



## Development of Sports and Health Physical Education Learning E-Module Pencak Silat Material Accompanied by Physical Fitness Exercise Activities for Class VII Students

Robiatun Batubara <sup>1</sup>, Bafirman <sup>2</sup>, Asep Sujana Wahyuri <sup>3</sup> Nurul Ihsan <sup>4</sup>,  
Abdur Rahim Fadlan <sup>5</sup>

<sup>1,5</sup> Sports Education Masters Student, FIK, Padang State University

<sup>2,3,4</sup> Sports Education Lecturer, FIK, Padang State University

author correspondence: [batubararobiatun@gmail.com](mailto:batubararobiatun@gmail.com)

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### ABSTRACT

**Abstract:** This study aims to determine the development of sports and health physical education learning e-modules for pencak silat material accompanied by physical fitness training activities for seventh grade students. Research is a type of development research (Research & Development). This research was conducted in class VII SMP Pertiwi Siteba, SMP Angkasa Lanud and SMP IT Budi Mulya, Padang City. The instrument in this study is a questionnaire that has been validated by experts. The data analysis technique is a quantitative descriptive analysis technique. The results of the study concluded that the level of product feasibility was 93.05% and large-scale trials obtained data of 86.21% of students strongly agreed to use the resulting e-learning module. It can be concluded that based on the validation tests and trials conducted, the e martial arts learning module for class VII students is "very feasible" to be used as teaching material for Class VII Physical Education Sports and Health.

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Correspondence Author : Robiatun Batubara

E-mail: [batubararobiatun@gmail.com](mailto:batubararobiatun@gmail.com)

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## INTRODUCTION

In the era of the industrial revolution 4.0, education has made very rapid progress in creating a generation of nations (Oktarina et al., 2021). Today's education has all used information and communication technology to make work easier. This has been felt by students and teachers. The teacher has saved time and effort in carrying out the teaching and learning process (Demir et al., 2019). So, with the existence of learning technology can carry out the learning process more effectively and efficiently (Ichsan et al., 2022). One of the keys to becoming a user of this sophistication is learning, one of which is through education . Education is one of the driving forces for every country in preparing a superior generation in the future(Nuraini et al., 2019). With education, children from elementary school, middle school to high school and even tertiary institutions will be prepared to face the present and future life.

Learning today is different from learning in the past. with the existence of increasingly developing technology, this can be used to provide convenience, effectiveness and efficiency of the learning process in achieving predetermined learning objectives (Mamurov, 2019). Bahan ajar berbasis elektronik menjadi hal yang tidak asing lagi bagi dunia pendidikan seperti modul berbasis elektronik yang biasa disingkat dengan e modul (Demir et al., 2019). The E

module is a systematic teaching material that is equipped with an introduction, material/learning up to no evaluation/questions (Fradila et al., 2021). E modules are also structured as attractively as possible in providing information that is easier for students to understand. Inside the e-module there are several types of media, namely writing, images, audio and video as well as a combination of several media (Demir et al., 2019). This provides more accurate information to students, because the e-module conveys information that can be obtained with various body senses (Islahulben & Catur Widayati, 2021). If more and more senses of the human body receive stimulation or information, it will make it easier for students to understand the material presented.

The E module is an effective and efficient teaching material for use in teaching and learning activities (Pazlina & Usmeldi, 2020). This is the reason for the importance of developing electronic-based teaching materials in the era of globalization. Self-defense activities such as pencak silat are one of the Class VII Physical Education Sports and Health materials that require theory as well as practice, besides being one that is very important in preserving and protecting oneself from human crime (Rachman et al., 2021). This material is material that fits the research needs. This research produces a learning e-module that can assist educators in delivering material. This e-module also makes it easier for students to review material outside of class hours or at home independently. So that with this development it can provide convenience in achieving predetermined learning objectives (Rachman et al., 2021). Especially in the lessons of Physical Education, Sport and Health, which require material in the form of theory and practice. With the development of teaching materials in the form of e-modules, of course it is very helpful for teaching and learning activities in schools and independently.

Research before by Gumara & Wahyuri, (2022) states that the use of physical education e-modules is very effective for students. Research by Nurhadi, (2021) stated that the development of an e-model of sports and health physical education is very appropriate to be used as teaching material for online learning for students during the Covid-19 pandemic. Based on these problems, this study aims to develop e-modules for learning physical education, sports and health, material for pencak silat accompanied by physical fitness training activities for class VII students.

