# Petanque Sports E-Module Development, Faculty of Sports Science, Universitas Negeri Malang

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***Abstract*— This study aims to develop a petanque sports e-module, Faculty of Sport Science, State University of Malang. The research method used is Research & Development (R&D) from Borg & Gall. In this study using three methods, namely analysis, validation and group test. Data collection is done by using a questionnaire or questionnaire. At the validation stage, it consisted of 1 material expert, 1 media expert, 1 petanque trainer, while the group trial of this application was tested on 5 groups of respondents, namely 1 material expert, 1 media expert, 1 petanque trainer, 9 small expert group test respondents and 23 respondents. test. big group. There are several aspects of the assessment, namely suitability, language, coherence, comfort, attractiveness, appropriateness and consistency. From the test results obtained the percentage value of material experts 91.25% (very valid), media experts 98.1% (very valid), petanque trainers 91.7% (very valid), small group tests 73.70 (quite valid) and large group test of 80.50% (very valid). Based on these results, this application is suitable to be used as a support for athletes and students in handling petanque sports and produces an e-module for petanque sports consisting of text, images and videos. The developed e-module can be operated at any time using a smartphone with the Petanque Sports e-module installed**

***Keywords*— *e-module, sports, petanque***

## I. INTRODUCTION

Globalization has expanded the scope of learning for students as well as students who have developed into online learning. In the midst of the COVID-19 pandemic, the learning system in Indonesia has changed to an *online system*. This situation carries considerable implications for the design of online learning environments. (Dabbagh, N., & Bannan-Ritland, 2005) shows that students or young people are currently growing with the internet and web-based technology as well as applications such as podcasting, searching, social bookmarking that are well prepared to engage in online learning activities that support interaction and collaboration. In addition, distributed online learning delivery models of knowledge networks, learning communities, asynchronous learning networks and knowledge portals are designed to effectively meet the characteristics of the emerging learner population. It supports interaction with colleagues in virtual spaces for team projects that engage in online discourse, research research papers using web-based resources or digital applications to demonstrate learning. The globalization of distance education allows students from all over the world to participate in online learning activities such as participating in online seminars and even sharing information through knowledge portals. (Thompson, 1998) describes that students who study at traditional educational institutions choose distance studies over other alternatives because these alternatives are preferred. (Laksana, GB, Pramono, H., & Mukarromah, 2017) said that an effective way to improve achievement is to use print media and electronic media. The latest trends in new sports that have the competence to compete with other sports. Not to mention sports learning which can also be done online, including petanque sports which developed at the Faculty of Sports Science, State University of Malang. Petanque is a sport that is able to compete and raise achievements in every number of matches. (Souef, 2015) states that petanque tends to require accuracy and concentration and does not look at the age of the players, this requires equality and opportunity for every player in every match and competition.

Petanque sport entered in 2011 at the 26th SEA Games in Jakarta-Palembang. And it was only in 2012, thatsports were *petanque* socialized to universities that have sports study programs in five provinces, namely Bali, Yogyakarta, Riau, Bandung, West Java, Jakarta and Surabaya, East Java, until the parent organization of *petanque*, namely FOPI (Federation of Indonesian Petanque Sports) was established. ) on March 18, 2011. In Malang itself, only the State University of Malang has developed this sport. Many students do not know the sport. Based on the results of observations and observations of researchers in the community ofsports activists, *petanque* there are still many who do not know the sport, how to play it, techniques, regulations, facilities and infrastructure, tools used, scoring and others.sport of *Introducing thepetanque* is the first step that can be taken to develop and increase interest in the sport of *petanque* itself. Based on (Suryadie, 2014), electronic modules (e-modules) are innovative media that can increase student interest in learning. This can be caused by considering the limited face-to-face time in front of the class when compared to the volume of material that

must be completed. And using the E-module is the first step in introducingsports *petanque*. E-sports modules are very efficient to develop because they are applications that can be carried anywhere. E-modules can also be compiled with multimedia applications that combine various file formats such as text, images and even videos to convey messages or materials to users.

## II. METHOD

This study uses the research model *Research & Development* (R&D) from Borg & Gall which has 8 steps for research. Researchers carried out three stages to conduct research, namely analysis, validation and group testing. This research was conducted at the Faculty of Sports Science. The trial subjects in this study were petanque athletes and students of Sports Coaching Education and Physical Education, Health and Recreation. As for the division, namely small group trials of 9 respondents, large group trials of 23 respondents.

