

Development of “M-Learning MELODIKA” to Improve the Skills of Elementary School Students in Playing the Pianika

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Abstrak. This study was based on the lack of skills of fourth graders SDN Proyonanggan 10 Batang. This study aimed to develop, assess feasibility and effectiveness of m-learning melodika, and also to describe the results of psychomotor-learning using m-learning melodika in the fourth grade at SDN Proyonanggan 10 Batang. This type of study is research and development (R&D) with ADDIE model. The sample in this study is 5 fourth grade students of SDN Proyonanggan 10 which represents the total population of 32 students. Data collection techniques were implemented with tests, observations, interviews, questionnaires, and documentation. Data analysis techniques includes product data analysis, normality test, t-test and n-gain test. Assessment by material expert and media expert of 96.47% and 100%. Teacher and student responses of 96% and 100%. T-test, sig value $0,00 < 0,05$ and t counts larger than t table which is $18,500 > 2,776$. N-gain test amounts to 0.74 with high criteria. Conclusion of this study is the media “M-Learning Melodika” that is worthy to use in both pianika playing materials and effective for improving the pianika playing skills of 4th grade students.

Keywords: Learning media; M-learning Melodika; Pianika playing skills.

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INTRODUCTION

The Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System Article 1 Paragraph 1 states that the implementation of education is intended to develop the potential of students, one of which is the development of skills. In the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 22 of 2016 concerning Standards for Primary and Secondary Education, it is stated that there are learning principles, one of which is that learning takes place by application instead of rote memorization. However, conditions in the field show otherwise, the results of observations show that the music learning process, especially in the delivery of piano playing material in grade IV, does not teach its application. Whereas piano playing skills are contained in the learning objectives made by the teacher, besides that it is important to master piano playing skills to improve students' musicality and provide students with basic skills in playing musical instruments that can be used when students are at a higher level.

Before playing the piano, students should first (1) know the range of notes on the piano; (2) knowing how to play the piano instrument;

(3) knowing the task of each right finger; and (4) knowing how to hold the piano (Tarmizi, et al, 2019:35). However, the implementation of learning to play the piano at SDN Proyonanggan 10 does not yet contain the technique of playing the piano. So that students still cannot play the piano properly. The mistakes made by students in playing the piano include in the position of playing the piano, the piano fingering technique, the piano blowing technique, and the tempo that is played is not right.

In addition to the lack of learning materials provided, the mistakes made by students when playing the piano are also influenced by the availability of learning facilities, namely learning media. The use of student books and whatsapp media is also not optimal in the implementation of offline and online combined learning. The use of learning media can encourage the creation of a learning process and learning objectives will be achieved well (Abi Hamid, et al, 2020:4). The learning media needed during a pandemic like today are technology-based media that are easy to access and reduce social mobility directly because of the implementation of physical distancing. One of the easy-to-use technologies is mobile technology that can be used in the implementation of online learning and the

application of blended learning because it can be accessed via computers or mobile phones. Mobile devices allow the merging of text, graphics, audio, video, and animation in one medium called multimedia. Heinich, et al, mention that one of the advantages of using multimedia is that it is able to attract students' attention because it is able to integrate the components of color, music, graphics, animation, and video (Dony Novalindry, 2013: 110).

From these problems, the researcher offers a solution, namely developing mobile learning media products which are then shortened to multimedia-based m-learning that can be accessed anywhere, making it easier for teachers and students in the learning process during the pandemic. The developed mobile learning media will provide knowledge about piano, explanations of piano playing techniques, tutorials on playing the piano, number notation and videos playing the piano in several songs that can be used as guidelines for students in practicing playing the piano, as well as games to better memorize song notations that will be practiced in playing the piano. interactive multimedia form equipped with explanatory audio in each subject. The purpose of developing this media is to improve students' piano playing skills.