### **Research Method**

The research conducted was Research and Development (R & D) which developed a simple teaching material into an electronic-based teaching material (Rachman et al., 2021). This development research uses the Borg and Gall development model which consists of 1)

potential and problems, 2) data collection, 3) product design, 4) design validation, 5) design improvement, 6) product trials. Research and development of the e-module is carried out up to the product trial stage which consists of large-scale trials and small-scale trials. The research was carried out at private junior high schools in Padang, namely Pertiwi Siteba Middle School, Angkasa Lanud Middle School and Budi Mulya IT Middle School, Padang city.

The research was conducted from October to November 2022. This research and development involved several experts as validators in testing the feasibility of the e-module based on material aspects, language aspects and IT aspects. The sample of this research is class VII students. Class VII students from one school became the research sample in the small-scale trial stage and class VII students from two other schools became the research sample in the large-scale trial stage. The data collection technique used a validation questionnaire to test the feasibility of the e-module involving five experts and a respondent questionnaire for students to test the effectiveness of the e-module at the small-scale and large-scale trial stages (Rachman et al., 2021). Then, the data obtained will be analyzed using a rating scale and percentage range. Based on the data analysis carried out, it will be seen how the feasibility and effectiveness of the e-module for Physical Education, Sports and Health, material for the specific martial arts of pencak silat, is used as teaching material for class VII.

## **Result and Discussion**

### **Result**

This research produced an e-learning module for Physical Education, Sports and Health, material for class VII martial arts specific to pencak silat. The stages of development carried out are as follows:

### **Potential and Problems**

At the potential and problem stage the writer analyzes what potential can be utilized in solving learning problems that are less effective and efficient which will be given learning solutions. The potential that the author uses to carry out research is information technology that can be used in facilitating the learning activities of Physical Education Sports and Health to achieve learning objectives.

### **Data collection**

At the data collection stage, various information was discussed that could be used in making e-modules such as the material studied, namely martial arts material according to the 2013 curriculum and an assessment of the equipment needed in making e-modules, namely PJOK Kemdikbud teaching materials for class VII, laptops, internet packages , inshoot

applications, google forms and canva. The martial arts material in the 2013 curriculum can be seen in table 1.

**Table 1.** Martial arts material in the 2013 curriculum

CORE COMPETENCE 3 (KNOWLEDGE)	CORE COMPETENCE 4 (Skills)
3. Understanding knowledge (factual, conceptual and procedural) based on curiosity about science, technology, art, culture related to visible phenomena and events	4. Trying, processing, and presenting in the concrete realm (using, parsing, composing, modifying, and creating) and the abstract realm (writing, reading, counting, drawing, and composing) according to what is learned in school and other sources from the same point of view /theory.
BASIC COMPETENCIES	BASIC COMPETENCIES
3.1 Understand specific movements in various simple and or traditional large/small ball games*)	4.1 Practicing specific movements in a variety of simple and or traditional big ball/small ball games*)
3.2 Understanding the specific motions of walking, running, jumping and throwing in various simple and or traditional games. *)	4.2 Practicing specific motions of walking, running, jumping and throwing in various simple and or traditional games. *)
3.3 Understand the specific moves of martial arts. **)	4.3 Practicing martial arts specific moves.**)
3.4 Understand the art related concepts of physical fitness	4.4 Practicing exercises to increase the degree of physical fitness associated with

### Product Design

Product materials designed consist of material, images, audio, video and supporting applications. Furthermore, the product is designed according to the initial design that has been made as attractive as possible. The product design is arranged systematically starting from the pre-introduction which consists of cover/title, preface, table of contents, instructions for using the e-module, introduction, learning or martial arts material and closing or evaluation in the form of questions in Figure 1.

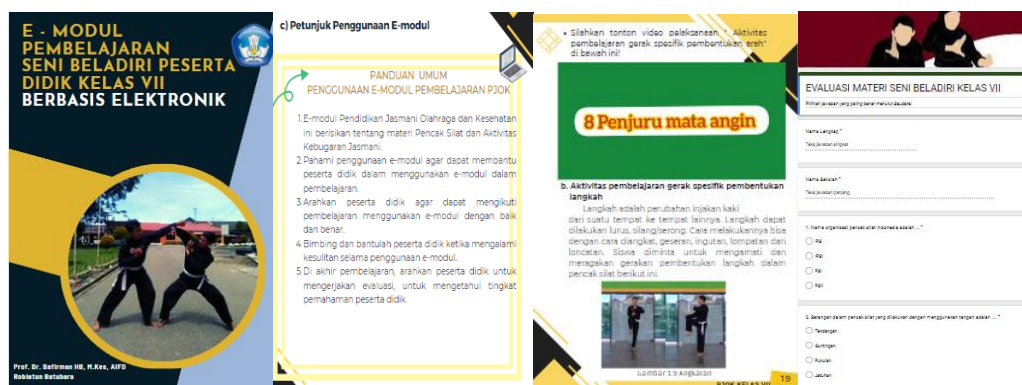


Figure 1. Design of e module

## Product Validation

E modules that are designed are then tested for validation by several experts or experts consisting of material experts, language experts and IT experts.

