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DEVELOPMENT OF TIKTOK VIDEO BASED LEARNING MEDIA IN SOFTWARE APPLICATION SUBJECT FOR XII DPIB STUDENTS SMK ISLAM 1 BLITAR

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Abstract

This research is motivated by the lack of use of interactive learning media in software application and interior design subjects. This study aims to develop efficient and interactive tiktok video-based learning media in order to help students more easily understand the learning material delivered by the teacher. This research uses the Research and Development (RnD) development model and the ADDIE research method which consists of 5 stages, namely Analysis, Design, Development, Implementation, and Evaluation. To determine the feasibility of this learning media, a design validity test was conducted by media experts, material experts, and users (students). The results of the media expert validity test get a value with very feasible criteria, as well as the results of the material expert validation get a value with very feasible media result validation criteria, the results of small group trials on students get a value with a percentage of 91.54%, then on the other hand the results of large group trials on students get a value with a percentage of 86.79%. Thus, Tiktok Video-Based Learning Media for XII DPIB Students of SMK Islam 1 Blitar in Software Application and Interior Design Subjects can be said to be feasible to use as supporting material in learning.

Keywords: Vocational High School, Learning Video, Tiktok

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Introduction

Vocational High School is an upper secondary level school that is oriented towards the world of work, vocational high school students are educated to master one of the specific scientific fields chosen according to the interests and abilities of students (Atmaja & Maulana, 2020). In order to realize the learning outcomes of the Education curriculum, it needs to be supported by facilities and infrastructure to support the success of education, one of which is learning media (Abidah et al., 2022).

Media literally means introduction or intermediary (Karo-Karo & Rohani, 2018). Learning media is a tool that can be utilized by educators in delivering learning materials effectively to help students in making it easier to examine the material that are delivered (Muhammad, 2020; Fitri et al., 2019). Learning media also functions as a benchmark in measuring student learning outcomes (Saifulloh & Darwis, 2020; Yuanta, 2019) and minimizing student boredom in learning (Budiman et al., 2019).

The selection of learning media must be adjusted to the characteristics of the message, learning objectives, the needs of students, and the accessibility of technology in the learning environment (Budiyono, 2020). This learning media development can be realized by developing available information technology (Turisia, 2022).

The use of technology-based learning media is needed for Software Application and Interior Design subjects so that students can more easily understand how to build designs in 3D and 2D (Susandri et al., 2022). Thus, monotonous learning media and learning models in the form of lectures are not suitable for application in this subject (Zabidi, 2019).

However, facts in the field, Williyana et al. (2018) show that there are still many schools that are not optimal in utilizing technology to support learning success. There are still many teachers who use contemporary learning medias (Titania & Widodo, 2020). The lack of variations in learning media will affect on students' abilities to understand the materials presented by the teacher. This results in a decrease in students' learning motivation (Murtinugraha et al., 2021; Rahmi et al., 2021). To overcome this, teachers must find innovation to create interesting and interactive teaching materials.

The solution to this problem is to create a learning media that has more appeal, namely by developing video-based learning media by utilizing social media, one of which is tiktok (Rahardaya & Irwansyah, 2021; Ahmad Fadillah & Bilda, 2019). Video-based learning media can help students to understand the material because it presented in structured manner, and because of its easy access, students can easily repeat the video if they forget any material, so that they find it easier to achieve learning goals (Nuritha & Tsurayya, 2021; Ario & Asra, 2019).

Learning materials presented in the form of short and clear videos make it easy for students to understand The concepts and be independent in honing their own thinking skills (Titania & Widodo, 2020; Agustriana, 2014). The selection of videos as additional learning media in the 2013 curriculum is because it is in line with the type of scientific approach or observing (Apriansyah, 2020; Farida et al., 2022). Learning activities in this scientific learning include seeing, reading and listening, which is the type of approach in accordance with the 2013 curriculum. Another reason for choosing videos as learning media is because videos fulfill the criteria of learning media through aspects of learning media functions (Zahwa & Syafi'i, 2022). Therefore, the application of video as a learning media is very suitable for use in the learning process of Software Application and Interior Design (Agustiningih, 2015). In addition, learning videos can make it easier for students to learn because they can be accessed independently, anywhere and anytime (Efendi & Sumarni, 2016). The key to the success of video-based learning media development is to customize the material and presentation of videos with student characters so that they are right on target (Mendrova, 2022).

