Development of a Game-based Shot Put Motion Task for Junior Hight School Student

Komang Agus Ariyana [1*], Made Agus Wijaya [2], Komang Sukarata Adnyana[3]

[123] *Universitas Pendidikan Ganesha, Bali, Indonesia.*
*Korespodensi penulis: wijaya.madeagus@undiksha.ac.id

Abstrack

PJOK learning motion tasks encourage students to learn to move and learn through movement in fun situations. The absence of game-based shot put material movement assignments for junior high school students prompted this development research to be carried out. Using the ADDIE model, this article focuses on discussing two stages, namely the design stage and the development stage. Game-based shot put material motion tasks are designed at easy, medium and hard difficulty levels. The research instrument consists of validation sheets from content experts and PJOK practitioners. Data analysis was carried out descriptively quantitative-qualitatively. The results of the research showed that the PJOK content expert's validation score reached 71, and the PJOK practitioner's score reached 72 from a maximum score of 75. Based on the results of the research and discussion, it was concluded that the game-based shot put material movement assignment for junior high school students was included in the very good category and met the criteria in accordance with curriculum, ensuring adequacy of movement, the presence of internalized character elements and ensuring the security and safety of students. It is recommended that PJOK SMP teachers can implement game-based shot put material motion tasks for SMP students.

Keyword: motion tasks, shot put, game

INTRODUCTION

Education is the learning of knowledge, skills, and habits of a group of people that are passed down from one generation to the next through teaching, training, or research. Suryosubroto (2010) said that the level of education is a stage in continuing education that determines the level of development of students and the breadth and depth of teaching materials, be it elementary school, junior high school, high school/vocational school or college level. The development of movement in students can occur well if they get enough opportunity to do physical activities in the form of movements that involve all parts of their body, so that students will be able to master movement skills well.

The importance of movement tasks for PJOK teachers is to apply movement tasks that are in accordance with the characteristics of students. Movement tasks that are said to be appropriate for students are movement tasks that are in accordance with the characteristics and needs carried out in stages from easy to difficult, from simple to complex while maintaining the safety of students. One of the materials that can improve students' movement abilities and skills is game and sports activities. In games and sports there is material, namely athletics.

According to Munasifah (2008: 9), Athletics is a combination of 3 types of sports that can be broadly grouped into running, throwing, and jumping. The word athletics comes from

the Greek "athlon" which means "contest." Athletics is a branch of sport that was competed in the first Olympics in 776 BC. In Junior High Schools, especially in class VIII, athletics can be carried out previously, with the material Shot Put. The development of technology is very rapid. Many teachers use video tutorial media in conducting classroom learning, but sometimes this is not effective in the learning process. Because students are still afraid to do the movement tasks given by the teacher. Therefore, the researcher designed a media that would make it easier for teachers in movement tasks, the researcher plans to develop learning media that were previously given by teachers in the form of video tutorials now using audio-visual video media. The learning process in the 21st century era of course, PJOK learning cannot be separated from the role of ICT (Information and Communication Technology). By including the role of ICT in the learning design, it will certainly increase the excitement of the world of education, especially in PJOK learning. Information and Communication Technology (ICT) in the implementation of the curriculum is very necessary, and ICT will play a very important role in the implementation of its learning. Therefore, the use of ICT is needed in learning activities so that the effectiveness and efficiency of the learning process are carried out. So that the material, tasks in the learning process can be done through transfer from ICT. Technological Pedagogical and Content Knowledge (TPACK) is a framework that integrates the relationship between Technological Knowledge, Pedagogical Knowledge, and Content Knowledge in a learning context. TPACK was initially developed by Shulman's (1987, 1986) which describes PCK (Pedagogical and Content Knowledge), then to describe how teachers understand learning technology and are connected to PCK and with others to produce effective learning using technology. TPACK is important for teachers, because the more technology develops, the more teachers must be able to use technology in the teaching and learning process in the classroom. ICT TPACK in the learning process plays a very important role in improving learning using technology that can make learning more effective and efficient. Then ICT TPACK is expected to be able to help teachers in the learning process in the classroom using technology, and make students in following the learning process not feel bored quickly because teachers are able to vary learning activities in the classroom using technology. Relevant Research identifies that the shot put learning media currently used by PJOK teachers is limited to video tutorials, does not display varied movement tasks and is not game-based. In fact, media is very influential in learning, this is proven in a study conducted by Carolin, et al. (2020) entitled "Development of Learning Video Media with the ADDIE Model on Basic Pencak Silat Kicking Technique Material for Class VII SMP Negeri 4 Sukasada in the 2019/2020 Academic Year". Based on the results of product validity according to expert reviews, namely; (1) according to content/material expert Dr. I Gede Suwiw, S.Pd.,M.Pd. the percentage of the product is 94% with a very good category, (2) according to media expert Dr. I Gde Wawan Sudatha,S.Pd.,S.T.,M.Pd. the percentage of learning products is 90% with a very good category, and (3) according to learning design expert Dr. I Gde Wawan Sudatha,S.Pd.,S.T.,M.Pd. the percentage of the product is 94% with a very good category. Therefore, it can be concluded that the developed learning media is valid for use in supporting the learning process. Based on the results of the first observation and interview conducted by the researcher with resource person 1 who is a class VIII PJOK subject teacher at SMP Negeri 3 Singaraja on November 13, 2023, that in PJOK learning one of the materials given by the teacher, namely athletics material, the PJOK teacher still seems monotonous in giving movement assignments, so that students tend to be less enthusiastic in the learning process. Where in the Shot Put material, the teacher does not yet have learning media in the form of movement assignments, so far the teacher has only used video tutorial media and it is still not interesting. It can be seen that students are still afraid to do athletic movements, previously the teacher had also provided a video tutorial but students still felt afraid and less enthusiastic about doing the movements, because students still did not have an

