Video tutorial-based learning media: A solution to assist students in learning sepaksila sepaktakraw skills

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ABSTRACT

The use of video learning media has been believed to play an important role in facilitating the teaching and learning process. However, limited video learning media are available for teaching the sepak takraw course. To fill this need, this research aimed at developing a video tutorial to assist students in learning the sepak sila skill at the sepak takraw course. The study applied research and development (R & D) design with the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. Data were collected through a questionnaire and an interview. A questionnaire was used to collect the students' needs, the validity of the product, and the students' perceptions about the product. An interview was conducted to seek feedback from the experts (a content expert, a design expert, a learning media expert, and a practitioner or coach) related to the developed product. The data were analyzed quantitatively and qualitatively. The results show that the developed product was feasible to use. This was proven by the average score of the product validity, which was 4,7 (very good). The results of the field trials also showed very good results (4, 8). The students perceived the developed product positively, in that it could arouse their motivation to learn, was easy to understand and follow, and could help them enhance their sepak takraw skills. The study's findings could enrich existing theories about the importance of using learning media in teaching as well as provide a practical contribution in that the developed product can be used by both sepak takraw lecturers and students to improve students' sepak takraw skills.

Keywords: developmental research; learning media; sepak sila; sepak takraw; tutorial video

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INTRODUCTION

Rapid technological and information advancement has altered the pattern of human life, including teaching and learning processes. Lecturers no longer only conduct their teaching and learning processes in traditional classrooms but also in virtual ones. They should integrate technology and information into the teaching and learning process to adapt to this shift (Gawrisch et al., 2020). The role of the lecturers is important in the learning process because they serve as guides who convey and transfer teaching materials to the students. As a result, the lecturers should be responsible for providing understandable learning materials and engaging learning media to help students understand the material and achieve their learning objectives well (Abdullah, 2017).

Lecturers must develop new innovations in the learning process, not only to facilitate learning but also to make students feel enthusiastic, motivated, and gain new experiences in the teaching and learning process (Utami, 2020). This new innovation is also required to make the learning process enjoyable and engaging. The lecturer's innovation can take the form of developing learning media and methods (Shalikhah, 2017). Students' interest and motivation in the learning process can be sparked by engaging learning media. Similarly, using monotonous and less innovative learning media in teaching and learning activities makes learning boring.

From the preliminary study conducted at an online sepak takraw course, it was found that the lecturer had integrated information and technology into his teaching practice, in which he combined synchronous (Zoom meetings) and asynchronous (Moodle-based e-learning). Unfortunately, these two modes were not sufficient in facilitating students learning of the basic skills of sepak takraw. When the lecturer gave models of the sepak takraw basic skills and techniques through a Zoom meeting, some students could not follow them due to poor signal. This condition affected the students basic sepak takraw skills, as the results of kicking or passing skills tests were low. This was unfortunate considering that kicking is the core of the sepak takraw game because the ball is mostly played with the feet, starting from the beginning of the game to making points or numbers. Alfiandi et al. (2018) furthermore, argue that a good sepak takraw player should master sepak takraw basic skills, with sepak sila being one of the most important sepak takraw basic skills. It is a method of kicking the ball with the inside of the foot for receiving, holding, passing, and defending against an opponent's attack. It is a technique of kicking the ball by using the inside of the foot for receiving, holding, passing, and saving the opponent's attack.

Based on our interview with students' taking a sepak takraw course and observations in a sepak takraw online class, it can be identified that some factors influence students low ability in performing basic kicking or passing techniques, namely a) the lack of the use of supportive learning media, b) the lack of students initiative in enriching knowledge to seek references through other media, c) the lack of problem-solving skills of the students to compensate for their lacking, and d) the lack of students' internet signal so that they could not follow the model of basic sepak takraw skills taught in a Zoom meeting Similar to our preliminary study's result, Yarmani and Syafrial (2020) and Yunitaningrum et al. (2020) also found that students had a lack of understanding of basic sepak takraw skills due to the limited learning media for the sepak takraw course.