The stages of e-module development are as follows:

The first stage of analysis. The activities carried out in the analysis phase are (1) preliminary analysis to find out the problems faced in the learning process and the practices used to develop e-modules (2) material analysis carried out to identify, detail and compose in a coherent manner what students will learn.

The second stage is validation. The activities carried out at this stage are (1) the selection of media related to determining the right media for presenting the material that will be used by students (2) e-module validation which includes validation tests of material experts, media experts and petanque trainers

| No | Criteria | Validity Level |
|---|---|---|
| 1 | 75.01%-100.00% | Very Valid (can be used without revision) |
| 2 | 50.01%-75.00% | Fairly Valid (can be used with minor revisions) |
| 3 | 25.01%-50.00% | No Valid (cannot be used) |
| 4 | 00.00%-25.00% | Very Invalid (forbidden to use) |

The third stage of group trials which stage is an e-module trial which includes a small group trial and a large group trial where the test results are used to improve the e-module product.

Data collection was carried out by several methods, namely the observation method which was carried out by observation, the type of observation carried out was participation. Questionnaire or questionnaire method is carried out to find out the initial problem and measure the quality of the application product.

The data obtained from the questionnaire instrument are quantitative and qualitative. Respondents determine the level of agreement with a statement by choosing one of the available options.

The formula for processing data is descriptive percentage, namely:

$$V = \frac{TSEV}{S-max} x\ 100\%$$

Description:

V : validity

TSEV : Total empirical score validator

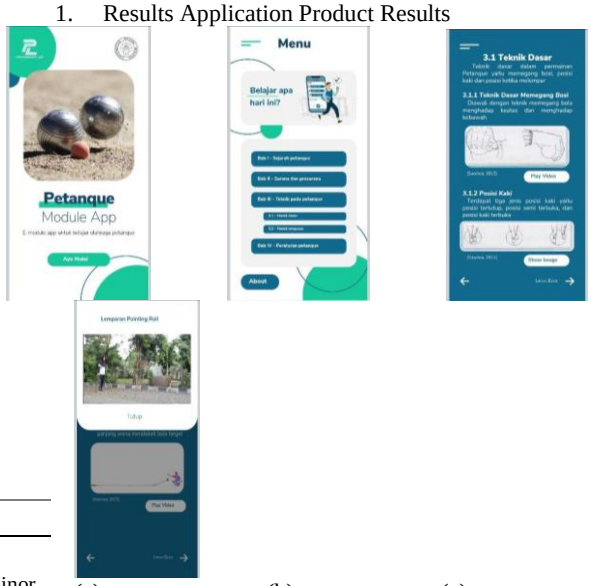
S-max : Maximum expected total

From the data above, classification criteria are set to make it easier to give conclusions, namely

## III. RESULT AND DISCUSSION

**Research**

1. Results Application Product Results




(a) (b) (c) (d)

Figure 1. Application display (a) Main Menu (b) Material Menu (c) Material Content (d) Material Content with Video

2. Application Feasibility and Assessment

Table 1. Application Feasibility Assessment Results by Material Test

| Assessment Aspect | TSEV | S-max | % | Description of |
|---|---|---|---|---|
| Conformity | 18 | 20 | 90 | Very Valid |
| Language | 14 | 16 | 87.5 | Very Valid |
| Congeniality | 16 | 16 | 100 | Very Valid |
| Ease | 15 | 16 | 93.75 | Very Valid |
| Figure | 7 | 8 | 87.5 | Very Valid |
| Video | 3 | 4 | 75 | Sufficiently Valid |
| Total | 73 | 80 | 91.25 | Very Valid |

Results of the application feasibility assessment provided by material experts obtained an average score of 91.25% eligibility percentage. This value is very valid, meaning that the application is very feasible to use.

Table 2. Results of Application Feasibility Assessment by Media Test

| Aspects of Assessment | TSEV | S-max | % | Description of |
|---|---|---|---|---|
| Conformity | 19 | 20 | 95 | Very Valid |
| Consistent | 4 | 4 | 100 | Very Valid |
| Ministry of Industry | 8 | 8 | 100 | Very Valid |
| Ease | 16 | 16 | 100 | Very Valid |
| Eligibility | 4 | 4 | 100 | Very Valid |
| Total | 51 | 52 | 98.1 | Very Valid |

The results of the application feasibility assessment given by media experts obtained an average percentage score of 98.1%. This value is very valid, meaning that the application is very feasible to use.

