

# Effectiveness E-Module in PJKR Students Hurdles Learning

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**Abstract** - The purpose of this study was to develop an E-module for hurdles learning, to determine the effectiveness of using e-modules in hurdles learning. This research was carried out using the development research design with the most appropriate steps for his research based on the conditions and constraints faced and at least contained the main procedures in development research, namely: (1) conducting a needs analysis, (2) developing the initial product, (3) expert validation, (4) field trials, (5) product revisions. Data analysis techniques use percentage descriptions. Based on data from expert studies, data relating to the level of product conformity with RPS lecturers was obtained, product conformity with athletic subjects, product clarity in accordance with athletic subjects, product effectiveness related to athletic subjects, encouraging the development of cognitive, affective, psychomotor and physical aspects the average student is 90%, worth continuing. Small group trials, the responsiveness of students to the effectiveness of E-modules averaged 90%. Test of large groups for the effectiveness of using the E module is 95%.

**Keywords**—learning, effectiveness, e-modul

## I. INTRODUCTION

Physical Health and Recreation Education Study Program graduates master the knowledge of Physical and Sports Education at all levels of education, and have the ability to conduct research in the fields of physical education and sports, as well as skilled in implementing community service.

Before becoming an educator, a PJKR student needs to have good skills in teaching as expected, his graduate students are able to become professional teacher candidates. One of the subjects that must be mastered to take this education is the Athletics course.

Athletic courses in the PJKR curriculum consist of athletics 1 with 2 credits and athletics 2 with a total of 2 credits, so the number of credits is 4 credits. Athletics is the oldest sport in the world consisting of road numbers, running, throwing and jumping.

Running numbers include short distance running, medium distance, long distance, goal and relay. Throw numbers consist of disc throw numbers, javelin throws, bullet marks, hammer throws while the jump numbers consist of long jumps, jumps and jumps.

There is a considerable amount of material and limited meeting time, many students who are less skilled in practicing

athletic learning are found. As prospective teachers, the PJKR students must be able to become a model in learning and also be able to give the right movement for their students.

How this can be realized while students themselves do not understand how the stages in learning are especially athletic. In fact in the field based on preliminary studies there are still very few students who are able to practice learning especially athletic well, and some even don't understand at all, with the reason of forgetting.

To overcome this, the researchers tried to develop a learning model with learning media in the form of e-modules that contained how to do athletic learning specifically for the number of hurdles.

The electronic module (e-Module), is a development of print modules in digital form that adapt a lot from the print module. The advantages of e-modules compared to print modules are their interactive nature which makes navigating easier, allows displaying / loading images, audio, video, and animation and is equipped with formative tests / quizzes that allow automatic feedback immediately. Another advantage of e-modules in the learning process lies in the stages of learning based on problems, namely the orientation of participants to problems, organizing college participants to study, guiding individual and group investigations, developing and presenting work, and analyzing and evaluating problem solving processes [1].

One medium that is effective, efficient, and prioritizes student independence is e-Module media. The module is a teaching package that contains a unit of concept from teaching material. Teaching modules is an effort to organize individual learning that allows students to master a unit of learning material before he switches to the next unit. In connection with increasingly sophisticated technology and easily available at affordable prices at this time modules which are generally presented in the form of prints then by using electronic technology using computer modules can be presented in digital form or called e-Module. In general, the definition of electronics is the study of weak current electricity which is operated by controlling the flow of electrons or electrically charged particles in a device such as a computer, electronic equipment, thermocouples, semiconductors, etc. So e-Module is a digital media that is effective, efficient, and prioritizes student independence in conducting learning activities that

contain one unit of teaching materials to help students solve problems in their own way [2].

