



Android-Based Flute Learning Media

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Abstract. Learning media has an important role to support the teaching and learning process, with learning media the delivery of information can be easily conveyed. Android-based learning media is a new technology, which is in great demand by young people, Android-based distilled learning media can be used to support teaching processes that are more effective, flexible, interesting and easy to understand. This research is motivated by the difficulties faced by students in the process of learning the introduction of flute instruments. Based on a preliminary study conducted on 15 students from the Sekolah Tinggi Musik Bandung (STiMB) it showed that the main difficulty encountered was regarding the technique of playing the flute. One of the efforts made to overcome these problems is by making learning media based on Android. Therefore, the purpose of this research is to produce learning media that can facilitate students in mastering flute playing technique material, so that learning becomes more interesting, flexible and easy to understand. The method for making flute learning media uses the Multimedia Development Life Cycle method. The research results obtained are an android-based flute learning media which contains material about the meaning of the flute, the history of the flute, the names of the parts of the flute, and the technique of playing the flute.

Keywords: Learning · Media · Flute · Android

1 Introduction

The rapid development of ICT (Information and Communication Technology) affects the development of technology in the manufacture of various learning media. Learning media and learning resources today are many and varied including: modules, videos, films, television, smartphones, web, and so on. The variety of learning media is the impact of the rapid development of ICT, for that a professional teacher is required to be able to use the right learning media around him [1].

Learning media is one of the factors that determine student success in learning. It is known that learning media is able to provide direct benefits that can affect motivation, interest, and be able to describe something abstract so that it can help students in the learning process. Learning media is able to create effective learning conditions [2].

Research that has been done [3] shows an increase in the percentage of student interest in learning who is only given a module from 65% to 76%, and for students who

provide learning media based on mobile for Android, the percentage of learning interest in 65% increases significantly to 86.7%. Based on this research, mobile for android-based learning media is able to precisely help increase student interest in learning.

This Android-based learning media also has several advantages compared to other learning media, including being able to present material that is packaged efficiently and display interactive and colorful slides [4].

The feasibility of android-based learning media as learning media shows that 95% of android users feel comfortable and satisfied in using this android-based learning media [5]. In addition, android-based learning media can give the impression of learning that is more interesting for students and is able to increase learning motivation, clarify the meaning of learning materials, make learning methods more diverse, and increase activities for students [6]. Learning media is adapted to the learning needs of students and is easy to use, also attractive to students and has similarities with the original product [7].

Several research results on android-based learning media that have been carried out in the world of education show that learning outcomes are increasing. Students who use iSpring Suite with attractive presentations can increase students learning motivation, interactive media based on iSpring Suite can help students learn concretely [8], and iSpring Suite can improve understanding and practice dexterity in spelling questions by applying it to students through tests using interactive quizzes as learning media [9].

The flute is a musical instrument that belongs to the woodwind family, the flute playing technique looks easy to do, but in fact the flute playing technique requires repeated practice, accompanied by breathing techniques. So that the flute playing technique is easy to understand, a flute learning media is made which contains the history of the flute to the procedures for playing techniques.

2 Methods

Making android-based flute learning media that is made is described in the research flow diagram (Fig. 1). Literature study is needed to find out the procedures for making the right learning media, selecting the appropriate software, and selecting the materials needed to support the making of flute learning media.

Data collection begins with searching for data about the appropriate flute material to be displayed on learning media. Making flute learning media based on android is made with the help of the iSpring suite software that has been installed in the power point software, then in order to be displayed on android, the APK Builder website software is used.

So that the flute learning media is made in accordance with the rules of making learning media, then testing is carried out using the multimedia development life cycle method. The development of this multimedia method is carried out based on six stages, from the Multimedia Development Life Cycle method (Fig. 2).

The development of this multimedia method is carried out based on six stages, namely concept, design, collecting material, assembly, testing, and distribution, where each stage does not have to be sequential, but can be done in parallel with the concept and design must be started first [10].

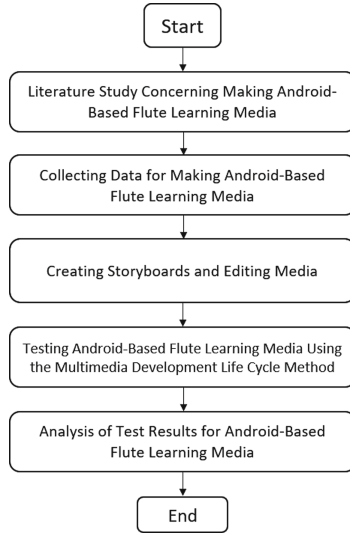


Fig. 1. Research flow.

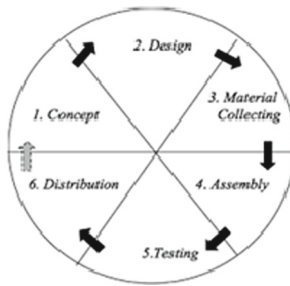


Fig. 2. MDLC method flow.

2.1 Concept

The concept stage is the initial stage in the MDLC cycle. At this stage, starting with determining the purpose of making an application to create an Android-based flute learning media to facilitate students who have difficulty playing flue musical instruments.

2.2 Design

Design is the stage of translating goals into designs that will become a reference in developing learning media. The results of this design stage are the design of image placement, inserting sound, explanatory text and inserting video on each slide.