To overcome these identified problems, the lecturers needed to create an innovative learning medium, namely video tutorials. Video tutorial-based learning media is a series of live pictures displayed by a lecturer or a professional player to help students' understand the learning material (Prihantono et al., 2020; Wahyuni et al., 2021). Video tutorials are made to explain how to practice or how to explain certain tasks in detail. According to Prasetiawati (2015), the use of video tutorials is important for learning sepak takraw because they provide modeling and scaffolding of the basic techniques of sepak takraw. Further, Cendra et al. (2019), Heri et al. (2020) and Qian (2022) also provide a shred of evidence that video tutorials in sports lessons are effective in enhancing students' performance. However, it is unfortunate that a video tutorial that has a complete and detailed example of sepak takraw basic techniques is still limited.

Given the importance of video learning media in sports education, several researchers have conducted research on developing video tutorials. Mardiana et al. (2019) developed a video learning medium for the basket-ball course. A year later, Heri et al. (2020) developed an audio-visual tutorial for swimming lessons in the form of a VCD. Further, Harefa et al. (2022) created a product in the form of a CD of video tutorial training media for basic martial arts techniques for young children. In these studies, all researchers agree that developing learning media in the form of video tutorials is important. Keeping this in mind, they conducted research and development to develop such learning media. Following the stages of research and development, these researchers proved that their developed products could assist their students to achieve their learning objectives.

However, according to the reviewed studies on the development of video learning media, to the best of our knowledge, little research has been conducted to create a tutorial video for learning sepak takraw. Sepak Takraw studies place a greater emphasis on examining the techniques used to teach sepak takraw (for instance, Darmiyanti et al., 2020; Muhyi et al., 2021; Nopiyanto et al., 2021 Pambudi & Sulendro, 2021). In fact, the presence of video tutorials in sepak takraw courses is critical for providing a step-by-step guide for students,

particularly those who are unable to attend synchronous meetings. Based on this context, the researchers conducted a study with the goal of creating a video tutorial to assist students in learning sepak sila skills at a sepak takraw course.

METHOD

To achieve the purpose of the research, the research and development (R&D) design was implemented in the study by implementing the ADDIE model. This model was chosen as it provides a guide to developing learning media based on needs (Wang & Hsu, 2008). Widyastuti (2019) also stated that this model is structured and programmed with sequences of systematic activities aimed to solve learning problems related to learning resources that are appropriate for students' needs and characteristics. This model consists of five stages, namely analysis, design, development, implementation, and evaluation. At the analysis stage, the researchers conducted needs analysis, environmental analysis, and learning analysis. The data were gathered from a questionnaire distributed to students taking a sepak takraw course and a sepak takraw lecturer. At the design stage, the researchers conducted these activities: 1) determining devices. Devices used include hardware (a laptop or computer, camera, microphone, and also loudspeakers) and software (Adobe Illustrator, Adobe Premiere, and Adobe After Effects); 2) determining the learning objective; 3) preparing the learning materials, texts, videos, images, and animations; 4) developing a storyboard; and 5) providing the video script.

At the development stage, the researchers developed the product. The designed product was reviewed by four experts (a content expert, a design expert, a learning media expert, and a practitioner or coach). These experts were asked to fill in the Likert-scale questionnaire consisting of items that should be included in the tutorial video. Comments related to the video revisions were also given by the experts. At the implementation stage, the developed product was implemented in individual and small group trials. Individual field trials involved three students from physical education and health. They consisted of one student with high academic achievement, one student with moderate learning achievement, and one student with low learning achievement. The information about their learning achievement was obtained from the lecturer who taught them sepak takraw. In similar vein, a small group field trial involved six students: two were those with high academic achievement, two were students with moderate academic achievement, and the other two were those with low learning achievement. At the evaluation stage, the researchers saw whether the developed product had met the predetermined objective or not. The overall phases of conducting the research are shown in Figure 1.
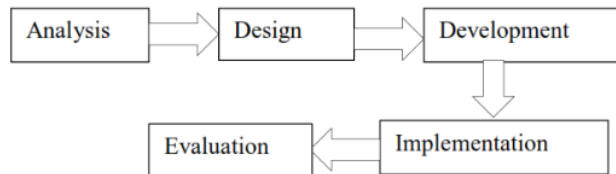