E-module is an ICT-based module, its advantages compared to print modules are its interactive nature which makes navigation easier, allows displaying / loading images, audio, video and animation and is equipped with formative tests / quizzes that allow automatic feedback immediately. The use of web modules and media learning would guarantee student control, flexibility, context-free and also relatively free social conventions. The e-module that will be developed in this study was prepared using eXe software. This software is a freeware that can be downloaded at <http://eXelearning.org> developed by Sandi Britain etc (2004) and is supported by CORE Education. Some advantages of using this software include: 1) easy to use, the display is very user friendly and without the need for mastery of programming languages. This template, modified in MS Word 2007 and saved as a "Word 97-2003 Document" for the PC, provides authors with most of the formatting specifications needed for preparing electronic versions of their papers. All standard paper components have been specified for three reasons: (1) ease of use when formatting individual papers, (2) automatic compliance to electronic requirements that facilitate the concurrent or later production of electronic products, and (3) conformity of style throughout a conference proceedings. Margins, column widths, line spacing, and type styles are built-in; examples of the type styles are provided throughout this document and are identified in italic type, within parentheses, following the example. Some components, such as multi-leveled equations, graphics, and tables are not prescribed, although the various table text styles are provided. The formatter will need to create these components, incorporating the applicable criteria that follow.

## II. MATERIAL AND METHODS

In this study the development model used is a procedural development model, because this model is descriptive, namely a procedure that describes the steps that must be followed in producing a product. Each development can choose and find the most appropriate step for his research based on the conditions and constraints faced and at least contain the main procedures in development research, namely: (1) analyze the products to be developed, (2) develop initial products, (3) expert validation, (4) field trials, (5) product revisions. Based on some of these opinions, it is related to this research, only the appropriate steps are taken to solve the problem of developing learning materials by using E-athletic Modules, especially whether the hurdles are appropriate or not [3].

The data used in this study are qualitative and quantitative data. Qualitative data obtained from interviews in the form of comments, criticisms, verbal and written suggestions as constructive input for product revision materials, while quantitative data obtained from questionnaires were given to PJKR students.

First, try the product trial. To obtain a satisfactory product, the product must be tested first on individuals, small groups, and field trials. The purpose of this trial is to get about the suitability, attractiveness, enthusiasm of students towards the use of the Gawng number running athletic learning module E-

so that it can be used as a means to increase knowledge in learning and enrich students' skills.

Second, design of try test. The trial design includes (1) subject matter experts to provide information and data about material suitability and draft material and suggestions, (2) media experts serve to provide corrections to material suitability, material draft design and suggestions, (3) individual trials function to knowing and disposing of errors in the E - learning module, (4) the small group test serves to review the small group trials, (5) the field trial serves to find out student enthusiasm for the use of E - the hurdles number athletic learning module.

Third, try subjects. The trial subjects consisted of 3 experts, namely: (1) media experts, (2) subject matter experts. The small group test consisted of 10 students, a field trial consisting of: 40 students.

Fourth, data collection instrument. The instruments used in developing this product are interviews, documentation and questionnaires. Interviews are used to capture information systematically and directed. Documentation is used to determine educational background and subject development expertise. The questionnaire used consists of two types, namely: (1) to find out the learning resource needs and assessment techniques in Penjas subjects, and (2) as an instrument for collecting the opinions of Penjas experts and teachers about the acceptability of products developed, namely usability, leads to benefits products for students in learning. Accuracy leads to how relevant the product is to meet the needs of the teacher in teaching students about athletic learning in the long jump number. Implementation leads to how realistic and economical if this product is implemented in the learning process of Penjas subjects.

Fifth, data analysis techniques. The analysis technique used is the percentage for analyzing and evaluating the subject of development in assessing the level of feasibility, quality and acceptability of the product. (usefulness and relevance) to the product development Ease of Use.

## III. RESULT AND DISCUSSION

Results of Need Analysis, an analysis of student E-module development needs was conducted on 40 students. Based on the results of the needs analysis of E-modules, from 40 respondents 92.5% stated that they needed an E-module that could be used as a tool for athletic learning, especially the number of hurdles. This fact shows that the development of E-modules is needed by PJKR FIK UNNES students. Therefore it is necessary for student E-modules to be used as a medium for athletic learning especially for the number of hurdles.

Discussion of the results of the analysis from the Expert study. Based on data from the study of experts, obtained data relating to the level product conformity with RPS Lecturers, product conformity with athletic subjects, product clarity in accordance with athletic subjects, usefulness of products related to athletic subjects, encouraging the development of student cognitive aspects, encouraging the development of student affective aspects, encouraging the development of psychomotor aspects of students, encouraging students'

physical development increasing the interest of students participating in athletic learning in the number of hurdles, increasing the motivation of students participating in athletic learning sprint numbers.

