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DIGITAL LEARNING MEDIA FOR CULTURAL ARTS CLASS-VII PROTOTYPE CURRICULUM INTEGRATED 6C AND TPCK

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Abstract

Indonesian education must improve, the Programme for International Student Assessment (PISA) is a reference for world education, placing Indonesia in the 10th behind. The central role of 21st century learning media is the main thing and must be fulfilled in Indonesia's current education infrastructure. Junior High School (SMP) Negeri 10 Malang has three main problems in implementing the prototype curriculum. The purpose of this media development is to solve these three problems, including minimal digital media education infrastructure, the carrying capacity of human resources in making digital media in the 21st century less competent, and students' misconceptions in learning. Using the ADDIE Model, this learning media is packed with 3D augmented reality features, games exploring the archipelago and local wisdom, as well as audio-visual integration matrix A1 (critical thinking), A2 (creative thinking), A3 (collaboration), A4 (communication), A5 (character), and A6 (country) for 6C. This is followed by Matrix B accommodating 7 domains of Technological Pedagogical and Content Knowledge (TPCK). This learning media got a score of 92.08% by expert validators, followed by 96.5% by material expert validators. The media practicality test to 297 seventh grade students got a score of 93.4%, and the media effectiveness test experienced Asymp.Sig. (2-tailed) is worth 0.000 is less than <0.05. Therefore significant influence between the use of learning media on student learning outcomes

Keywords: Learning Media, Curriculum Prototype 2022, 6C, TPCK

1. Introduction

Education is a basic need of a country that is very central, important, and has high urgency [1]. Indonesia as a developing country needs education as the internalization of the nation's progress movement. Ideally, education is designed to be the supervision, transformation, and preparation of human resources to face the speed of science globally. The value of internalizing education must be used in the development of the country to prepare for the development of human resources [3], the character of the nation's identity [4], and prepare for competitive quality in the development of such a fast era [5].

Indonesian education has made massive adaptations which are reflected in the process of digitizing learning through the integration of materials with technology [6]. Implementation that occurs in the field is identical to the change in conventional education culture through paper-based media into digital education which is identical to server-based technology that is interconnected and centralized [7]. Currently, Indonesian education has significant changes in the implementation of media as a form of adaptation in the learning process [8]. One of the reasons for changing conventional education to technology-based education. This is also supported in [9] outlining that changes in education digitization are closely related to Indonesia's education ranking in the size of the Program for International Student Assessment (PISA). PISA is the mecca of world education measures, the results of a survey conducted every three years with a focus on literacy, mathematics, and science in PISA 2018 measuring 600,000 15-year-old children spread across 79 globally. Indonesia's wide geographical location, diverse Indonesian educational culture [10], and the character of education that takes place are very complex, appropriate learning methods in Indonesia must

support coherent, tactical, measurable aspects [11], ideal for avoiding concepts that are not well received [12] and the integration of creative critical thinking to support collaboration, communication, and shape the ideal national character [13]. One of the schools that made the transition to the implementation of the Prototype Curriculum (KP) was SMP Negeri 10 Malang. Interviews conducted with Teachers of Cultural Arts (GSB) at SMP Negeri 10 Malang described the conditions of the learning process for grades 7A to 7I with 297 students, related to the ornamental uterus material which was transferred to unit II (Designing) material in the 2022 prototype curriculum, various obstacles occurred to be described immediately. The main problem is students' responsiveness to learning media which is decreasing. This creates a feeling that it has not yet reached an effective point in achieving learning objectives. As a result, students will get bored quickly because the interaction between the media and students as students is very minimal. Departing from the problem of Indonesian education infrastructure looking at the 21st century ideal education that is so systematic, Indonesian education is never separated from learning media as a central issue, and the Unit 2 (Designing) material has many misconceptions by students. Researchers developed interactive learning media through the implementation of 3D augmented reality features, adventure games exploring the school environment, interactive motion graphics videos, archipelago exploration games loaded in one media with 6C and TPCK integration.