Figure 1. The Phase of ADDIE Model

In this research, data were collected from the analysis stage, the development stage, and the implementation stage of the ADDIE model. At the analysis stage, data were gathered by distributing an open questionnaire to 40 students who were taking a sepak takraw course and by interviewing a sepak takraw lecturer. The questionnaire was about the students' needs in learning sepak takraw. The questionnaire was created via Google Form and sent via a class WhatsApp group. At the development stage, data were gained from distributing a 5-point Likert scale questionnaire and interviewing four experts (a content expert, a media expert, a design expert, and a professional practitioner). The data from the interviews was used to support the questionnaire data as well as to seek suggestions for the improvement of the developed product. At the implementation stage, data were obtained from distributing likert scale questionnaires to the subjects of the study (3 students in individual trials and 6 students in small group trials). This was a closed questionnaire consisting of their judgment about the developed product. Besides, the researchers also used an open

questionnaire to gather their attitudes towards the developed product. These questionnaires were distributed via Whatsapp. Further, the data collected from the questionnaire and interview were analyzed differently. The data obtained from the questionnaire were analyzed quantitatively using a 5-point Likert scale, while the data obtained from the open questionnaire and interview were analyzed and described qualitatively.

RESULTS AND DISCUSSION

This section reports how video tutorial-based learning media on sepak sila for students taking a sepak takraw course was developed by following the ADDIE model. The results are presented following the stages of the ADDIE model. The results of the study are then discussed in the discussion session. Each of which is described below.

Analysis

This stage focused on digging up the needs of students in learning sepak takraw. To find data, one sepak takraw lecturer was interviewed, and forty students were given an open questionnaire. Having analyzed the data, it was found that a) students' ability in performing the sepak takraw passing technique was low; b) students were demotivated to learn through Zoom meetings; and c) limited video resources were available for students to scaffold them in practicing the passing techniques appropriately. Fortunatelly, the results of the environmental analysis show that some facilities, tools, devices, and human resources were available to assist the researchers in conducting the research. These results are similar to the research findings of (Suwiwa et al., 2022).

Design

At this stage, the activities conducted were: a) determining the hardware and software used. The hardware used were a laptop/computer, camera, microphone, and loudspeakers, and the software used was Adobe Illustrator, Adobe Premiere, and Adobe After Effects. b) determining the learning objective, in which, after watching the tutorial video, the students were expected to be able to perform the sepak sila skill appropriately; c) preparing the learning materials, including texts, videos, images, and animations; d) developing a storyboard; and e) providing the video script.

After preparing the tools and materials needed, the video tutorial began to be designed by following some steps, namely: (a) developing the flow of information in the video. The first flow was an opening containing the identity of the university and the study program. The second flow was the title of the video tutorial and the creator. The third flow was a speech with learning indicators and learning objectives. The fourth flow was the presentation of the history of sepak takraw and the basic techniques of sepak sila. The fifth is the content of the video tutorial, namely the basic techniques of sepak sila. The sixth is conclusion and closing; (b) developing the content of a video tutorial. The video tutorial contains the history of sepak takraw, the basic techniques of sepak sila starting from the initial position, the right poses and postures during the implementation of the technique, and the final position. The design used in displaying the movement is: (a) displaying text and dubbing; (b) shooting and editing the video tutorial.

The video tutorial for the basic techniques of sepak sila for sepak takraw was taken at the indoor sports building, and the editing application used in creating this video tutorial was Adobe Premiere; and d) designing front, back, and background views. The front view design was the background of the campus, with animations showing universities, majors, and study programs; the background when explaining the speech, learning indicators, and learning objectives was the model's picture when she was performing the basic techniques of sepak sila in the sepak takraw game at the Campus Sports Building; and the background design used during the video tutorial was a blue background, an animated cover design showing the identity of the university, department, and study program, as well as the background of the campus.