TikTok is a social media network from China that is equipped with musical video features (Aninda Devi, 2022). Seeing the various features provided, this application can be utilized as a learning media for Software Applications and Interior Design (Taubah, 2020). The selection of the

TikTok platform for developing learning media is because of its easy access, and the platform currently favored by various groups. In this platform, you can share videos with a duration of approximately 5 minutes (Aji & Setiyadi, 2020). Therefore, with the features provided by Tik Tok, this application is very possible to be utilized as a learning media for Software Applications and Interior Design for 3D design skills (Junia Muslim & Zola, 2022). The advantage of the TikTok application is that it is favored by Generation Z because this application displays interesting content and presents facilities and features that support Generation Z to create content (Warini et al., 2021). Herdiati et al. (2021) said that the TikTok application is easy to operate by ordinary people because of the many features offered by the TikTok application. According to Sabila & Mutrofin (2023), supporting features on TikTok that can be used for learning media include voice changers, filters on videos, effects on videos, auto captions.

By developing several learning video tutorials on Software Application and Interior Design subjects for vocational students majoring in Information Modeling and Building Design (DPIB) and utilizing the TikTok platform as a learning video dissemination, it is hoped that this learning media can be used as a means of channeling information to students regarding material in Software Application and Interior Design subjects and increasing student motivation, creativity, and learning achievement (Ramdani et al., 2021)

Research Methodology

This development uses a research and development model in the form of Research and Development (R&D) which is focused on developing learning with the output of a product and testing the feasibility of the developed product, the output product of the Research and Development (R&D) method does not have to be hardware but can also be software (Sugiyono et al., 2021).

Researchers collect data related to the TikTok application, learning, learning media, and learning methods related to research by applying the ADDIE method which consists of 5 stages, namely Analysis, Design, Development, Implementation, and Evaluation.

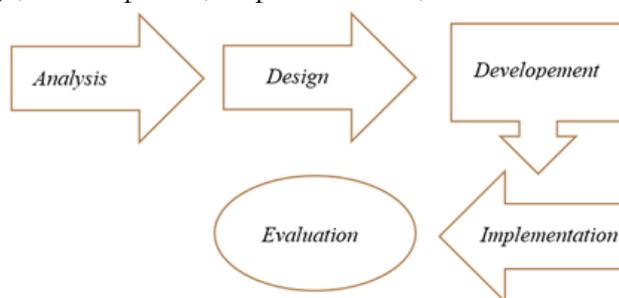


Figure 1. Flow Chart ADDIE

Participants or respondents in this study were XII DPIB class students of SMK Islam 1 Blitar who took software application and interior design subjects. This research was conducted in the 2023/2024 school year. In this study using data collection techniques, namely distributing questionnaires to respondents, quantitative descriptive data analysis techniques with a Likert scale. At the implementation stage, two types of trials were carried out, namely small group trials and large group trials. The minimum sample used to test a relatively small population is at least 20% of the population. Since the total population of class XII DPIB is 80 students, the trial will be used as a small group trial of 20 students, if this small group trial gets a positive response from students, then there is no need to revise the learning video and continue with a large group trial of 60 students.

The questionnaire grids on the validation sheet which are useful for finding data from media experts, material experts are adopted from previous research by Rustadi & Hikma in 2020, and the questionnaire grids for students are adopted from previous research by Oetari & Gusmareta in

2021 and modified by researchers, to find out the consistency of this questionnaire, a reliability test is carried out on the results of students' questionnaire answers. The results of data collection will be summarized, analyzed, and described to answer questions related to the use of Tiktok video-based learning media as a learning medium for Software Applications and Interior Design at SMK Islam 1 Blitar.

Research Results and Discussion

In conducting research and development of learning media, researchers developed video tutorial as product design, presented in the Tiktok application regarding the application of 3D drawing commands. This research applies research in accordance with the ADDIE procedure. The following is the production process by going through a validation test process by several experts, such as tests on design, media and feasibility experts which can later produce products as expected.

Analysis

This research begins with an analysis of the potential and problems carried out at SMK Islam 1 Blitar at XII DPIB class in the subjects of Software Applications and Interior Design. The methods used at this stage include observation and survey/questionnaire.