understanding of how to carry out the movements. With the presence of a video tutorial containing movement assignments, it will make the learning process easier, students understand and are more enthusiastic about the movement assignments given. Therefore, the researcher plans to develop audio-visual media based on movement assignments. So from the results of the observations that the researcher has obtained, the researcher intends to develop Audio Visual Videos for conducting PJOK learning. Because students need movement task media to support learning so that the learning process can run smoothly. Therefore, researchers are interested in conducting research entitled " Development of ICT TPACK- Oriented Learning Media for Game-Based Shot Put Athletics Material for Grade VIII Junior High School Students;.

Research Methode

This designed research includes research and development (R&D). Development research according to Sugiyono (2017: 297) is defined as a research method used to produce certain products and test the effectiveness of these products. Furthermore, Tegeh, et al. (2014: xii) stated that development research is an effort to develop and produce a product in the form of materials, media, tools and/or learning strategies, used to overcome learning in the classroom/laboratory, and not to test theories.

Based on the description of the 2 experts above, in this study what is meant by development research is an effort to develop a product in the form of materials, tools, or learning strategies, which later the results of the product will improve learning practices where the product developed can later be designed into physical form.

The development procedure is a staged process for the development to be carried out. The development procedure itself is useful to clarify how the procedural steps that must be taken to get to the expected product. In this development research, the ADDIE development model includes 5 stages, namely:
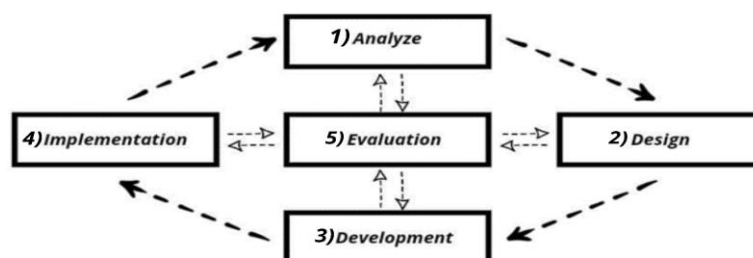

Figure 1. Figure 1. ADDIE Model (Source: Tegeh, et al. 2014:78)