Development

To develop the designed video tutorial, the video was then reviewed by four experts (a content expert, a media expert, a design expert, and a professional practitioner). They were given a 5-point Likert scale and were interviewed. The result of the review from each expert is described below.

Review result of the content expert

The aim of the content review was to ensure the content of the developed video tutorial contained the expected learning materials, which could help students master how to perform sepak sila appropriately. The content expert was a sepak takraw lecturer at one of the state universities in Bali, Indonesia. He has been teaching sepak takraw for more than 10 years. Data from the questionnaire is presented in Table 1.

Table 1. Review Result from the Content Expert

No.	Statement	Score
1	The learning material is in line with the learning competency	5
2	The learning material is in line with the learning indicator	5
3	The learning material is in line with the basic learning	5
4	The content of the learning material is delivered in details	4
5	The tutorial created in the video is well understood	5
6	The information ilustrated by the pictures in the video is delivered clearly	5
7	The learning material delivered by the model is clear	5
8	The intonation used by the model in delivering the learning material is appropriate	4
9	The sentences used by the model in explaining the learning material are effective	3
10	The language used by the model is communicative	5
11	The video tutorial is in line with the learning material	5
12	The learning material is in line with audio, video, dan text in the video tutorial	5
13	The learning material explained by the model is well understood	4
14	The video tutorial can enhance students's knowledge and skills on sepak sila	5
15	The video tutorial can improve students' learning achievment	5
	Total	**70**

From Table 1, it can be seen that the total score of the video tutorial from the content expert was 70, and the average score was 4,6. This indicated that the validity of the content of the video was very good and that it was feasible to be used. Even though the content was very good, the content expert added comments regarding things to revise. In the interview, he suggested that the texts written in the video should have been in line with the dubbing. Here is the excerpt: "If the model says two, the number should also appear in the video. This is to avoid confusion and to be consistent" (interview, content expert). Following his suggestion, the product was revised.

Review result of the design expert

The aim of the media review was to ensure the flow and design of the information in the video tutorial were acceptable. The video tutorial was reviewed by a lecturer in the Informatics Engineering Education Study Program at one of the state universities in Bali, Indonesia. The result of the media review is presented in Table 2.

Table 2. Review Result from the Design Expert

No.	Statement	Score
1	The instruction in the video tutorial is clear	5
2	The presentation of the learning material is appropriate	5
3	The presented learning material is clear	4
4	The color used is appropriate	5
5	The font used is appropriate	5
6	The presentation of texts and pictures is interesting	5
7	The position of each component in the tutorial video is appropriate	5
8	The sentences written in the video is well understood	5
9	The grooming of the model in the video is appropriate	5

No.	Statement	Score
10	The pictures used in the video is in line with the students' characteristics	5
11	Thetutorial video is easy to carry/practical	5
12	The tutorial video is easy to save	5
13	The treatment of the tutorial video is simple	5
14	The tutorial video is easy to access	5
15	The tutorial video can be watched or learned any time	5
16	The tutorial video is packaged in DVD	3
	Total	**77**

From Table 2, it can be seen that the total score of the video tutorial from the design expert was 77, and the average score was 4,8. This indicated that the design validity of the video was very good and that it was suitable to be used. To improve the product, the design expert suggested adding one more section consisting of the conclusion part displayed in texts.

Review result of the learning media expert

The aim of the review by the learning expert was to ensure that the designed tutorial video was appropriate and interesting so that it could arouse students' motivation to learn the sepak takraw basic skills. The learning media expert was reviewed by a lecturer of the Informatics Engineering Education Study Program in one of the state universities in Bali, Indonesia. The result of the learning media review can be seen in Table 3.

