

Art and Culture Learning Model for Music Art Material Using Smartphone Music Applications

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ABSTRACT

Objective: This study explores the role of smartphones in the development of education in Indonesia, with a particular focus on how technology enhances the quality and efficiency of the learning process. The research aims to examine how smartphone applications can be utilized as innovative, interactive, and efficient learning tools in the educational context. **Method:** A comprehensive review of various smartphone applications available on the Playstore, including music and instrument-related apps, was conducted to analyze their potential for improving educational methods. The study also explores how these applications can be integrated into the existing curriculum to support a new and more effective learning model. **Results:** The integration of smartphones in education provides significant opportunities for enhancing learning. With a wide range of applications available, such as music instruments, string, piano, percussion, and organ apps, smartphones can function as versatile tools for creating innovative and interactive learning experiences. These applications can support students in engaging with subjects in a more hands-on and efficient manner, contributing to the overall improvement of education. **Novelty:** This research highlights the potential of smartphones as powerful tools for transforming education in Indonesia. By leveraging mobile technology, the study provides insights into how smartphones can be incorporated into the learning process to create a more dynamic and engaging educational environment. The findings also underscore the importance of adapting to technological advancements in order to meet the evolving needs of modern education.

INTRODUCTION

According to H. Horne, education is a continuous process of higher adjustment for human beings who have developed physically and mentally, who are free and conscious of obedience, as manifested in the intellectual, emotional and human environment of humans.

The world of education continues to develop. We can see this development from a conscious effort by the government in managing education in Indonesia by changing the curriculum and learning materials periodically in certain periods. This is done to improve the quality and efficiency of education in Indonesia. The development of education today is supported by the rapid development of technology. With technology, the education process can be carried out more efficiently and more effectively.

Arts education is a mandatory education that must be implemented in every school, starting from elementary school, junior high school, Islamic junior high school and senior high school, vocational high school and equivalent schools. Arts education in schools includes fine arts, dance, music and drama. Art education is provided in schools because

it is unique and useful in providing aesthetic experiences. Providing aesthetic experiences can be done through two approaches, namely the educational approach in art and education through art. Education in the arts is an art learning activity for students so that students have skills in creating art.

Currently, the government in Indonesia, in this case the Ministry of Education and Culture, is implementing an independent curriculum. The independent curriculum has been implemented gradually since 2021. This independent curriculum focuses on essential materials and developing student competencies. This independent curriculum gives students and teachers the freedom to innovate in learning.

According to John Dewey, learning is the process of developing the ability to solve problems that arise in interaction with the environment. Problem solving in the learning process is done in various ways. Learning variations are carried out by utilizing technology and facilities and infrastructure in educational institutions. Usually we can see variations in learning in the Arts and Culture subject. According to Komalasari [1] learning is a system or learning process that is planned, implemented and evaluated systematically so that learning can achieve learning objectives effectively and efficiently.

Art learning is learning that aims to provide a balance of rational, emotional, intellectual and sensibility, in its implementation. Art education emphasizes the process more than the results. Students are expected to be able to express themselves, imagine and create. Creating is an art activity that aims for students to be able to channel or express their feelings in their work. Creative dance performance activities are a form of dance art activity that aims for students to be able to show their work. Meanwhile, appreciation activities are activities that aim for students to be able to appreciate the work of others.

According to Saraf Whitfield in *Music: Its Expressive Power and Moral Significance* [2], according to Plato, music is the most sovereign educational instrument because rhythm and harmony find their way to the deepest soul and hold it firmly.

Music art is a sub-section of the art and culture subject. Students are required to be able to understand music art and improve their creativity. Nowadays, junior high school students generally use smartphones. Smartphone is one of the supporting tools for learning. Anything can be accessed using a smartphone, be it articles, theories, learning media and other things related to learning.

A smartphone is a mobile phone or smart cell phone that is equipped with advanced and highly capable features like a computer. Smartphone can also be interpreted as a mobile phone that works by using operating system (OS) software that provides standard and basic connections for application developers. There are also those who define a smartphone as a smart mobile phone that has advanced features such as email, internet, ebook readers, and others. In short, a smartphone is a small computer that has the capabilities of a telephone.

Music applications can also be accessed on smartphones available in the Playstore. There are various music applications available including: talempong instruments, string applications, piano applications, percussion applications, organ applications. Viewed

from the whole, the available applications can be used as innovative, efficient and interactive learning media to create a new learning model.