Result and Discussion

Learning media that focuses on ICT TPACK for game-based Shot Put material for grade VIII junior high school students has gone through a trial improvement process. The development model used is the ADDIE model, which consists of five steps: Analysis, Design, Development, Implementation, and Evaluation. In the development process using the ADDIE model, two designs were successfully produced, namely storyboards and flowcharts. In the first stage of development, there were two stages of analysis using Qualitative Analysis Techniques, namely needs analysis and curriculum analysis. Curriculum analysis was carried out through interviews, observations, and questionnaires to PJOK teachers. The results of the interviews

showed that PJOK learning, especially long jump athletics material, had used learning videos, but had not included the movement task stages. Observations also showed that the learning process was still monotonous, and students were reluctant to follow because there was no game element. In addition, observations of the curriculum show the use of the independent learning curriculum with long jump athletics material. At the planning stage, the selection and determination of software, such as the CAPCUT application, has an important role because of its ease of use in video editing, as well as in designing movement tasks for long jump material and learning video storyboards. At the development stage, learning video development and validation were carried out by expert experts. The validation results indicate that the continuation of the validation results can be filled in according to the results obtained from the development stage Hasil merupakan bagian utama dari sebuah artikel ilmiah, yang berisi: hasil bersih tanpa proses analisis data, hasil pengujian hipotesis. Hasil dapat disajikan dalam tabel atau grafik, untuk memperjelas hasil secara lisan.

Validation Data Analysis of Content Experts and PJOK Practitioners

The results of the review by content experts and PJOK practitioners on learning media obtained results with scores of 72 and 69, while the maximum score is 75. Based on these results, the percentage level of the Shot Put learning media can be calculated as follows:

Table 1 Results of Content and PJOK Expert Validation Data Analysi

expert	Presentation	Category
Content Expert	96%	Very good
Physical Education Practitioner	92%	Very good

Developing obtained with a percentage result of 94% and 96% and has an average score of 95% in the very good qualification. Thus, the learning video media has a very good feasibility in terms of material aspects. Data Analysis Validation of Media Experts and PJOK Practitioners The results of the review by design/media experts and PJOK practitioners on learning media obtained results with a score of 71 and 72, while the maximum score is 75. Based on these results, it can be calculated.

Data Analysis Validation by Media Experts and PJOK Practitioners

The results of the review by design/media experts and PJOK practitioners on learning media obtained results with scores of 71 and 72, while the maximum score is 75. Based on these results, the percentage level of long jump learning media can be calculated as follows:

Table 2 Results of Validation Data Analysis by Design/Media Experts and PJOK Practitioners

expert	Presentation	Category
Content Expert	95%	Very good
Physical Education Practitioner	96%	Very good

After the data was converted with a 5-scale conversion table, the percentage results were 95% and 96%, and had an average score of 96% in the Very Good qualification. Thus, learning video media has a Very Good feasibility in terms of design/media aspects. Data Analysis of

Individual Test Results The individual trial involved 5 students of class VIII of SMP Negeri 3 Singaraja where in its implementation students only tested the movement tasks given before entering the small group trial. Data Analysis of Small Group Trial Results In the small group trial stage, 15 students of class VIII of SMP Negeri 3 Singaraja were involved, consisting of 8 male students and 7 female students. The focus of this development is for students to better understand the stages of movement from the Shot Put material. After conducting a small group trial conducted by students, it was continued with students filling out a questionnaire, the questionnaire given was a Formative Class Evaluation (FCE) questionnaire. In this FCE assessment, each score is in it. For the answer yes, the score is 3, the answer no gets a score of 2, and don't know gets a score of 1. The results obtained after students answered or filled out the FCE questionnaire are as follows.

Table 3 Small Group Assessment Results

Woman :

No	Name		1	2	3	4	5	6	7	8	9	*Average*
1.	Responden1	L	3	3	3	3	3	3	3	3	3	3,00
2.	Responden2	L	3	3	3	3	3	3	3	3	3	3,00
3.	Responde3	L	3	3	3	3	3	3	3	3	3	3,00
4.	Responde6	L	3	3	3	3	3	3	3	3	3	3,00
5.	Responde7	L	3	3	3	3	3	3	3	3	3	3,00
6.	Responde9	L	3	3	3	3	3	3	3	3	3	3,00
7.	Responde10	L	3	3	3	3	3	3	3	3	3	3,00
8.	Responde11	L	3	3	3	3	3	3	3	3	3	3,00
			3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	