2.3 Material Collecting

This stage is the collection of article material about the meaning of the flute, the history of the flute, the names of the parts of the flute, videos of flute playing techniques, videos of flute fingering techniques and flute instrumental videos.

2.4 Assembly

Is the stage of making learning media. The result of this stage is compiling the material that has been collected into a series of flute learning media on each slide, which is equipped with sound and music to beautify and facilitate understanding in learning the flute.

2.5 Testing

This stage is carried out by testing the distilled learning media that has been made, the step taken is to look at the results of the process of utilizing the iSpring suite software. So that if there are deficiencies in running the learning media that is made will be seen clearly, and re-edited.

2.6 Distribution

This is the final stage of a series of Multimedia Development Life Cycle methods. At this stage, the finished learning media is published by the iSpring suite software, then distributed to smartphones with the help of the Website APK Builder software.

3 Results and Discussion

3.1 Results

After carrying out a series of stages in the Multimedia Development Life Cycle method, a flute learning media is produced which is ready to be used as a learning medium. The results of the flute learning media using power point software that has been integrated with the iSpring suite and APK Builder website software that can be easily opened on a smart phone.

Making flute learning media using Microsoft PowerPoint because this software is a program for making presentations with facilities that can be used to create learning media, the resulting program is quite interesting when combined using iSpring Suite software which can turn it into animated media in flash form [11].

The resulting product is shown in Figs. 3, 4, 5, 6 and 7. The resulting flute learning media contains fifteen slides, starting with the opening slide and ending with the closing slide.

Opening View. The initial display shows a flute silhouette image with a melody silhouette image added by the flute instrument of Camila Cabello's Havana song (Fig. 3).

Menu Display. The menu display is presented on the second slide, containing materials that will appear on flute learning media, containing material on the meaning of flute, flute history material, flute section name material and flute playing technique material. On this menu slide, a silhouette of a person playing the flute appears, this is intended to beautify the appearance, as well as the addition of images of melodic strains as if the person playing the flute produces a melodious sound. Also from this menu slide, the person who blows the flute produces materials that will be discussed on the next slide, to produce slides that can be easily understood by students, this menu slide is equipped with text and sound (Fig. 4).

Flute History Display. The flute history slide shows the history of flute development starting from the middle ages, the renaissance era, the baroque era, the classic era, and the modern era (boehm). This slide is equipped with text and sound, which are intended to provide convenience for students (Fig. 5).

Flute Part Name Display. On the flute section name slide, a flute image is displayed which is added with text about the name of the flute section accompanied by a sound about the name of the flute section. On the background of the slide, a melody silhouette and a flute image silhouette appear (Fig. 6).



Fig. 3. Opening view.



Fig. 4. Menu display.

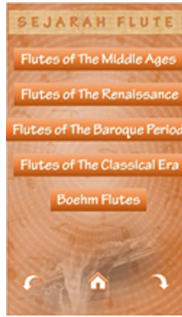


Fig. 5. Flute history display.

Display of Flute Playing Techniques. The flute playing technique slide contains basic flute blowing techniques, fingering techniques, and examples of flute instrumentalia. This slide shows a silhouette of a person playing the flute accompanied by text and sound (Fig. 7).



Fig. 6. Flute part name display.



Fig. 7. Display of flute playing techniques.

3.2 Discussion

iSpring Suite as a Learning Media. iSpring suite is a software that is operated to create a learning media by loading several aspects of media such as audio, visual, and audio visual.

The device used is integrated with powerpoint and can be collaborated with several supporting software so that the resulting media becomes more interesting and interactive. In addition, with the iSpring suite the files generated from powerpoint can be converted into attractive flash form, so that users can use them either directly or can be used optimally as learning in the form of e-learning. Thus, the learning media produced by the iSpring suite application can facilitate teachers in delivering learning materials so that students will be more focused, conducive and easy to understand learning materials [12].

Website 2 APK Builder. Website 2 APK Builder is a computer-based application that is made specifically for creating apk or android extension applications that contain websites or blogs. Website 2 APK Builder application is software that is used to convert HTML format into applications that can be used on android. The format that has been converted into an application can be sent to Android to be used, then the application is installed and the interactive learning media is ready to be used.

Currently, with the development of technology, it is easier for teachers to create and design learning media according to the needs of students [13]. One of the learning media that suits the needs of students is learning media based on website2 apk builder which is a software that converts learning media files from PowerPoint combined with the iSpiring suite into an android application [14].

This learning media is an alternative that has unique characteristics, which can be used anywhere and anytime, supported by interesting visualizations because it can be converted into an android application. This condition is in accordance with Sadiman's opinion [15] which states that students can learn indirectly by actively interacting using media or other learning resources, so that the learning process can be carried out anytime and anywhere students are. Abstract learning materials such as flute sounds can be conveyed in real terms through interactive learning media. This is in line with one of the functions of learning media, namely being able to manipulate certain objects [16].

4 Conclusion

Android-based flute learning media that is produced using powerpoint software that is integrated with the iSpring suite software, followed by converting it into an apk file using the APK builder website that can be installed and opened on a smart phone. The flute learning media product contains the meaning of flute, flute history, names of flute parts and flute playing techniques, using the Multimedia Development Life Cycle method.

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