Table 3. Review Result from the Learning Media Expert

No.	Statement	Score
1	The display of pictures and video in the tutorial video is clear	5
2	The audio is clear	5
3	The texts are easy to read	5
4	The combination of videos, pictures, and texts is neat	5
5	The position of the shooting video is effective	5
6	The background of the tutorial video is in line with the learning material	5
7	The video tutorial can enhance students' motivation to learn	5
8	The backsound of the tutorial video is appropriate	4
9	The pictures are in high resolutions	5
10	The tutorial video is smooth to use	5
11	The texts, pictures and videos are well understood	5
12	The texts, videos, and pictures are in line with the students' characteristics	5
13	The tutorial video is easy to acces	5
14	The tutorial video can be used repeatedly for the learning process	5
15	The tutorial video is practical	5
	Total	**73**

From Table 3, it can be seen that the total score of the video tutorial from the design expert was 73, and the average score was 4,8. This indicated that the validity of the video from the learning media aspect was very good and that it was suitable to be used. From the interview, the learning media expert had no suggestions. He commented that the learning media were very good and could be continued to be tried out.

Review result of the professional practitioner/sepak takraw coach

The purpose of the review by the practitioner was to gain the practitioner's judgment on whether the developed product was feasible to use or not. The practitioner was a sepak takraw coach. He has been coaching for more than 15 years and was also a sports teacher. The result of the review is presented at Table 4.

Table 4. Review Result from the Practitioner

No.	Statement	Score
1	The display of the pictures and the video in the tutorial video is clear	5
2	The audio is clear	4
3	The movement showed by the model in performing techniques is appropriate	5
4	The combination of video, pictures, and texts is neat	5
5	The position of shooting the video is effective	5
6	The background used in the tutorial video is in line with the learning material	5
7	The movement shown by the model is clear	5
8	The backsound of the tutorial video is appropriate	4
9	The pictures used are in high resolutions	4
10	The tutorial video is smooth to use	5
11	The texts and the pictures are well understood	5
12	The texts, videos and pictures are in line with the students' characteristics	5
13	The tutorial video is easy to access	5
14	The tutorial video can be used repeatedly for learning process	5
15	The tutorial video is practical	5
	Total	**71**

From Table 4, it can be seen that the total score of the video tutorial from the design expert was 71, and the average score was 4.7. This indicated that the validity of the video was very good and that it was appropriate to be used. From the interview, he appraised the product and suggested continuing to the implementation stage. He had no suggestions for revising the product.

Implementation

At this stage, the developed product was tried out. In this research, the trial was conducted twice: once as an individual trial and once as a small group trial. The subjects for the individual trial were three students from class A (a student with high achievement, a student with moderate achievement, and a student with low achievement). The subjects for the small trial were six students from classes A and B (two students with high achievement, two students with moderate achievement, and two students with low achievement). They were taught by using the developed product, and after experiencing the tutorial video, they were given a questionnaire to be filled out. The results of the data analysis showed that the average score was 4.88. It means that they had a positive opinion of the tutorial video. Their positive judgment was also strengthened by their comments on the open questionnaire, in which they indicated that they perceived the tutorial video positively. Their comments can be seen in Tables 5 and 6, respectively.

Table 5. Students' Perception Toward the Tutorial Video in Individual Trial

No	Student (S)	Comment
1	S1	The video is good. It can enrich my knowledge and skill to perform sepak sila
2	S2	The video is interesting. The audio, pictures, and animations are good. The voice of the model is clear. I feel motivated to learn the skill
3	S3	I struggled to practice before, but now this media can help me a lot. I can watch and rewatch, even I can pause to follow the tutorial so that I can perform sepak sila better

Table 6. Students' Perception Toward the Tutorial Video in Small Group Trial

No.	Student (S)	Comment
1	S1, S3	The tutorial video is easy to understand
2	S2	The tutorial video really helps me a lot. The explanation given by the model is clear. I can practice sepak sila and perform it better
4	S3	I am not good at sepak takraw. The skills are hard to practice. But, watching the movement showed by the model in the video, I can follow the movement and practice the skill. I am sure, my skill will be improved
5	S5	The spirit showed by the model really fire my spirit too. I love how she showed the skill, it's easy to follow
6	S6	The texts and video are in a good combination. They both help me to understand the skill

Evaluation

At this stage, the researchers have studied and addressed all the feedback and comments provided by the experts and students during the review and trial. Some revisions were performed to improve the quality of the product and ensure that it could achieve the predetermined learning objective.