The solution to the problems at SDN Proyonanggan 10 is to develop learning media products. The research was conducted using a research and development (R&D) approach. The development model uses the ADDIE development model. The steps of the ADDIE development model according to Januszewski and Molenda (2008) include analyze, design, development, implementation, and evaluation (Cahyadi, 2019:36). The ADDIE development model is widely used in educational research and development, one of which is a study by Salwani & Ariani (2021) entitled "Development of Learning Media Theme 3 Sub-theme 3 Based on Articulate Storyline 3 in Class Va SDIT Mutiara Kota Pariaman" which uses the ADDIE model R&D approach . In this study, there are several conditions that are the same as the research conducted by researchers, namely the development of the media using the Articulate Storyline 3 software which can be used to create interactive multimedia and the research was carried out during the Covid-19 pandemic. This study aims to test the practicality of the media with the final results of expert validity and

student and teacher responses obtained from the questionnaire instrument. And the results show that the developed media is feasible to use.

Research by Ardiansyah (2019) with the title "Development of Fingering Techniques Guidebooks and CD Tutorials to Improve Piano Playing Skills Class V SD Negeri Kalibanteng Kidul 03 Semarang" media development is intended to improve students' piano playing skills which focuses on students' fingering skills, that is, students are expected to be able to proper functioning of the five fingers. The media developed were in the form of guidebooks and tutorial CDs containing material on piano playing techniques including piano playing positions and piano fingering. Based on the description of the problem and based on previous research, the researcher intends to develop a multimedia-based learning media called "M-Learning Melodika" (Mobile Learning Multimedia Playing Melodic Musical Instruments Pianika) through research and development entitled "Development of Learning Media "M-Learning Melodika" to Improve Students' Piano Playing Skills".

METHODS

This type of research is Research and Development (R&D), this type of research has the aim of producing a certain product, and testing its effectiveness (Sugiyono, 2016:407). The development model uses the ADDIE development model developed by Januszewski and Mollenda with 5 stages including: analyze, design, development, implementation, evaluation (Cahyadi, 2019:36). Analyze is examine methodically and in detail the constitution or structure of (something, especially information), typically for purposes of explanation and interpretation. A design is a plan or specification for the construction of an object or system or for the implementation of an activity or process or the result of that plan or specification in the form of a prototype, product, or process. Development encompasses a set of strategic, proactive, catalytic, and capacity-building activities designed to facilitate individual faculty members, teams of researchers, and central research administrations in attracting extramural research funding, creating relationships. Implementation research is the systematic study of methods that support the application of research findings and other evidence-based knowledge into policy and practice.^[1] It aims to understand the most

effective pathways from research to practical application.

Evaluation is a systematic determination and assessment of a subject's merit, worth and significance, using criteria governed by a set of standards. It can assist an organization, program, design, project or any other intervention or initiative to assess any aim, realisable concept/proposal, or any alternative, to help in decision-making; or to ascertain the degree of achievement or value in regard to the aim and objectives and results of any such action that has been completed.

While the research design uses a pre-experimental design which is used because in development research it is not fully applied to the experimental design. The pre-experimental design used in this study is the one-group pretest-posttest design. The reason is because one of the objectives of this research is to test the effectiveness of the products developed in the learning process in the same class. The working step is that there is a pretest before being given treatment and a posttest after being given treatment, the treatment given is the use of media that has been developed.

The subjects in this study were 5 fourth grade students at SDN Proyonanggan 10 for a small-scale trial with random sampling. Data collection techniques in this study used the techniques of testing, observation, interviews, questionnaires, and documentation. The data analysis technique uses product data analysis, normality test, t test, and n-gain test.

RESULTS AND DISCUSSION

The result of this research and development is the media product "M-Learning Melodika" which was developed with the aim of improving the skills of fourth graders at SDN Proyonanggan 10 Batang in playing the piano. It was further formulated into three indicators that

were studied, namely (1) the results of the development of the "M-Learning Melodika" media, (2) the results of the feasibility assessment of the "M-Learning Melodika" media, and (3) the effectiveness of the "M-Learning Melodika" media. in improving the piano playing skills of fourth grade students at SDN Proyonanggan 10.

