the PGRI Madiun University environment to analyze the Application of Smartphone-Based Quizizz Applications as Learning Media in the PGRI Madiun University environment, which is applied in Accounting Education for students who take multimedia courses of 22 students and study programs in economic education at 20 students took computer courses

Research subjects and data sources

Research subject

The subject of this research is students who take courses. students taking multimedia courses and students taking Computer Application courses.

1. Data Sources

a) Primary Data Sources

(Nazir, 2014) explains that primary data sources are basic sources that are primary evidence or witnesses of past events. The data was obtained from informants that were made as research objects by students, lecturers who taught multimedia learning subjects

b) Secondary Data Sources

Secondary **data** sources are sources that directly provide data

to data collectors, for example through other people or through documents. (Sugiono, 2014). Secondary data used are (1). Documents and records in the form of data from learning outcomes in the form of final grades and practice values (2). Literature material from books, previous research and relevant scientific journals.

Data collection technique

a. Observation

social situation yakni place, actor, dan activities berikut ini: The observation model uses the passive participation approach, referring to the concept offered (Prastowo, 2011) called the social situation, namely the following places, actors, and activities:

- 1) Place: Accounting Education Study Program and Economic Education Study Program as the main place.
- 2) Actor: The culprits are students who take multimedia courses and students who take Computer Application courses
- 3) Activity: Observe during the learning process by using the smartphone-based Quizizz application

b. Interview

The interview model uses a structured type. Interviews were conducted with: (1). The lecturer is used for information about student development in learning (2). Head of Study Program as an observer in curriculum and learning (3) students who take multimedia courses and students who take Computer Application courses.

c. Test

4 The use of this method to obtain data in the form of results achieved from the implementation of learning using the smartphone-based Quizizz application in the Accounting

Education and Economic Education Study Program

d. Document Analysis

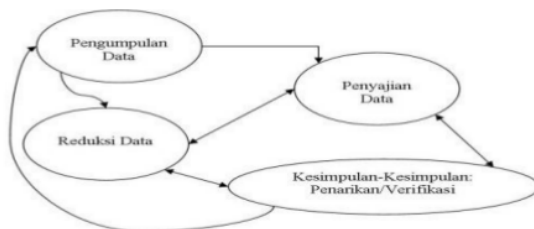
Analysis of documents from: (1). Archives or documents about Student Data on Accounting and Economic Education Study Program, (2). Documentation in the form of photos of activities, (3). Proof of record of activities in learning practice.

Data Validity Techniques

The data validity technique used is source triangulation with the models offered (Nurkamto, 2006)

Data Analysis Techniques

This analysis model refers to Miles and Huberman's interactive plot which can be described as follows:



Picture 4. The Qualitative Analysis Model of the Miles and Huberman Interactive Model

source: (Miles, 2009)

RESULTS AND DISCUSSION

Descriptive Analysis

This analysis model refers to the interactive flow of Miles and Huberman with the following steps collecting data, reducing data, drawing conclusions. Researchers conducted observations and interviews about the role of using mobile phones before implementing the quizizz application in learning on campus. Based on observations made, students are quite

ready to start learning, it can be seen that there is student attention when the lecturer speaks in front of the class. Students pay attention when the lecturer explains what will be learned today and answers the questions given by the lecturer. At the time of study there were some students who used cellphones to take notes on the board and then copy them in books. Apart from that cellphones are also used to reflect, open Instagram, open lines, view photos and videos and to chat. When the lecturer asks a question, there are some students who try to answer the question without being instructed by the lecturer. Students use cellphones to do assignments given by the lecturer. When the learning process ends, students and lecturers make conclusions about what they have learned today.

The use of cell phones in the learning process in Economic Education and Accounting Education, namely there are some students who use cellphones to take notes of notes written on the board, then copy them in books. Apart from that cellphones are also used to reflect, open Instagram, open lines, view photos and videos and to chat, but some also get photos of material notes from their class groups. So the notes are photographed, distributed in class groups. Lecturers allow students to use cellphones to find information related to the material being studied. During the 30-minute recess, there were some students who used cellphones to open social media such as WhatsApp, Instagram, YouTube and others. There are also those who use cellphones to find information related to the task they are working on. In addition, there are some students who also use a calculator found on their mobile to calculate when doing their assignments.

