Development of Dance Learning Media - Based on Interactive Video for Children with Special Needs

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Abstract. Dance for students with special needs has a function as a stimulant for kinesthetic intelligence and motor development of children. In addition, dance for children with special needs can also be used as a therapeutic medium because of its pleasant characteristics through body movements. So it is important to learn dance for children with special needs. This research will develop interactive video-based learning media using 4D research types (define, design, develop and disseminate). The interactive video was chosen based on an analysis of the needs of special school teachers and an analysis of teachers in communities of children with special needs in Lampung province. The interactive video contains two dance learning methods for blind children, namely the touch and move method and the 'austruk' method as well as a direct practice video by students. The video is also equipped with clear images and sound to facilitate the learning process. Based on the results of the validation test, practicality test and effectiveness test, this learning media is said to be suitable for use in dance lessons for children with special needs, namely the blind.

Keywords: learning media · interactive video · children with special needs

1 Introduction

An extraordinary school is an educational unit in which learning is carried out for children with special needs. Children with Special Needs are given learning to have skills. According to the National Education System Law number 20 of 2003, education for children with special needs is the provision of education for students with disabilities or extraordinary intelligence that is held inclusively or in the form of special education units at the elementary and secondary levels.

The implementation of learning in Special Schools is carried out by providing lessons like other public schools. Education is given while taking into account the three domains, namely knowledge (cognitive), attitude (affective) and psychomotor (skills). Although the three domains are still adapted to the characteristics of children with special needs. One of the areas that trains the creativity of children with special needs is the psychomotor domain or student skills in a field, such as art.

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Dance is not only used as a subject for children with special needs, but can also be used as a therapeutic medium because of the pleasant characteristics of dance through body movements. According to Oritz, learning dance has benefits which is good for increasing body sensitivity, motor skills and self-coordination. Through dance can also grow children's confidence level.

Kinesthetic intelligence is one type of intelligence that may be owned or processed to be owned by students, including students with special needs. Gardner [1] says that kinesthetic intelligence is the ability to use the body skillfully to express ideas or thoughts and feelings, able to work well in handling and manipulating objects. In other words, kinesthetic intelligence is a synchronization system of commands from the brain to the body to be able to move, remember a special movement and also make movements based on certain objects. Dancing is one of the media to train the kinesthetic intelligence.

There are several special schools in Lampung which are spread from the provincial capital to several other cities and regencies. These schools are also classified into several types according to the type of children with special needs such as SLB type A, type B and also C. Based on the results of the pre-study, information was obtained that the school and community are aware of the role of dance for children with special needs, but the obstacles that arise so far this is happening in the field of teaching staff. There are no teachers who really have a dance education background so that dance lessons are taught by other teachers with improvised methods and implementation. There is a gap between the situation in the field and the desire that should be achieved through dance education for children with special needs.

This study develops dance learning media for children with special needs with the type of blindness. Blind people are types of children who have limitations in their visual system. Learning for children with special needs must be adapted to the characteristics of their needs, therefore this interactive video is made to adapt these characteristics, this is in line with the understanding that interactive videos contain practical guidance on target, which are presented through audio-visual presentations (images and sounds) equipped with with a guiding voice in Indonesian that is clear and easy to understand and packaged well [2].

This research is a development research that will create an interactive video containing dance learning materials for children with special needs which will contain appropriate learning methods, models and techniques for blind students.

2 Methodology

This research is a type of research and development. Development research is oriented to the development of learning media products [3]. This study aims to obtain an interactive video-based application that contains dance lessons for children with special needs, namely the blind.

The method used at the stage of the development procedure is [4]:

(1) Needs analysis in the form of gathering information related to learning in blind children, teacher needs and student needs.
(2) Learning design in the form of analysis and determination of subject matter, making product designs.

(3) Production/development of media in the form of collecting, inserting and combining materials such as materials, images, animations, photos, audio, and others in accordance with the material to be used in accordance with the planned design.

This research was conducted at SLB A Bina Insani Bandar Lampung. The research outputs after producing interactive video-based learning media products that contain two methods of learning dance for blind students, as well as learning video tutorials. The measurable achievement indicator in this study is an interactive video product containing dance lessons for children with special needs (blindness), to improve valid, practical and effective higher-order thinking.

In this study, the 4-D learning media development method was used. In the 4D method there are 4 stages, namely define or stages of analyzing media needs, then the Design stage which at this stage is the stage of determining what will be displayed on the learning media. The next stage is Develop, which is the development stage which also contains media validations from experts or validators. The last stage is Dessiminate or the dissemination of learning media.