The result of the study shows that the tutorial video that was developed to facilitate students in learning the sepak sila skill was considered a very good product. This was validated by four experts. In addition, the product had been tried out by students, either in individual trials or small group trials. The students perceived the product positively, and all of them stated that the developed product could help them learn sepak takraw. This indicates that the purpose of developing the product has been achieved. This study supports a study conducted by Suwiwa et al. (2022), that learning media in the form of videos are needed to be developed, especially in distance learning. This can provide an alternative or solution for students who have limited internet access. In addition to this, the use of video in this digital age has adapted with the world's changes, in which teaching practices are also shifting from offline to online. Thus, Escamilla-Fajardo et al. (2021) argue that integrating technology into the teaching and learning process is highly needed.

According to Pane et al. (2018), Video is a learning medium that can stimulate students' thoughts and feelings so that they can be engaged and involved in the learning process. It is not only a tool for the lecturers to deliver the learning materials but also a medium for arousing students' interest and motivation in learning (Koekoek & Van Hilvoorde, 2019). In so doing, the learning material can be well understood and well achieved by the students. As revealed in this research finding, the students who had used the tutorial video acknowledged that the video learning media could help them to understand the learning material, that is, sepak sila, and that their performance on sepak sila was improved. This was because the learning material was clearly explained by the model. In addition to the clarity of the explanation, one interesting finding is that the spirit of the model also boosted their motivation to learn the skill. This supports Carmichael et al. (2018) argument about the role of the model/presenter in the educational video, in which the voices, postures, facial expressions, and even the movement shown by the model can affect students' emotions. The more positive the verbal and non-verbal cues used by the model, the more positively the students receive the message, and the more motivated the students will be.

Besides the existence of the model, which delivered and clearly showed the movement of the skill, the research findings also reveal that the combination of text, audio, and video is very good. As a result, this also attracted students' attention and motivation to watch and learn the skill. The various multimodal elements used in the video bring positive emotions to the students, who are happy and enthusiastic to watch the video. Besides, these elements also accommodate all students' learning styles. Where the learning media meets with their learning styles, their motivation is increased and their learning achievement can be well achieved (Billah & Yazid, 2020). The use of video is also believed to enhance students' autonomy (El-Sabagh, 2021) and provide a flexible, adaptive classroom (Jimola & Ofodu, 2021). It is also proved in this study that the students were happy to have the tutorial video as they could watch it anytime and anywhere, rewatch it, or play it repeatedly and pause it based on their needs to make sure that they could perform the skill appropriately. Even a student with low performance admitted that by using this technique, he could gradually perform the skill better. This means that the tutorial could help the students adapt to the changes in the teaching and learning process and manage themselves to become autonomous learners.

CONCLUSION

The paper has presented the process of developing a tutorial video to facilitate students learning of sepak takraw basics, particularly sepak sila. The product was developed by following the ADDIE model. After the product was designed, it was reviewed by four experts (a content expert, a design expert, a learning media expert, and a practitioner) and implemented in individual and small group trials. Based on the review and the field trials, the developed product was feasible to use, as the average score was 4.7 (very good). The students also perceived the developed product positively, in that they acknowledged that it could enhance their motivation to learn and that it was easy to follow. In so doing, their performance could be enhanced.

Considering that the use of this video tutorial is beneficial for the students, it is suggested for sepak takraw lecturers to apply this learning media to help students, especially the low-performing students and those that need flexible learning. By following the step-by-step guidance, gradually the students' skills can be improved. Even though the study has provided a pedagogical contribution, this research still has limitations. In this study, due to time constraints, the testing of the developed product was limited to a small group. Thus, to extend the scholarship of the study, further research can be conducted to find the effectiveness of the developed product towards students' sepak takraw skills. Since the availability of tutorial videos is still limited, it is also suggested that further researchers conduct similar studies in sports areas to explore the application of the ADDIE model for developing video learning media in depth.

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CONFLICT OF INTEREST

The authors declared that there were no conflicts of interest in writing this article.

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