Table 3. Results of Application Feasibility Assessment by Trainer Petanque

| Aspects of Assessment | TSEV | S-max | % | Description of |
|---|---|---|---|---|
| Conformity | 15 | 16 | 93.75 | Very Valid |
| Correspondence | 9 | 12 | 75 | Sufficiently Valid |
| Ease | 20 | 20 | 100 | Very Valid |
| Figure | 8 | 8 | 100 | Very Valid |
| Video | 3 | 4 | 75 | Sufficiently Valid |
| Total | 55 | 60 | 91.7 | Very Valid |

The results of the application feasibility assessment given by the petanque trainer obtained an average percentage score of 91.7%. This value is very valid, meaning that the application is very feasible to use.

Table 4. Results of Feasibility Assessment Application Testing Small Group and Large GroupTest

| AspectsRatings | Small Group | | | Large Group | | |
|---|---|---|---|---|---|---|
| | TSEV | | S-max % | TSEV | | S-max % |
| attractiveness of the | 85.18 | 108 | 92 | 232 | 276 | 84.05 |
| Conformity | 29 | 36 | 80.55 | 69 | 92 | 75 |
| Ease | 248 | 360 | 68.88 | 733 | 920 | 79.67 |
| Simplicity | 29 | 36 | 80.55 | 77 | 92 | 83.69 |
| Total | 398 | 540 | 73.70 | 1.111 | 1.380 | 80.50 |

The results of the application feasibility assessment given in the small group test obtained an average score of the percentage of eligibility by 73.70%. This value is quite valid, meaning that the application is suitable for use with revisions. While the assessment given to the large group test obtained an average score of 80.50% of the feasibility percentage. This value is very valid, meaning that the application is very feasible to use.

**Discussion**

**1. Assessment**

Results of the application's feasibility assessment provided by material experts obtained an average percentage score of 91.25%. This value is very valid, meaning that the application is very feasible to use. The e-module application has the advantage that there are videos and images to add knowledge references. The material and pictures shown are appropriate and coherent which can be used as alternative learning resources that are practical and interesting. The results of the assessment given by media experts obtained an average percentage score of 98.1% of eligibility. This value is very valid, meaning that the application is very feasible to use. The e-module application has advantages such as the application installation process on *smartphone* the media expertruns smoothly and when the application is run it does not experience *hangs* or errors. The e-module application also has an attractive layout and the use of button icons is appropriate and easy to operate. The addition of easy-to-use image and video features also adds to the convenience of using the e-module application. Petanque trainer experts give an average percentage of eligibility score of 91.7%. This value is very valid, meaning that the application is very feasible to use. The petanque e-module application is easy to operate and the material displayed is appropriate and the addition of the material presented in the material field adds learning material to the petanque e-module application.

The assessment of the small group respondents got an average percentage score of 73.70% of eligibility. This value is quite valid, meaning that the application is suitable for use with revisions. While the assessment given to the large group test obtained an average score of 80.50% of the feasibility percentage. This value is very valid, meaning that the application is very feasible to use. The result scores obtained from small groups get revisions that help to improve the application so that when tested for large groups, the result score increases which applications can be used as alternative sources of student learning that are practical and interesting as well as simple and easy to operate.

**2. Improvement of Petanque's E-module Application**

Based on various suggestions from respondents, and the evaluation of the researcher, several improvements were made to the e-module application. In the installation process it is only used for *smartphones* Android while for iPhones it still cannot be installed and requires sufficient free space or memory to be able to install applications. And many want it to be made into a website so that when they open they just click on the website link. Improvements in writing consistency also need to be improved. Layouts such as buttons whose function is for *back* still don't work properly when the button is operated.

## IV. CONCLUSION

Based on the results of the study, several conclusions were obtained, namely (1) this research resulted in an e-module for petanque sports which consisted of text, images

and videos. The developed e-module can be operated at any time using a smartphone that has been installed the petanque sports e-module (2) Research has resulted in a petanque sports e-module that is very valid or can be used by students or athletes or coaches.

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