In this section the researcher will explain the results of the interviews that have been obtained. The results of this

interview have been made transcripts, then the transcripts will be reduced by researchers, then after data reduction the researcher will present the data or conclude the data. The data presented is made in the form of points based on interview questions. After that the researchers made a descriptive conclusion. After making a conclusion, the researcher will also conclude descriptively whether this research can answer the problem formulation or not. Analysis of smartphone-based quizizz applications as learning media in the University of PGRI Madiun environment which includes feasibility studies, interfaces using quizizz applications and quizizz application practice activities. The initial steps taken include: login to the lecturer, student, admin and exchange of information, material, lectures provided. Then content analysis includes analysis to find out online course descriptions for anyone who has accessed the system. The next stage is the interaction analysis (Interaction Analysis), which is a user analysis that will interact with the quizizz application and authentication takes place, where the user name and password / class code that has been entered automatically randomly according to the database system that the application can enter. Students can immediately use all the facilities provided by the system after a successful login process. After this is done the next process is functional analysis which will discuss the functions that exist in the quiz application and conduct an evaluation in the form of test questions contained in the quizizz application. Measures of success The effectiveness of the application of learning with the Quizizz Application includes a) good material organization, b) effective communication, c) mastery and enthusiasm for the subject matter, d) positive attitude towards students, e) giving fair value, f) flexibility in the learning approach , and g) student learning outcomes.

Measurement Analysis

Feasibility study

Feasibility study is the process of studying and analyzing problems that have been found in accordance with the ultimate goal to be achieved. In the application of the Quizizz Application, the steps to be carried out by the feasibility study are to learn how students and lecturers apply the quiz application in the learning and teaching process at PGRI Madiun University. Understand the extent of using the quizizz application in the PGRI Madiun University environment, Learn the benefits of the quizizz application for students and lecturers at PGRI Madiun University.

Based on the research that has been done, a feasibility study was obtained on the use of the quizizz application in the PGRI Madiun University environment, seen from the ease of running students, adding to the experience of students and group collaboration

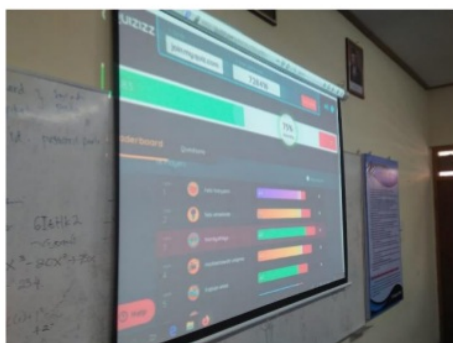
2. Technical and Operational Feasibility of Quizizz Applications

Technical feasibility that the quizizz application has met the standards set to facilitate students and lecturers in the learning process. That is all evident from the use of the quizizz application that has been used efficiently by students and lecturers in the quizizz process where students can access the material needed through quizizz. In addition, by adjusting the schedule that has been adjusted by the lecturer, the use of the quizizz application as an online learning medium can be balanced with the face-to-face learning process. Students can easily access the quiz application whenever and wherever they are. This allows them to keep their information up to date even if they are outside the area. Whereas for lecturers who teach with the existence of this quizizz help in the evaluation of learning at face-to-face meetings.

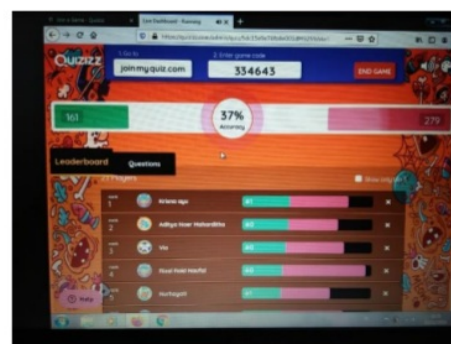
Electronic learning through the quizizz application. Learn with the

quizizz application, which is learning that combines face-to-face activities and internet-based activities through each Smartphone. The learning quiz application has the following characters: Lecturers can hold face-to-face activities at least 14 times. Internet-based activities that are built according to certain requirements are considered equivalent to face-to-face activities. Face-to-face and online activities are configured alternately.

