



Designing Interactive Audio-Visual Instructional Media Based On Value Clarification Technique (VCT)

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ABSTRAK

Minimnya media pembelajaran yang berkualitas yang dilengkapi dengan pendekatan yang tepat pada mata pelajaran pendidikan keagamaan Buddha berdampak pada keberhasilan dan prestasi belajar siswa yang tidak optimal. Penelitian ini bertujuan untuk menciptakan dan menganalisis kelayakan media pembelajaran audio-visual interaktif berbasis VCT pada materi candi-candi Buddha di Indonesia. Metode yang digunakan dalam penelitian ini yaitu metode penelitian dan pengembangan model ADDIE. Teknik pengumpulan data dengan memberikan kuesioner kepada ahli media, ahli materi, guru dan siswa. Analisis data menggunakan analisis deskriptif persentase dan deskriptif kualitatif. Hasil penelitian menunjukkan kelayakan produk yang dapat dilihat dari analisis angket dengan rata-rata skor hasil validasi media pembelajaran oleh ahli materi dengan nilai 82,5% dengan kategori sangat layak, hasil validasi media oleh ahli media dengan nilai 89% dengan kategori sangat layak, hasil akhir uji penggunaan media oleh guru dengan nilai 86,6% dengan kategori sangat layak, dan hasil akhir uji penggunaan media yang diberikan pada 29 siswa menunjukkan 25 siswa (86%) menyatakan media sangat layak digunakan sementara 4 siswa (14%) mengungkapkan media pembelajaran layak digunakan. Sehingga dapat disimpulkan bahwa media pembelajaran yang disusun valid dan sangat layak untuk digunakan dalam pembelajaran pendidikan agama Buddha pada materi candi-candi Buddha di Indonesia.

ABSTRACT

The minimum quality of instructional media which is completed with appropriate teaching method on Buddhist religious education subject impacts towards students' learning achievement. This study aims to create and analyze the validity and feasibility of interactive audio-visual learning media based on VCT which focuses on material about Buddhist temples in Indonesia. The method used in this study is the research and development method by using ADDIE model. Data collection techniques were by giving questionnaires to media experts, material experts, teachers and students. Data analysis used was descriptive percentage and descriptive qualitative analysis. The results of the study indicate the instructional media is very feasible to use which can be seen from the questionnaire analysis with an average score of validation results by material experts is 82,5% which is included into very feasible, the results of media validation by media experts is 82,5% which is included into very feasible, the response of teachers towards instructional media compiled is 86,6% which is included into very feasible, and final result among 29 students response towards the media shows 25 students (86%) declare that the insructional media is very feasible meanwhile the rest 4 students (14%) argue that the media is feasible. In conclusion the learning media compiled are valid and very feasible to use in teaching Buddhist education about Buddhist temples in Indonesia.

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1. INTRODUCTION

Learning activities are designed to develop students' potential so that each teacher needs to develop an interesting instructional media (Choirunnisa, 2019; Saputri et al., 2018). Therefore, the presence of learning media can increase students' interest in teaching and learning and can help teachers in delivering material, it also will certainly facilitate teachers in teaching and learning so that teachers can choose the type of media that will used in accordance with the material (Aisyah & Haryudin, 2020; Marfuah et al., 2016). Instructional media will be very helpful in teaching and learning process, it affects students' motivation and achievement that can improve significantly (Amelia et al., 2021; Diner et al., 2021). Designing instructional media will ease teacher in

guiding students during teaching and learning process. In fact, teachers' innovation and willingness to conduct a specific learning media is still low. In the teaching and learning process, teachers are always required to provide new innovations so that students are able to gain new experiences in the teaching and learning process. Innovation in designing instructional media is needed so that the learning process becomes fun and interesting (Erna et al., 2021; Ristika et al., 2020). However, currently lots of teachers are less able to create a certain learning media or optimizing technology in instructional activity (Marfuah et al., 2016; Meidyanti, 2021; Miftah, 2014;). Innovation in teaching and learning process can be in the form of developing learning media and learning methods by using various technologies. The increase in the use of technology information and communication in education and training processes has enhanced its role in education and has made the use of technological tools indispensable in learning environments as in all areas of our lives (Kapucu et al., 2021; Ugur et al., 2021). In addition, the teacher has not used the learning media, the teacher still uses books and blackboards as learning media. Besides, the learning method used by most teachers is still conventional, namely the lecture method. This method is deemed no longer appropriate, this is unfortunate considering that in the era of information technology there are many software and hardware that can be applied as a means of developing learning media. Teacher must be able in mastering information and communication technology to develop an interesting learning media because teachers are the main actors in the class (Amelia et al., 2021; Ugur et al., 2021).