Man:

No	Name		1	2	3	4	5	6	7	8	9	*Average*
1.	Responde4	L	3	3	3	3	3	3	3	3	3	3,00
2.	Responde5	L	3	3	3	3	3	3	3	3	3	3,00
3.	Responde8	L	3	3	3	3	3	3	3	3	3	3,00
4.	Responde12	L	3	3	3	3	3	3	3	3	3	3,00
5.	Responde13	L	3	3	3	3	3	3	3	3	3	3,00
6.	Responde14	L	3	3	3	3	3	3	3	3	3	3,00
7.	Responde15	L	3	3	3	3	3	3	3	3	3	3,00
			3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	

For the results obtained, each question item answered by 15 students got a score of 3 and got an average of 3.00. Furthermore, for the score of each component, namely questions 1 - 3, the results of 15 students got a score of 3 and got an average of 3.00, for questions 4-5, the willingness component got a score of 3 and got an average of 3.00, for questions 6 - 7, the method component got a score of 3 and got an average of 3.00, and for questions 8 - 9, the cooperation component got a score of 3 and got an average of 3.00. The standard score conversion table for each component can be seen as follows

Table 4 FCE Scoring Sheet into Values for Each Component

Items	F-1	F-2	F-3	F-4	F-5	F-6	F-7	F-8	F-9	*Average*
Dimension		*Result*		*Volition*		*Method*		*Cooperation*		
Male	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	

8		**3,00**		**3,00**		**3,00**		**3,00**	**3,00**
Female	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	
7		**3,00**		**3,00**		**3,00**		**3,00**	**3,00**
Total	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	**3,00**	
Standard Score	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**3,00**
15		**3,00**		**3,00**		**3,00**		**3,00**	
Standard Score		**5**		**5**		**5**		**5**	**5**

The development of technology is currently growing very rapidly. Although many teachers use video tutorial materials to facilitate learning in the classroom, there are situations where this approach is not effective. Even now, students are still afraid to complete the movement tasks given by the teacher. Based on related research, the media is already available, but teachers have not utilized it optimally so learning becomes boring and leads to a decline in student learning outcomes. Based on the theory and results of previous studies, the learning media for Shot Put material based on ICT TPACK-oriented games is considered valid and feasible according to trials by experts and students which of course follows the definition of TPACK (Rahmadi 2019) regarding the use of appropriate technology based on student pedagogy to teach certain content. The results of this study following the development research conducted by (Sokheh et al. 2017) entitled "Development of Learning Video Media with the ADDIE Model for Basketball Passing Material", in the expert validity test stage the results obtained were, Content Expert Test with an average score of 88% in the very good category, Design Expert Test with an average score of 84% in the very good category, with these results the learning media is good but needs to be developed because there are still no videos of movement tasks and playing nuances in the learning process, also following suggestions and input from students regarding the previous study. While in this study what is different is that it has been developed by containing movement task videos with three levels, namely, easy, medium, and difficult, then packaged with playing nuances so that in the expert validity test stage the results obtained were, Content Expert Test and PJOK Practitioners with an average score of 96% in the very good category, Design/Media Expert Test and PJOK Practitioners with an average score of 95% in the very good category, In addition, this study is also in line with the TPACK component framework, namely in the scope of study material, pedagogy and technology (Rahayu, 2017). Thus, the athletic learning video media for Shot Put material can help the learning process, and students can more easily understand the material contained in the learning video. In addition, it can make the teaching and learning process more interesting so that it can improve student learning outcomes. Based on the research conducted, three experts, namely learning content experts, learning design/media experts, and PJOK practitioners, and small group trials were used to test the validity of the learning video media. This learning video can be used for further learning. Of course, this research will have a great impact on the learning process in schools, especially for grade VIII junior high school students. This research also certainly has limitations, especially the availability of modification tools used, especially in the school there are many students, so the tools that must be provided must also be many.

Simpulan

Kesimpulan harus, daripada hanya mengulangi hasil, menyatakan hasil penelitian yang diartikulasikan dengan baik dan secara singkat menyarankan jalur penelitian masa depan di bidang tersebut berdasarkan temuan yang dilaporkan dalam makalah.

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