Quizizz application



Students begin to answer the questions contained in the application



Results will soon appear and be recorded as well as the effectiveness of the application of Quizizz Application in learning in the PGRI Madiun University environment, which includes: Organizing good material, In applying the quizizz application the lecturer makes plans about when the application of the Quizizz Application is carried out, the material or theory can be given to students at the meeting beginning and next in accordance with the learning plan that has been prepared. Seeing students' initial abilities by giving verbal tests to students. Lecturers prepare question material that will be included in quiz applications and at predetermined meetings students are ready to apply it, effective communication, including the presentation of material clearly raised in the quiz application, fluency in speaking, interpretation of abstract ideas with examples, speaking skills that good (tone, intonation, expression), and the ability to hear, mastery and enthusiasm for the lecture material, Increased student enthusiasm for the lecture material applied with the quizizz application. This is evidenced by students responding quickly in joining via smart phones, each student entering an existing virtual class either independently or in a group. Students answer more concentration in answering questions on their respective smartphones. Positive attitude towards students, In daily reality, not all messages delivered can be well received by the recipient or recipient, this is caused by a disruption in communication. Interference occurs because the message conveyed is not very clear or not explained in terms that are easily understood. The negative attitude is

that there is one student who still answers carelessly because the previous meeting did not attend the lecture and missed the material given previously. Giving a fair score, in the quiz application the scores given are very fair because if a student answers questions online via a smartphone then the results will immediately appear when the correct green color and a checklist symbol will appear and 5 wrong then the correct answer appears. After students answer all questions the total score will be immediately known by the students concerned.

4. Discussion

Based on the results of research and theory that has been presented

1. Analysis of applying smartphone-based quizizz applications as learning media in the University of PGRI Madiun environment includes

a) Organizing good material.

The use of smartphones with the quizizz application as learning media is considered suitable to be applied to learning within the scope of the University of PGRI Madiun because of adequate Wi-Fi facilities and 17 infrastructure that supports learning is expected to support the learning process, so that the concept of providing material can be maximally distributed by students.

b) Effective communication.

Learning media can be developed on mobile devices that are easy to carry anywhere such as smartphones and tablets (Squire, 2009). According to (Wilson & Bolliger, 2013) mobile learning aims to facilitate learning learners anywhere and anytime in accordance with the time available. Virtual learning can be accessed virtually anywhere, by providing access to the delivery of material. This means being able to interact effectively in learning.

c) Mastery and enthusiasm for the subject matter.

Based on the theory being cuddled (Azhar, 2007) students should be given more concrete experience so that the message to be conveyed really can achieve the goals and objectives.

Through the application quizizz provides a real and applicable experience to students so that students in learning do not feel bored and are able to increase concentration and enthusiasm for learning.

d) Positive attitude towards students.

The use of games also fosters student character according to (Irwan et al., 2019). This gives a sense of comfort for students and increases the enthusiasm to attend lectures to completion.

e) Granting fair value.

Student learning outcomes are directly evaluated by the system and the total value can be known. Student learning outcomes will be sent by lecturers in the course via e-mail from the student concerned

f) Flexibility in the learning approach

Flexibility in the learning approach, this quizizz application can be applied to other subjects. The questions created are not only in the form of question descriptions, can be in the form of drawings, formulas, diagrams that can be 5 applied in all study programs.

g) Student learning outcomes. Based on research results (Sidhu, 2009) the use of multimedia in learning can improve learning outcomes 56% greater, consistency in learning 50-60% better and resilience in memory 25 -50% higher

2. The effectiveness of smartphone-based quizizz applications is applied to learning in the PGRI Madiun University environment

Quizizz which is a web tool for creating interactive quiz games that can be used as a learning medium. Quizizz is the best alternative choice used as a learning medium available in mobile applications such as Android and App Store and can be used as a website through a browser on a computer.

Quizizz is an interactive quiz application that is more effective in increasing student enthusiasm in learning because it replaces the old quiz way that only involves paper and pens but in the form of questions created by a lecturer online with the student learning evaluation process capable of carrying out such learning using the quizizz application in their cellphone. Students are more interested and more concentrated and are serious in implementing it. Feedback from students to better apply the application to other subjects because it is more interactive and focused

Students have easier access to Quizizz.com to do by entering the join code. The use of learning media that can be accessed through students' cellphones is a positive use of technology and can increase student interest in learning. In addition, the features available in Quizizz can also make it easy for lecturers in assigning assignments and assessment processes which can be downloaded in Excel format and sent the results to the e-mail of each student.

It can be concluded that the application of smartphone-based quiz application is effectively applied to students of Accounting Education Study Program in multimedia subjects and Economic Education Study Program in computer application courses

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