### Test The Validity Of The Material

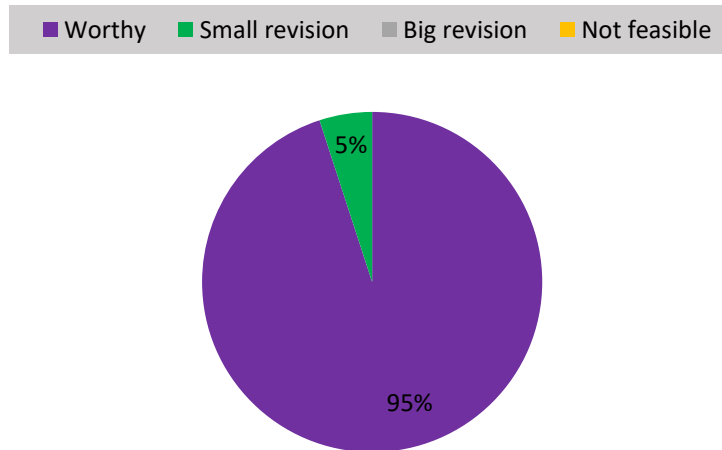


Figure 2. Material valid test results diagram

The results of the valid test of the e-learning module for martial arts activities based on the material aspect show that the e-module produced is very feasible to be tested with small revisions. There are several revisions that need to be fixed, namely fixing the camera angles of images and videos so that they are clearer to display. Then, add an explanation per each stage of the movement.

### Test The Validity Of The Language

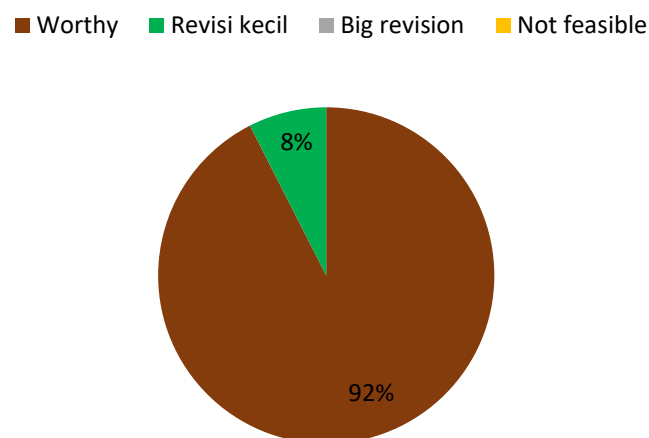


Figure 3. Diagram of language valid test results

The results of the valid test of the e-learning module for martial arts activities based on language aspects show that the resulting e-module is very feasible to be tested with small revisions. The revision of the valid language test results is to pay attention to sentence conjunctions and delivery of material in accordance with the Big Indonesian Dictionary.

### Test the validity of the language

■ Worthy   ■ Small revision   ■ Big revision   ■ Not feasible

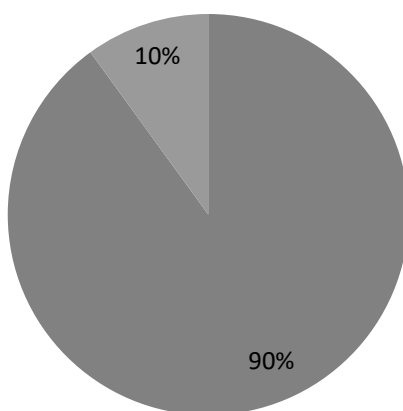


Figure 4. IT valid test results diagram

The results of the valid test of e-learning modules for martial arts activities based on IT aspects show that the e-modules produced are very feasible to be tested with small revisions. As for the revision of the valid IT test results, there are several videos that are still paused, and the music instruments are adapted to Minang typical music.

#### Product trials

The trial phase was carried out after correcting the revision of the validation test results from all aspects tested, namely aspects of material, language and IT. The trial phase E of the learning module for class VII self-defense activities based on small-scale electronics was carried out at Pertiwi Siteba Middle School for class VII students.

The results of the e-module trial are described through a histogram in Figure 5.