3 Literature Review

Media in the form of interactive videos containing practical guidance on target, presented through audio-visual presentations (images and sound). In interactive learning videos, there is an interaction or reciprocal relationship between the user and the media itself. The interactive video media that has been developed will be disseminated using the YouTube platform, which is one of the easiest platforms to access and close to everyday life. So that this media can be used for the implementation of learning for children with special needs.

Learning dance for children with special needs (tunaghanda) has the result that by providing dance lessons for children with special needs, it can have a positive impact on children's development both socially, emotionally, motorly, and linguistically. Learning for children with special needs must be adapted to their character.

In addition to training the intelligences mentioned above, learning dance for children with special needs is also in line with Howard Gardner's Multiple Intelligence theory. One of the many intelligences according to Gardner is kinesthetic intelligence. Kinesthetic intelligence is one type of intelligence that may be owned or processed to be owned by students, including students with special needs.

Gardner [1] says that kinesthetic intelligence is the ability to use the body skillfully to express ideas or thoughts and feelings, able to work well in handling and manipulating objects. In other words, kinesthetic intelligence is a synchronization system of commands from the brain to the body to be able to move, remember a special movement and also make movements based on certain objects.

Dancing is one of the media to train the kinesthetic intelligence. Kinesthetic intelligence is good for children with special needs, because it can balance the right brain and left brain. Besides that, being kinesthetically intelligent through dance can also stimulate children's motor skills. Children with special needs tend to passively move in some parts of the body, and dance serves to activate these passive limbs. So that dance learning for children with special needs is important to implement.

Based on the results of a pre-research that was carried out in 2021 on dance lessons at the Bina Insani SLB Bandar Lampung, the results showed that teachers were still confused about implementing art learning for children with special needs. This is due to the shortage of teaching staff with an art education background.

The current teachers are teachers of children with special needs, not teachers of arts and culture or even volunteers who do not have a teacher background. Previously there were several learning media in the form of videos, but there were no learning videos specifically for children with special needs or in this case blind children.

The available audio-visual media is only a dance video, not a tutorial video learning to dance. So we need a learning media which contains video tutorials for dance learning whose models and learning methods are specifically for blind children. The learning media that will be made are media that can be used by all teachers with special needs, both in schools, studios or the general public. Based on the needs analysis from the pre-research results, the media created is an interactive learning video that will be socialized on the youtube platform.

4 Using the Template

The research on the development of interactive video-based dance learning media for children with special needs was carried out in accordance with the process of developing learning media. These processes include:

A. *Difene Stage*

The first step in this research is to collect information. The information collected is in the form of an analysis of the needs of teachers of children with special needs in Lampung, an analysis of the needs and characteristics of students, and other supporting factors that help carry out learning. Based on the results of interviews with the head of SLB A Bina Insani Bandar Lampung, it was found that art learning, especially dance at school, is usually only carried out when there will be a dance competition. So that students do not get dance lessons that are useful for their kinesthetic intelligence.

The next analysis is about students with special needs or in this case blind students. Children who have this type of privilege cannot do dance lessons with the demonstration method. So it is difficult to teach dance forms like school students in general.

The analysis is used as the basis in the process of developing learning media. After conducting research on dance learning with children with special needs, two methods were formulated in learning dance for the blind children. The first method is called touch and move, the name is taken from the activities carried out during the learning process. The teacher will touch the student's body part, and the student will make the movement according to his wishes on the touched body part. This method is not to learn one particular dance, but to activate the body that is rarely moved through dance movements.

The next method is named Austruk, namely Instructional Audio. The teacher acts as a giver of instructions to students through words (audio). Audio in this method can also be interpreted as a song used to stimulate the child's body to move. In this method, dance forms can be applied, but still have a very simple level of movement difficulty.

Fig. 1. .

Fig. 2. .

B. *Design Stage*

At this stage, the first thing to do is to determine the concept of the learning media to be made, namely the media in the form of interactive videos.

The design of the video includes:

1. Video opened by animasi "Mentari" atau Media Dance Learning. Besides being a visual display, this opening video will also be filled with voices who will introduce "Mentari" and explain dance lessons for children with special needs or the visually impaired. This is done to provide an explanation to the audience about the contents of this video (Fig. 1).
2. Next, the video will be continued with a dance learning tutorial using the touch and move and austruk methods. In the visual display, there will be one tutor demonstrating the method. In addition, there is also one student who will immediately apply the method (Fig. 2).
3. This interactive video-based learning media is followed by direct dance practice by students, based on the methods they have learned (Fig. 3).
4. The learning video is closed with closing words accompanied by animated pictures.