The most fundamental result of the responses and suggestions of experts is that the use of media must be made standard, in order to be able to describe a real model. In addition, the use of words must avoid multiple interpretations, so that the messages conveyed are easily understood and understood, both by lecturers and students.

Discussion of the results of individual evaluation analysis. The results of the analysis of individual evaluation data described earlier, in the aspect of evaluation of writing errors there are no significant errors, so it can be said that this product is correct in writing. In the aspect of clarity of the content of the products that are produced after being evaluated individually, they generally judge very well. While based on responses / suggestions, it can be identified things that need to be addressed and addressed, especially those related to costs for product purchases, in general the products need to be simplified so that the price can be affordable, besides student workbook material if possible arranged more variations so that the teacher can choose according to the conditions of the students and schools that exist.

Discussion of the results of the Small Group evaluation. Trials in small groups, when compared to the actual area or field, this is the sample, meaning on a smaller scale (subject involvement, students using e modules 92.5% of students of this product are tested to obtain constructive inputs, This is intended to be implemented and accepted by all students in the Faculty of Science. The level of clarity in understanding the E Module is 100% provided by the response from students. The level of compatibility with the material obtained is 100% according to the material received by the first semester students, the level of pleasure with the smart book is 90% because it is very helpful, students in learning.

The level of convenience in learning through 90% smart book is well received by students. The usefulness of using the E Module is 100%. The level of clarity and understanding associated with E Modules is 90% according to the results received by students. The level of success in improving cognitive aspects is 90%. The level of success in improving psychomotor aspects is 90%. The level of success in increasing physical aspects is 90% of the results of the questionnaire given by students.

Discussion on the Results of Large Group Trial Analysis. Based on the collected data, the level of clarity in understanding the E Module 95% is provided by the response from students. The level of compatibility with the material

obtained is 100% according to the material received by the first semester students, the level of pleasure with the E Module is 95% because it is very helpful, students in learning.

The level of ease in learning through E Module 95% is well received by students. The usefulness of using the E Module is 100%. The level of clarity and understanding associated with E Modules is 95% according to the results received by students. The level of success in improving cognitive aspects is 95%. The level of success in improving psychomotor aspects is 95%.

The level of success in increasing physical aspects is 95% of the results of the questionnaire given by students. After the text edit has been completed, the paper is ready for the template. Duplicate the template file by using the Save As command, and use the naming convention prescribed by your conference for the name of your paper. In this newly created file, highlight all of the contents and import your prepared text file. You are now ready to style your paper; use the scroll down window on the left of the MS Word Formatting toolbar.

#### IV. CONCLUSION AND SUGGESTION

The conclusion in this study is the development of the E athletic learning module, especially the hurdles number is effectively used as an athletic learning media.

Based on the findings in this study both related to the strengths and weaknesses that exist in the development of this product, the diversity of situations and conditions in the field, the diversity of teachers' abilities as users of this product, need to be given some advice on the use of products, so that takes place effectively and efficiently. The suggestions that can be given here related to the products produced are: more making varied media in athletic learning because there are many numbers that must be learned in lectures in one year or two semesters.

#### REFERENCES

- [1] N. Sugihartini and N. L. Jayanta, "Pengembangan E-Modul Mata Kuliah Strategi Pembelajaran," *Jurnal Pendidikan Teknologi dan Kejuruan*, vol. 14, no. 2, pp. 221-230, 2017.
- [2] M. Fausih and D. T., "Pengembangan Media E-Modul Mata Pelajaran Produktif Pokok Bahasan "Instalasi Jaringan Lan (Local Area Network) Untuk Siswa Kelas XI Jurusan Teknik Komputer Jaringan Di SMK Negeri 1 Labang Bangkalan Madura," *Jurnal Teknologi Pendidikan*, vol. 1, no. 1, pp. 1-9, 2015.
- [3] W. D. Dwiyo, *Konsep Penelitian dan Pengembangan Lokakarya Metode Penelitian*, Semarang: FIK UNNES, 2004.