RESEARCH METHOD

This type of research uses Research and Development (R&D) is a process or steps to develop a new product, or improve an existing product, which can be accounted for. The product is not always in the form of objects or hardware, such as books, modules, learning aids in class or in the laboratory, but can also be software, such as computer programs for data processing, classroom learning, libraries or laboratories, or models of education, learning, training, guidance, evaluation, management, etc [3].

The collected data will be analyzed using quantitative and qualitative approaches. Quantitative data from test results and questionnaires will be analyzed statistically to see the differences before and after using the learning model. While qualitative data from interviews and observations will be analyzed using thematic analysis techniques to identify patterns and themes related to the influence of the learning model on improving students' skills and understanding in music arts.

This study is expected to produce an innovative and easily accessible music arts learning model, using smartphone music applications that are in accordance with student needs and current developments in educational technology. This model is expected to increase students' interest and skills in music arts, as well as enrich the methods of learning arts and culture in schools. Thus, this study focuses on the development of a learning model that integrates modern technology in arts and culture education, especially in music arts materials, with the aim of creating more interactive, interesting, and effective learning.

RESULTS AND DISCUSSION

Simply put, this stage is the needs analysis stage. In product development, developers need to refer to development requirements, analyze and collect information on the extent to which development needs to be carried out. The definition or analysis stage of needs can be done through analysis of previous research and literature studies. Thiagarajan, mentions that there are five activities that can be done at the define stage, namely [4]:

1. Define Stage

- a. Front-end Analysis (Initial Analysis).

Initial analysis is conducted to identify and determine the basis of the problems faced in the learning process, thus forming the background for the need for development. By conducting an initial analysis researchers/developers obtain a picture of the facts completion. This can help in determining and selecting learning devices to be developed.

- b. Learner Analysis (Student Analysis)

Student analysis is an activity to identify the characteristics of students who are targeted for the development of learning tools. The characteristics in question are related

to academic ability, cognitive development, motivation and individual skills related to learning topics, media, formats, and languages.

c. Task Analysis

Task analysis aims to identify the skills being studied. researchers to then be analyzed into additional skill sets that may be needed. In this case, educators analyze the main tasks that students must master so that students can achieve the minimum competencies set.

d. Concept Analysis

In concept analysis, the main concepts that will be identified are identified. taught, putting it in a hierarchical form, and detailing the concepts. individuals into critical and irrelevant matters. Concept analysis other than Analyze the concepts to be taught and also develop steps which will be done rationally.

e. Specifying Instructional Objectives (Formulating Learning Objectives)

Formulating learning objectives is useful for summarizing the results of the analysis. concept analysis and task analysis to determine behavior of research objects.

2. Design Stage

The second stage in the 4D model is design. There are 4 steps must be passed at this stage, namely the constructing criterion-referenced test (preparation of test standards), media selection, format selection (format selection), and initial design.

a. Constructing Criterion-Referenced Test (Preparing Test Standards)

The preparation of test standards is a step that connects definition stage with design stage. Preparation of test standards based on the results of the analysis of learning objective specifications and analysis students. From this, the learning outcome test grid is compiled. The test is adjusted with students' cognitive abilities and test result scoring using an evaluation guide that includes a scoring guide and key answer to the question.

b. Media Selection

In general, media selection is carried out to identify the media. learning that is appropriate/relevant to the characteristics of the material. Selection media is based on the results of concept analysis, task analysis, characteristics students as users, as well as distribution plans using a variety of media. The selection of media must be based on maximizing the use of teaching materials in the material development process teach in the learning process.

c. Format Selection

The selection of formats in the development of learning tools aims to to formulate learning media designs, strategy selection, approaches, methods, and learning resources.

d. Initial Design (Preliminary Design)

The initial design is the overall design of the learning device which must be done before the trial is carried out. This design includes various structured learning activities and skills practice differentiated learning through teaching practices (Microteaching).

3. Develop Stage

The third stage in the development of 4D model learning devices is development (develop). The development stage is the stage for produce a development product. This

stage consists of two steps namely expert appraisal (expert assessment) accompanied by revision and developmental testing (development trial).

a. Expert Appraisal

Expert appraisal is a technique for obtaining improvement suggestions. material. By conducting an assessment by experts and getting advice improvements to the learning tools developed and then revised according to expert advice. Expert assessment is expected to make the device learning is more precise, effective, tested, and has high techniques.

b. Developmental Testing

Development trials are conducted to obtain feedback. directly in the form of responses, reactions, comments from students, observers on devices that have been prepared. Trials and revisions are carried out repeated with the aim of obtaining effective learning tools and consistent.