Fig. 3. .

Table 1. Validator's Assessment of Content

No.	Indicator	Aiken's V	Category
1.	Indicator 1	0,867	Valid
2.	Indicator 2	0,833	Valid
	Total		0,85

C. *Development*

After the design stage is complete, the next stage is the development stage. This stage aims to produce valid, practical and effective interactive video-based learning media. This development stage contains an assessment of media and material validation by the validator and a practicum assessment by the teacher. In addition, tests were conducted to determine the effectiveness of the developed learning media.

This media validation test phase was conducted to determine the feasibility of developing learning media based on the assessment of media content, media presentation and media formats.

This validation activity was carried out with the aim of obtaining valid status from experts, which then this learning media could be used and disseminated to teachers in special schools throughout Lampung Province.

The results of the validators are used as material to revise the media that has been developed, the following is an analysis of the questionnaire data from the results of the validation test.

1) *Content Validation*

The validators chosen to validate the contents of this learning media are learning media experts. Getting results about whether or not the learning media is valid can be seen in the Table 1.

Based on the Table 1, it can be said that the assessment of content on interactive video-based dance learning media for children with special needs is valid with an AIken's V value of 0.85. In the first indicator the value of Aiken's V is 0.867 with a valid category.

Table 2. Validator's assessment of the learning media format

No.	Incicator		AikensV
1	Navigation	0,87	Valid
2	Convenience	0,81	Valid
3	Writing		0,85
4	Appearance	0,87	Valid
	Total		0.83

Table 3. Validator's Assessment of Media Presentation

No	Indikator	Aiken'sV	Category
1	Indicator 1	0,833	Valid
2.	Indicator 2	0,917	Valid
	Total		0,9

The second indicator with a value of Aiken's V is 0.833 with a valid category, and the sum of the two indicators is 0.85 with a valid category.

2) *Media Format Validity*

At this stage, the selected validator is a validator who is competent in learning media. The validation results regarding the media format can be seen in Table 2.

Based on the Table 2, it can be said that the design assessment on the learning media is valid with the Aiken's V value of 0.83. In the first indicator the value of Aiken's V is 0.87 with a valid category. The second indicator with the aiken's V value of 0.81 with a valid category, the current indicator with the aiken's V value of 0.85 with a valid indicator and the fourth indicator with the aiken's V value of 0.87 with a valid indicator.

3) *Media Presentation Validation*

The validation stages of media presentation on interactive video-based dance learning media for children with special needs underwent several improvements based on suggestions from the validator which can be seen in Table 3.

Based on Table 3, it can be concluded that the assessment of media presentation is valid with a value of Aiken's V of 0.9. The first indicator aiken's V value is 0.833 with a valid category and the second indicator aikens' V is 0.917 with a valid category. Based on the suggestions given by the validator, the media was revised so that valid and appropriate learning media were obtained.

Table 4. Practical Assessment by Teachers

No	Respondent	Percentage	Category
1	Validator 1	93,29%	Very Practical
2	Validator 2	94,72%	Very Practical
	Total	94,05%	Very Practical

4) *Practical Test*

This stage is carried out with a report test to determine the level of practicality of the learning media that has been developed. Practicality test data were obtained from filling out a questionnaire about the practicality of the media. Respondents who assessed the practicality were the special school teachers in Bandar Lampung.

The teacher's response to the practicality of interactive video-based dance learning media for children with special needs was obtained from practical data through a questionnaire filled out by the teacher. The data is then analyzed to draw conclusions about the level of practicality of the media.

Based on the results of the analysis, the practical value of learning media is 94.05% which, if interpreted in terms of practicality, can be said to be very practical.

It can be concluded that this interactive video-based dance learning media for children with special needs can be useful for teachers and practical to use. Table 4 shows the data on the practicality assessment by the teacher.

Based on the Table 4, it can be concluded that the teacher's practical assessment of the learning media is very practical with a percentage value of 94.05%. The first validator has a percentage value of 93.29% with a very practical category and the second validator has a percentage value of 94.72% with a very practical category.

The results of data analysis show the results of the practicality of this learning media of 85.20% which if interpreted with a practical level, it can be said that this media is very practical. Thus, it can be concluded that the interactive video-based dance learning media for children with special needs is very practical for students to use in the learning process.