Media Development "M-Learning Melodika"

M-Learning Melodika is a media was developed based on an analysis of the needs of students and teachers as well as several theories on media quality criteria, which include the appropriateness of the content of the material, the suitability of language and writing, an attractive appearance, practicality of the media, and interactivity. Then the results obtained are in the form of multimedia in the form of an android application as well as in the form of a PC application software and in a version of the page that can be accessed online. Its manufacture uses the help of the Articulate Storyline 3 application software and several other supporting applications. The design of the melodic m-learning media consists of (1) title page, (2) instructions for using the media, (3) core competencies and basic competencies, (4) indicators and objectives, (5) "introduction to piano" and "pianika playing techniques". " which is equipped with pictures and video tutorials, (6) video tutorials for playing piano which are presented briefly, (7) video and audio fingering equipped with number notation, (8) games in the form of matching, sorting, and filling in the correct number notes, also equipped with (9) bibliography and developer/compiler profile. (8) games in the form of matching, sorting, and filling in the correct number notes, also equipped with (9) bibliography and developer/compiler profile.



between the average pretest and posttest. From the results of the t test, it is also known that t count $18.500 > t$ table 2.776 , it can be concluded that H_0 is rejected and H_a is accepted, these results indicate an influence in the use of M-Learning Melodic learning media on students' piano playing skills because of the significant difference between the results. pretest and posttest.

To find out an increase in the posttest results

compared to the pretest results, the n-gain test was carried out. From the n-gain test used to analyze the effectiveness of the melodic m-learning product, the average result of the psychomotor pretest of students is 50 with 0% completeness and the average result of the psychomotor posttest of students is 87 with a percentage of 100% completeness. The increase in the average will be seen from the value of n-gain obtained.

Table 3. Average Improvement Test Results

Average Pretest	Average Posttest	N-gain	Conclusion
50	87	0.74	High

From these results it can be seen that there is a significant average difference between the pretest and posttest. For the n-gain score, the result is 0.74 with high criteria. And from these data it can be seen that there is an increase of 0.74 from pretest to posttest. So it can be concluded that the M-Learning Melodic learning media is effectively used to improve the skills of fourth grade students at SDN Proyonanggan 10 in playing the piano. From the results of the t-test and the results of the n-gain test, it can be concluded that the development of learning media "M-Learning Melodika" is effectively used in SBdP learning activities for piano playing material in class IV and can improve piano playing skills for fourth grade students at SDN Proyonanggan 10.

The results of this study are relevant to research by Setiawan (2019) with the title "Development of Angklung Learning Multimedia for Elementary School Students Class V". The results of this study indicate an average psychomotor pretest score of 53.77 and an average psychomotor posttest of 66.73 and there is an increase of 12.96. After calculating the t-test, the results showed that there was a significant difference between the average pretest and posttest with a significance value of 0.000, which means that the use of multimedia learning is effective for improving the angklung playing skills of fifth grade students.

CONCLUSION

Based on the results of the research and discussion, it can be concluded that the researcher developed the learning media "M-Learning Melodika" to improve the piano playing skills of the fourth grade students of SDN Proyonanggan 10 with ADDIE development steps consisting of analyze, design,

development, implementation, evaluation. The melodic M-learning developed met the appropriate criteria (valid and practical) as evidenced by the assessment of the material expert's assessment of 96.47% and the media expert of 100%, as well as the results of the teacher's response of 96% and 100% of the students. The use of melodic m-learning is effective to improve students' piano playing skills. The t-test calculation shows that there is a difference between the average posttest and pretest with a significance value of $0.00 < 0.05$, which means that there is a significant difference between the average pretest and posttest. From the calculation of the average increase test (n-gain) it is known that the average increase from the pretest and posttest is 0.74 with high criteria. Based on these reviews, teaching materials based on local wisdom are effectively used in learning.

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