Teachers are demanded to be able to provide and use a variety of learning media such as books, modules, handouts, students' worksheets, powerpoint and charta which is in accordance with the material so that the teaching and learning process will be more effective and efficient (Abdullah, 2017; Ningsih et al., 2020). Nowadays development of information and communication technology should be used to create an effective, innovative, and efficient in electronic instructional media (Rustandi & Rismayanti, 2021; Salsabila et al., 2020). On the other hand, advances in technology have greatly impacted to the methods of delivering lessons in traditional classroom system, and also technology which has enhanced learning in areas such as medicine, agriculture, education, and engineering which can stimulate thoughts, feelings, and the willingness of students so that they can encourage the creation of a self-learning process learners (Chuks & Nebechi, 2016; Zaki & Yusri, 2020). Digitalisizing instructional media will help students anywhere and anytime because educational technology is argued as avenue by which students will gain knowledge needed in global economy (Daugherty et al., 2019; Lutfianto et al., 2021). The learning media used by a number of teachers are generally only simple media found in the classroom environment. Teachers have not implemented various existing learning media to support students' achievement. Developing an instructional media will improve the quality of teaching and learning process (Erna et al., 2021; Fitriyah et al., 2021; Purwani et al., 2019). In developing the learning media, audio-visual approach can be used and it is proved significantly afford to enhance students' learning interest (Darihastining et al., 2020; Djannah et al., 2020). Interactive instructional media will help students' learning achievement and students' language skill (Apriliani et al., 2020; Islam, 2020; S et al., 2019). Development is carried out to create interesting learning media. Interesting media and learning methods will make it easier for teachers to increase students' motivation and understanding in absorbing learning materials. However, in practice not all teachers can develop learning Media. The ability and knowledge of teachers in the field of development is minimal, it makes difficult for teachers to innovate more. Educators in this case teachers who master the material have not been able to present a form of learning using computers as learning media.

VCT as a learning method can be used to be implemented in designing an instructional media. VCT has been proved afford to improve students' problem solving skill and students' affective skill (Fitriani & Sundawa, 2016; Hakim et al., 2018). The core of teaching and learning process is about improving students' learning achievement. Based on the study by (Setiawan, 2020; Suganti, 2017) VCT can be used to improve students' learning achievement. Based on the explanation, it needs a further study to know how VCT is used as a base affective learning method in designing an interactive audio-visual instructional media especially in Buddhist religious education. This is the gap that will be filled by this study. This study elaborate how to create an instructional media based on VCT teaching approach especially on the material about Buddhist temples in Indonesia. It is because there is no specific study which elaborates how audio-visual learning method is combined with VCT. Moreover to know the effectiveness of the instructional media, it is implemented to the participants either teachers and students. To know the quality of the instructional media, the researchers involved material experts and media experts.

2. METHOD

This research is a research and development. Research and development is a kind of research which focuses on designing a certain product and tried it out to know the validity and feasibility. In this research and development uses ADDIE model which has five activities namely: 1) analysing the core competence and basic competence as a base idea before designing product; 2) Designing the instructional media by compiling pictures, materials, videos, etc; 3) Developing instructional media by integrating pictures, materials, videos, exercises, and

so on into a complete instructional learning media which can be used in android or mobile phone; 4) Implementing the instructional media to the teachers, students, and experts; 5) Evaluating the designed instructional media by considering the suggestion from experts, teachers, and students. The subject of this research is the fourth grade Buddhist students in Jepara Regency with amounts of 29 students. They come from various elementary school in Jepara because not many school which has Buddhist students. The teachers who are involved on this research amount 3 teachers, meanwhile the material and media experts are 2 of each. The questionnaire instruments rubric can be seen at table 1,2, and 3.

Table 1. Validity Instruments of Material Experts

Aspect	Indicator	Item Number
Self-instructional	Common objectives and specific objectives	1,2,3,4,5,6
	Relevance among indicators, material, and learning activity	
	Relevance among exercises and quiz	
Self-contained	Material Completeness	7,8,9,10
	Material Arrangement	
Stand Alone	Material Independence	11,12
Adaptive	Material Flexibility towards Technology	13,14
User Friendly	Simply Used	15,16,17,18
	Simply and understandable language	

Table 2. Validity Instruments of Media Experts

Aspect	Indicator	Item Number
Organization	Well-Structured	1,2,3,4,5
	Completeness	
Attractiveness	Clarity of sound	6,7,8,9,10,11,12,13 14,15
	Simply used	
	Integrated Color	
	Relevance pictures and Videos	
Font and Size	Proportional letter comparison	16,17,18,19
	Appropriate font color	
	Consistency	
Consistency	Consistency of letter, pictures, text-space, lay out	20,21,22