5) *Effectiveness Test*

The effectiveness of using this learning media is determined by looking at the learning achievement. Achievement is seen by the indicator of whether the blind student can move according to the provisions of the given method.

To show whether it is effective is by means if the percentage of classical mastery of the test subject students is greater than or equal to 85% then this learning media can be said to be effective, but if on the contrary if the mastery is below 85% then this media can be said to be ineffective. The results of students' classical test calculations can be seen in Table 5.

Based on the data from Table 5 regarding the effectiveness analysis, it was found that from a total of 10 students there were 8 students who were able to graduate from

Table 5. Results of Effectiveness Analysis Based on KKM

N	10
Maximum score	86
Minimum score	65
Range	3,096

Table 6. Results of Pretest Data Analysis

N	**Min.**	**Max.**	**Mean**	**Std.D**
Pretest	30	44	80	70
	10,167			
Valid N	10			

Table 7. Hasil Analisis Data Postest

N	**Min.**	**Max.**	**Mean**	**Std. D**
Pretest	30	64	88	8
	6,101			
Valid N	10			

the KKM and have a score >= 85 in this case it also means that the graduation rate of students reaches a value of 85% and >85%. Thus it can be concluded that interactive video-based dance learning media for children with special needs used by blind students at SLB A Bina Insani Bandar Lampung is effective to use.

Effectiveness in terms of the difference in the results of the pretest and posttest. The data obtained based on the initial test to blind students were analyzed using SPSS 16, to obtain results regarding the distribution of data, the average value and standard deviation of the data obtained. These results can be seen in Table 6.

From the results of the above data analysis using the SPSS 16 program, the following results were obtained, namely: the average value of the students was 69.8 and the highest score was 71 and the lowest value was 60. From these data, the standard deviation was 10.167. This data is initial data from students before learning to use android-based bedana dance learning media.

After students use the new media and take the test, the data is obtained which is then also processed in SPSS 16, to determine the distribution of the data, the average value and the standard deviation of the data obtained. These results can be seen in Table 7.

Based on the results of data analysis using the SPSS 16 program, the following data were obtained, the average value obtained by students was 88, with the highest score of 89 and the lowest score of 70. The standard deviation value of the posttest was 6.101.

Table 8. Gain Score Test Results

Resp.	Pretest	Postest	Gain Score	Category
Total	1852	2456		
Average	77	86	0,53	Sedang

Table 9. T Test Results

Independent Samples Test							
Levene's Test for Equality of Variances		t-test for Equality of Means					
F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
						Lower	Upper
10.674	.002	9.300	58	.000	20.133	2.165	15.800 24.467
		9.300	47.488	.000	20.133	2.165	15.779 24.487

The next test is a gain score test, this test is used to see the increase in student learning outcomes. Which can be seen in Table 8.

Data from Table 8 concludes that the use of interactive video-based dance learning media for children with special needs has been effective. This can be seen from the results of the gain score, which on average is 0.53 in the medium category.

The t-test is a test to determine the significance of the effect of the independent variable on the dependent variable individually and considers the other dependent constants. The criteria for decision making are as follows:

1. If the significance is (0.05), then Ho is rejected and Ha is accepted
2. If the significance of (0.05), Ho is accepted Ha is rejected. The calculation of the tcount value is carried out using SPSS version 16. The results of the analysis for tcount can be seen in Table 9.

Based on the results of data analysis using SPSS 16, it can be seen that the t arithmetic value is 9.300 > t table 1.697 and the significance value is 0.00 which is smaller than 0.05, it can be concluded that there is a significant difference between the pretest and posttest. Posttest learning outcomes are better than pretest learning outcomes, this can be seen through the average posttest results which are greater than the pretest. Thus, it can be concluded that the interactive video-based dance learning media for children with special needs is effectively used in SLB A Bina Insani Bandar Lampung.

5 Conclusion

Based on the results of research on the development of interactive video-based dance learning media for children with special needs that has been carried out, the following conclusions are obtained:

a. The development of interactive video-based dance learning media for children with special needs is carried out through needs analysis by students and teachers. Then through the stages of development, design and evaluation.
b. The learning media validation test states that this learning media is valid to use.
c. The practical test of the video based dance learning media as a supporting medium for independent learning states that the learning media is practical.
d. Testing the effectiveness of the video based dance learning media as a supporting media for independent learning states that the learning media is effective, this is evidenced by the increase in student learning outcomes.

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