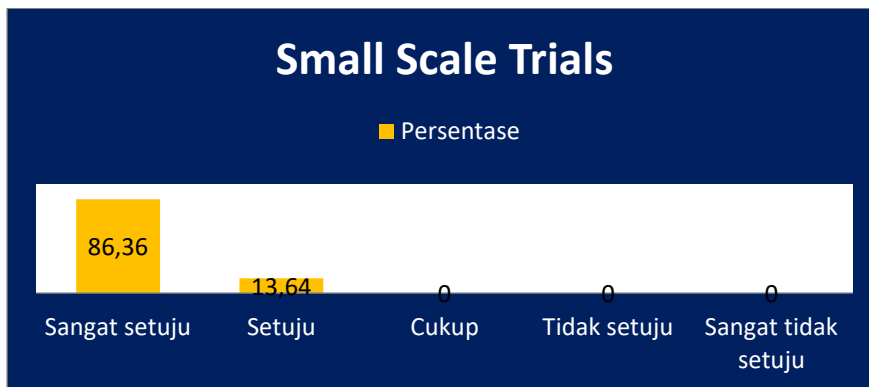


Figure 5. Small-scale trial results diagram

Based on the results of the small-scale electronic-based self-defense learning module E learning module trials, it was shown that the resulting e module was effective as teaching material for class VII martial arts material in the subject of Physical Education, Sport and Health.

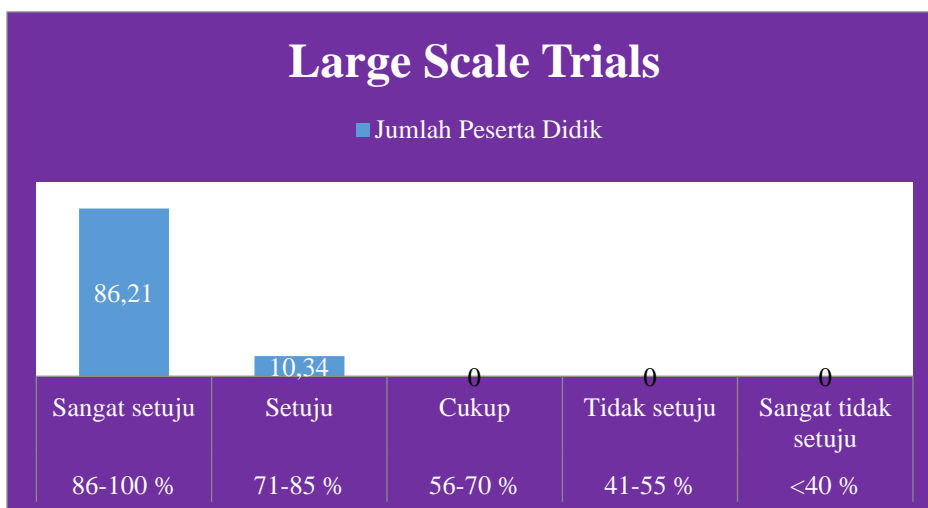


Figure 6. Diagram of the results of large-scale trials

Based on the results of the second trial E the learning module for martial arts activities for class VII students based on large-scale electronics shows that the resulting e module is effective as teaching material for class VII martial arts material in the subject of Physical Education Sport and Health.

## Discussion

This research and development resulted in a product similar to the Research and Development concept, namely an electronic-based try-out learning module for class VII students' martial arts activities. This is in line with the objectives of the research conducted, namely to develop electronic-based teaching materials to have a positive impact on the achievement of learning objectives (Pahlawan et al., 2022). The material presented in the

resulting e learning module is the material for the specific martial arts of pencak silat for one semester which consists of the origin, understanding, formation of attitudes, formation of steps and specific movements of defense in accordance with the 2013 curriculum (Rachman et al., 2021). E modules have been arranged systematically and contain complete and interesting teaching materials.

This E module has been tested for feasibility through the validation test stage with material experts, linguists and IT experts with a very suitable category for use with minor revisions. The trials also showed that the e-modules produced were effective as teaching materials for class VII martial arts materials, both at the small-scale trials and trials at the large-scale stages. So that through the testing phase carried out, it can be understood that the electronic-based self-defense activity learning module for Class VII students is very suitable to be used as teaching material for Physical Education, Sports and Health.

This E learning module can assist educators in conveying martial arts material that not only understands but also practices the basic technical skills of pencak silat. The E module also makes it easier for students to study independently both outside of class hours and at home (Nurhadi, 2021).

## **CONCLUSION**

This development research resulted in a product in the form of an electronics-based learning module for class VII martial arts which has been tested for validation/feasibility with five experts with the acquisition of a very suitable category for use as teaching material for Physical Education, Sports and Health, material for martial arts specific to pencak silat class VII. In addition, based on the results of the product trials it can also be concluded that the electronic-based learning module for class VII martial arts students in the small-scale trials obtained the very feasible category and during the large-scale trials it was also in the very feasible category.

Learning activities using this electronic-based module can attract the enthusiasm and attention of students. The e-module also contains questions in the form of quizzes that make students more happy when working on questions. However, this research is still at the product trial stage. So it is necessary to have further research at the next stage for the sake of improving the usability of the product that has been developed.



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