Table 3. Feasibility Instruments for Teachers and Students

Aspect	Indicator	Item Number
Material Display	Simply instruction	1,2,3,4,5,6,7,8,9,10
	Relevance material	
	Ease to be understood	
	Material Completeness	
	Concrete Examples	
	Relevance Exercises and Quiz	
Media Display	Attractive Interface	11,12,13,14
	Ease to Use	
Learning using VCT	Experiencing VCT syntax	15,16,17
Advantages	Interesting	18,19,20,21,22,23,24 25
	Motivates	
	Simply Used	

The instruments that have been compiled are tested for validity and reliability. Validity and reliability tests were carried out using the Aiken validity method. The results of the validity test show that each item number of the validity test instrument for material experts, media, as well as teachers and students shows a value of more than 0.6 so it can be concluded that all question items are valid. Furthermore, the reliability test obtained a reliability value of 0.88 which is included in the very reliable category. Based on this, it can be concluded that the instrument compiled is suitable to be used to collect data. The data were collected through questionnaire which is given to the material and media experts, teachers, and students. Besides, Qualitative data in the form of criticism and suggestions put forward by material experts, media experts, teachers and students were collected to improve the product. Quantitative data obtained from the questionnaire was then converted into qualitative data with a scale of 5 (Likert scale) to determine the quality of the product with the following description:

Table 4. Data Conversion

Category	Data Conversion
Very less	1
Lack	2
Fair	3
Good	4
Excellent	5

After the data are analyzed then are interpreted based on the feasibility criteria as follows:

Table 5. Interpreted Data Based On Feasibility Product

Score	Criteria
81%-100%	Very Feasible
61%-80%	Feasible
41%-60%	Feasible Enough
21%-40%	Not Feasible
<21%	Not Feasible at all

3. RESULT AND DISCUSSION

Result

Research and Development was carried out by using ADDIE model. In analysing stages, researchers collect literature studies to find theoretical foundations to strengthen the developed product, conduct a review of content standards which include Competency Standards and Core Competencies in the elementary school curriculum, compile a grid of instruments that will be used to determine media interactive audio-visual learning based on the value clarification technique (VCT) in the study of Buddhist temples in Indonesia as well as conducting instrument validation. The result of analysing core competence and basic competence is presented in the following table.

Table 6. Analysis of Core Competence and Basic Competence

Core Competence	Basic Competence	Appropriate Media	Skill Demanded
Students' are able To describe Buddhist temples In Indonesia	Describe Buddhist temples in Indonesia and temples used for Vesakh celebration Present factual information about Buddhist temples in Indonesia and Temples used for vesakh celebration	Pictures, maps, globe Miniatur of temples Pictures, Videos, Miniatur of temples	Cognitive Affective, Psychomotor

Researchers decided to develop an interactive audio-visual learning media based on the value clarification technique (VCT) in the study of Buddhist temples in Indonesia based on several problems behind. The problems behind the idea of developing interactive audio-visual learning media based on the value clarification technique (VCT) in learning Buddhist temples in Indonesia is that the existing learning media has not been utilized in teaching and learning activities, so it makes the learning process monotonous and boring. Moreover, teachers have not used the learning media, teachers still use books and blackboards as learning media. The learning method used by most teachers are still conventional. Not many teachers can develop learning media. It might because of the ability and knowledge of teachers in the field of development are minimal. Teachers who master the material have not been able to present forms of learning using computers as learning media. The activities carried out in design stage are formulating strategies and technically making interactive audio-visual learning media based on the value clarification technique (VCT) on the material of Buddhist temples in Indonesia as a whole. The formulation of strategies and ways of technically making interactive audio-visual learning media based on the value clarification technique (VCT) on the material of Buddhist temples in Indonesia are through collecting pictures that support the content of the material. Then make a plot of the material for each slide. After that, performing rough design of image layout, background, VCT-based interactive construction, and text. In developing product, things that need to be designed are media covers that reflect the title and content materials, quizzes, and VCT construction series. The process of designing a product using the construct-2 application with the aim that the application created can be used on smartphones. Here are some figures showing how the instructional media is developed:



Figure 1. Home Interface of Media



Figure 2. Material Appearance of Media

On the first figure, it can be seen that the media consists of four major points those are competence, material, quiz, and creator profile. In this stage, the validation process is not carried out in product design, but in the finished product. This is because the interactive audio-visual based on the value clarification technique (VCT) on the material for Buddhist temples in Indonesia that was developed is valid and finds out the feasibility of interactive audio-visual based on the value clarification technique (VCT) on the material for Buddhist temples in Indonesia that was developed. and used. Media validation is carried out by material experts and media experts. The material expert 1 gives total score 84 meanwhile the second material expert gives total score 81. It means that the average score of material experts is 82,5% which means the instructional media is very feasible to be implemented. Moreover, from instructional media experts, the first expert gives total score 90 while the second expert gives total score 88 so the average score of instructional media experts is 89% which means the instructional media is very feasible to be implemented. On the implementation stages media that has been compiled and declared valid by experts be implemented in learning activities. This implementation activity was carried out in Jepara Regency with 3 teachers and 29 students involved. The students are Buddhist pupil of grade IV at elementary from various schools throughout Jepara Regency. The implementation of the media was carried out for 1 month according to the completion of the material on the subject of Buddhist temples in Indonesia. Teacher 1 gives total score 88 meanwhile the second teacher gives total score 85 and the third teacher gives total score 84. It means that the average score given by the teacher is 86,6% which means the instructional media is very feasible to use. Moreover, looking at the second figure from students response towards the instructional media, among 29 students 25 students (86%) argue that the product is very feasible to use meanwhile 4 (14%) students argue that the instructional media is feasible to use. In addition, there is still advice and suggestion from teachers and students for media improvement, namely: 1) learning media needs to be equipped with instructions for use. 2) quizzes should also be accompanied by an answer key so that students can find out the correct answer.

Discussion

The development of interactive audio-visual learning media based on VCT provides students with real experiences that are able to captivate students' interest and motivation so as to increase students' understanding. The use of the media-assisted VCT learning model can improve students' understanding in learning (Setiawan, 2020; Suganti, 2017). An instructional based on VCT learning model provides real experiences, stimulates students' thinking to be creative, student-centered, and creates meaning in life. The use of audio-visual media also improves the quality of teaching and learning and reduces verbalism so that through learning media teachers can more effectively achieve learning objectives. The group whose learning uses the VCT learning model is more active than the group that is taught using the conventional learning model which looks more passive. Learning using the VCT model encourages students to learn to analyze and good character because basically this model is able to develop students' affective potential and integrates with cognitive and psychomotor potential as well as other external potentials (Fitriani & Sundawa, 2016; Hakim et al., 2018). The VCT learning process is a learning model that is able to actively involve students in the learning process.

The development model with ADDIE approach is very relevant for designing audio-visual learning (Pradilasari et al., 2019; Rustandi & Rismayanti, 2021). Moreover, in designing a learning media should utilize with development of information communication and technology. One of the roles of ICT in teaching and learning process is as a medium to help teacher transferring information so that learning will be more interactive (Amelia et al., 2021; Meidyanti, 2021). The development of ICT and technology management have been affected in the use of instructional media either at school or others education institutions (Mendoza-Diaz et al., 2020; Muhson, 2010). Each teachers should design technological learning media to relay information and to communicate because one of the objectives of ADDIE is to know the effectiveness of a product (Maden, 2018; Suwito et al., 2021).

Learning media is one of the tools used in the teaching and learning process that can improve student learning success. Learning media and education in technology should be specially designed and provided by experiences of the effective appropriation for the different technological advances so that they are suitable for learning interests (Miftah, 2014; Molina-Vásquez, 2021). Instructional media which is completed with technological development are used as supporting tools in learning process to improve the effectiveness and efficiency in achieving learning objective (Gorgoretti, 2019; Saputri et al., 2018). Moreover, on the material it is not just in the form of written text but also the material from video either from youtube or any other sources which affords to help students to comprehend the material. Interactive and digital learning media can be learning medium with students' learning achievement and involves children's cognitive, affective, and psychomotor sides (Cheng & Weng, 2017; Suwito et al., 2021). The use of learning media in the learning process is carried out with various models. One of the models VCT. Through the VCT model students have good abilities in developing an attitude, it is because there is a dialog activities and teachers' partnership which can affect students' cognitive skill (Kenny, 2020; Theofilus, 2019). The VCT model is able to develop student attitudes (Hakim et al., 2018; Lifa et al., 2021).

4. CONCLUSION

Instructional media should be designed based on the characteristics of the material and students. Designing an instructional media is about recognising the students' learning behaviour which is so various in learning style and learning interest. VCT is appropriate to be used as a base of an instructional media to improve students' affective skill. VCT should be implemented for at least junior high school students. It can be concluded that designing an interactive audio-visual instructional media by using VCT afford to improve students' affective skill and students' learning interest.

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