2. Method

This study uses the ADDIE Model development procedure [14]. The ADDIE model provides an opportunity for a constructive development path. The stages of this learning media development development model have the following flow chart:

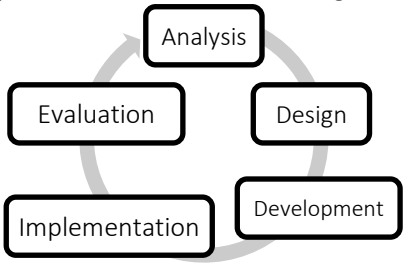


Figure 1. ADDIE Model Research Flow

The ADDIE development model is in line with the development stages regarding the principles of learning design using the ADDIE Model. There are 5 (five) stages of systematic development: analysis, design, development, implementation and evaluation in accordance with the main principles of development by [14]. The type of data in this development research uses qualitative data obtained from interviews with teachers of Cultural Arts at SMP Negeri 10 Malang, suggestions for improving the validation of two material and media experts by academics and research partner schools. Quantitative data were obtained from the results of needs analysis, validation of media experts, material experts, media practicality tests, and media effectiveness tests. Data collection techniques were obtained using a questionnaire that was disseminated to 297 class VII students in the current year. Structured interview activities to interview resource persons with open interviews followed by a substantial semi-formal language style. In this regard, it is intended that data collection is valid, reliable, explores broad, and in-depth information.

3. Finding and Discussion

Material Identification and Software Workflow

The main stage carried out is material identification, research partner schools choose Unit 2 (designing) as the main material in the cultural arts subject. In the process of material

dissemination, each 6C and TPACK integration learning will collaborate with each other as follows:

Table 1. 6C and TPCK collaboration

No	6C Matrix A	7 Domain TPCK Matrix B
1	Berfikir Kritis *(Critical Thinking)*	Pengetahuan yang fokus tentang materi *(content knowledge/CK)* berkaitan dengan disiplin ilmu bidang studi dan pembelajaran.
2	Berfikir Kreatif *(Creative Thinking)*	Pengetahuan pedagogis *(pedagogical knowledge/PK)* yang fokus terhadap proses dan strategi pembelajaran.
3	Kolaborasi *(Collaboration)*	Pengetahuan tentang teknologi *(technological knowledge/TK)* tentang implementasi teknologi yang masif dan terstruktur.
4	Komunikasi Efektif *(Communication)*	Pengetahuan tentang pedagogi dan materi *(pedagogical content knowledge/PCK)* yaitu gabungan kemampuan kolaborasi disiplin ilmu bidang studi atau pembelajaran dengan strategi dan proses pembelajaran.
5	Karakter *(Character)*	Pengetahuan tentang teknologi dan materi *(technological content knowledge/TCK)* yaitu tentang literasi digital dan materi pembelajaran
6	Kearifan Lokal dan Ragam Nusantara *(Country)*	Pengetahuan tentang teknologi dan pedagogi *(technological paedagogical knowledge/TPK)* yaitu tentang implementasi teknologi digital dan strategi maupun proses pembelajaran.
7		Pengetahuan tentang teknologi, pedagogi, dan materi *(technological, pedagogical, content knowledge/TPCK)* literasi teknologi, proses dan strategi pembelajaran, dan materi pembelajaran (bidang studi).

Integration, Content Display and Data Analysis

In this regard, the following is a storyboard of the development of interactive audio-visual-based digital learning media for Cultural Arts (Arts) Unit II Class VII Curriculum Prototype 2022 integration of 6C and TPCK as follows:

Table 2. *Storyboard*

Sub Unit	*Storyboard*	*Matrix* Integration (6C dan TPCK)
2.1	Finding Organic Patterns with technology traveling around the archipelago through 2D adventure games	A1, A2, A4, A6, Matrix B
2.2	Find tech geometric objects visit virtual classroom drag and drop game	A1, A4, A5 Matrix B
2.3	Coloured geometric pattern application with object finding technology with marker less augmented reality technology	A1, A2, A3, A5 Matrix B
2.4	Application of geometric patterns on objects with school environment exploration technology with 2D adventure game technology	A1, A2, A4, A5, A6 Matrix B