4. Dissemination Stage

The final stage in developing 4D model learning tools is the dissemination stage. The final stage of final packaging, diffusion, and adoption is the most important but most often overlooked. The dissemination stage is carried out to promote the product of development so that it is accepted by users by individuals, groups, or systems. Packaging materials must be selective in order to produce the right form. There are three main stages in the disseminate stage, namely validation testing, packaging, and diffusion and adoption.

In the validation testing stage, the completed product is revised at this stage. development is implemented on the actual target or goal. On stage, measurement of the achievement of objectives is also carried out, which aims to knowing the effectiveness of the product being developed. Furthermore, after applied, researchers or developers need to observe the results of achieving the objectives, goals that have not been achieved must be explained so that they do not happen again. time after the product is distributed.

At the packaging and diffusion and adoption stages, product packaging done by printing an implementation guide book which is then distributed so that it can be absorbed (diffusion) or understood by others and can be used (adopted) in their classes. Things that need to be considered in carrying out dissemination or dissemination are user analysis, strategy and theme, selection of distribution time, and selection of distribution media.

The integration of digital tools and technologies, such as smartphone music applications, has become an increasingly important aspect of music education [3]; [7]; [10]; [5]; [6]. These digital tools offer various benefits, including personalized learning, flexibility, multimedia resources, real-time feedback, and cost reduction [8]. They also have the potential to improve the teaching and learning of music by leveraging Artificial Intelligence (AI) technology [3].

Several studies have highlighted the positive impact of using digital tools and applications in music education. For instance, the use of digital media in teaching music education has been shown to contribute to the efficiency of teaching in lower primary

school grades [10]. Additionally, the hybridization of musical software tools and AI technology can lead to a new path for improving the teaching and learning of music [3].

Furthermore, the integration of ICT (Information and Communication Technology) tools in music education allows teachers to interpret and organize new types of learning, encouraging the development of creativity [5]. This is particularly relevant in the context of music conservatories and schools of music, where students are often digitally literate and expect the use of technology in their learning [5].

However, the successful integration of ICT tools into music education requires mentorship and ongoing support for teachers. Additionally, the current music curriculum should be restructured to integrate ICT in order to meet the needs of 21st-century music education, and music teachers should be trained to have the necessary skills in ICT applications [9].

The use of digital technology in music education can serve various functions, such as a tool, an instrument, and a collaboration medium [6]. The advantages of using digital technology in music and instrumental training include interactivity, integrality, didactic potential, a comfortable learning environment, and creativity [14].

Online and blended learning approaches have also been explored in music education, particularly during the Covid-19 pandemic [2]. These approaches have the potential to transform music learning, with a focus on learner-centered pedagogy and the use of technology [2].

In the context of vocal music education, the application of computer technology has expanded the field of education and improved artistic performance [4]. Digital music education includes multimedia music education, digital music production, and online music education, providing students with a comprehensive learning experience [4].

Overall, the integration of smartphone music applications and other digital tools in music art material can enhance the learning experience, foster creativity, and better meet the needs of 21st-century music education. However, this integration requires a comprehensive approach that addresses curriculum, teacher training, and the effective use of technology in the music classroom.

CONCLUSION

Fundamental Finding : The study of smartphone music applications in arts and culture education demonstrates their significant positive impact on learning music. The use of these applications has been shown to enhance student interest and engagement in music education by providing an interactive and enjoyable alternative to traditional teaching methods. The flexibility of these apps allows students to learn at their own pace, outside of school hours, contributing to a better understanding of fundamental musical concepts such as rhythm, melody, and harmony. **Implication :** These findings emphasize the critical role that smartphone applications can play in revolutionizing music education. By offering a more accessible, interactive, and flexible learning environment, smartphone apps empower students to take control of their learning process, fostering greater independence and creativity. This approach not only improves students' practical

skills but also enhances their overall learning experience, making music education more effective and enjoyable. **Limitation** : However, the study is limited by the potential gap between students' access to technology and their ability to use it effectively. Additionally, while the apps offer great flexibility, the lack of direct teacher supervision in the learning process may result in students missing out on crucial guidance and feedback that is typically provided in a classroom setting. **Future Research** : Future studies could explore the long-term impact of smartphone music applications on students' musical development and academic performance. Additionally, research could investigate how to better integrate these technologies into traditional teaching methods, ensuring that students receive the benefits of both personalized learning and structured guidance. Furthermore, exploring the use of emerging technologies, such as augmented reality or virtual reality, could open new possibilities for interactive music education.

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