The results of the media expert validation test get a point achievement score with a proportion of 92.08%. Material expert validation gets an achievement value with a proportion of 96.5%. The product practicality test phase obtained a score of 93.4% with a good level of feasibility and feasibility of being implemented. Test the effectiveness of the product to calculate the increase in student learning outcomes is done with a descriptive statistical test. The following are the results pre-test for 297 students, the minimum score is 5.00, the highest score is 8.00, and the average pre-test score for 297 students is 6.46. Whereas in the post test column for 297 students, data was obtained that the minimum score in the post test was 6, the maximum score was 10, and the average score was 8.02. The hypothesis of the non-parametric test data analysis Wilcoxon signed test (match pair test) in this study is H_0: There is no significant effect of the use of instructional media on student learning outcomes.H_a: There is a significant influence of the use of instructional media on student learning outcomes. Basis for Basic Decision Making in signed tests Wilcoxon test: Asymp.Sig. (2-tailed) is less than < 0.05, then H_a is accepted. Asymp.Sig. (2-tailed) is greater than > 0.05, then it is rejected. The negative ranks column or the (negative) difference between learning outcomes for the pre-test and post-test, there were 31 students who experienced a decrease in learning outcomes. In the positive column, ranks or difference (positive) between learning outcomes for the pre-test and post-test, there are 233 positive data (N). This proves that 233 students experienced an increase in learning outcomes from pre-test scores to post-test scores. The mean rank or average increase is 140.0, while the total positive rankings or Sum of Ranks is 32637.50. Furthermore, Ties is the similarity of the pre-test and post-test scores, in the Ties column there are 33, so it can be said that there are 33 students who get the same scores between

the pre-test and post-test. These results provide a conclusion that student learning outcomes experience a dominant increase.

a) Test Statistics

Table 3. Test Statistics

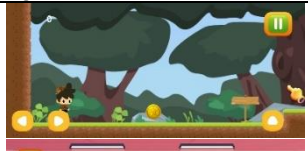
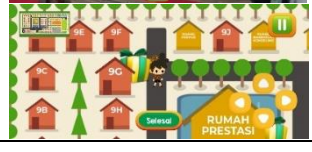
Test Statistics[a]	
	Post Test - Pre Test
Z	-12.341[b]
Asymp. Sig. (2-tailed)	.000

Based on the "Test Statistics" output above, it is known that Asymp.Sig. (2-tailed) is worth 0.000 is less than <0.05, it can be concluded that Ha is accepted and H0 is rejected. This means that there is a difference between student learning outcomes in the pre test and post test. So it can be concluded that there is a significant influence between the use of learning media on student learning outcomes.

User Interface Subject

Researchers collaborate in the form of futuristic learning media and provide 21st century educational content with the title of interactive audio-visual-based digital learning media material for Cultural Arts (Arts) Unit II Class VII Prototype 2022 Curriculum integration 6C and TPCK with the following display:

Table 4. User Interface Learning Media Features

Sub Unit	Figur	Feature
2.1		Finding Organic Patterns with technology traveling around the archipelago through 2D adventure games
2.2		Find tech geometric objects visit virtual classroom drag and drop game
2.3		Colored geometric pattern application with object finding technology with markerless augmented reality technology
2.4		Application of geometric patterns on objects with school environment exploration technology with 2D adventure game technology

4. Conclusions and Suggestions

Unit 2 learning media (designing) in the 2022 prototype curriculum has the main features of finding organic patterns with technology around the archipelago through 2D adventure games, finding technological geometric objects, visiting virtual classrooms, drag and drop games, application of colored geometric patterns with technology to find objects with augmented technology. markerless reality, and the application of geometric patterns on objects with school environment exploration technology with 2D adventure game technology.

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