Observations were made by researcher through direct observation during the learning process of the Software Application and Interior Design subjects of XII DPIB class students at SMK Islam 1 Blitar. The questionnaire used by researchers consists of several questions about difficulties or what students need in the teaching and learning process of Software Application and Interior Design courses.

From the analysis of the potential and problems, the researcher draws the conclusion that the teacher still uses monotonous learning media so that students feel bored quickly while learning, and based on the questionnaire students are more likely to like video-based learning media. Therefore, researcher chose to develop video-based learning media in Software Application and Interior Design subjects that are interactive and creative so that they are not monotonous and boring. In addition, the video-based media to be developed contains interior drawing tutorials accompanied by 3D animated images so that students can better understand how to draw correctly and easily. Later, researcher discussed with SMK teachers and media experts to determine the theme of the materials presented in the videos and also the concept used in it.

Design

This stage is carried out several step including 1) Determining ideas and ideas about the basic theme of making material, 2) Make a target analysis and outline the content of learning media 3) Make a Storyboard for learning videos.

Development

The development stage includes making video designs/footage using the help of SketchUp Pro and OBS Studio software, Recording sound (Voice Over) for Tiktok video dubbing.



Figure 2. Footage Video

At this stage also includes the editing process, in this editing process researcher use the help of the Capcut application. The next process is the mixing process which is carried out to combine the sound and image aspects into one. After the video and image editing process are done, the dubbing/voice over recordings that have been made and the back sound are then organized and arranged in such a way as to produce a good 3-8 minutes long video.

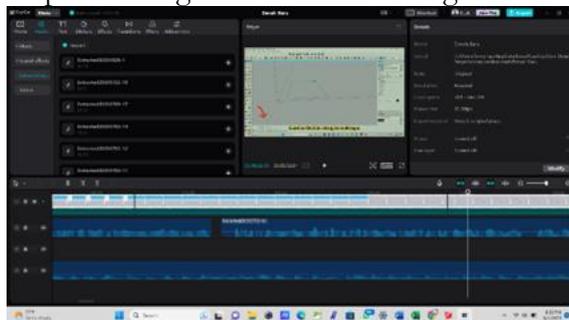


Figure 3. Editing and Mixing Video Process

Before carrying out the design validation stage, researcher first finalized the design. In the finalization process, researcher returns to ensure all alignment between video, back sound, dubbing/voice over and other video support components. So that the final result of the video is in good condition and in harmony.

The next step is the validation stage, validation aims to provide value to the product or learning media made to determine whether testing is feasible or whether product revisions are needed to achieve the desired results. This product validation was carried out by two validators, namely material experts and media experts. Media validators by Malang State University lecturers from various fields who have knowledges and experiences regarding media.

Data analysis was also carried out by finding the average percentage value of the data obtained. The formula used according to (Asyhari & Silvia, 2016) is as follows:

$$P = \frac{\sum x}{\sum x_i} \times 100\%$$

Description

P = Percentage

$\sum x$ = Number of test subject answers

$\sum x_i$ = Ideal number of answers

100% = A constant number

Table 1. Percentage Analysis Validity Criteria (Riduwan et al., 2015)

Achievement Level	Description
81%-100%	Very Decent
61%-80%	Feasible
41%-60%	Decent Enough
21%-40%	Not Feasible
0%-20%	Very unfeasible

Calculation of the percentage value of the questionnaire using Microsoft excel.

Table 2. Media Expert Validation Results

No	Assessment Aspect	Number of value scores	Average Scores	Percentage
1	Aspects of video components	53.8	3.84	96.07%
2	Sound aspect	27.2	3.89	97.14%
Average Score			3.86	96.61%

Table 3. Material Expert Validation Results

No	Assessment Aspect	Number of value scores	Average Scores	Percentage
1	Learning aspects	32	4	100%
2	Material content aspect	31.6	3.95	98.75%
Average Score			3.98	99.38%

The results of the validation questionnaire assessment from media experts obtained an average score of 96.61%. This score shows that the video is in the Very Good category (No Need for Revision). The results of the validation questionnaire assessment from the material expert obtained the average score of 99.38%. this score shows that the video is in the Very Good category (No Need for Revision). Here is the tiktok account link of the developed learning video <https://bit.ly/3u0gUqt>.

Implementation

Products that have been declared feasible by material expert validator and media expert validator are then disseminated by researcher. This Software Application learning media is disseminated through Tiktok, because its access is quite easy and can be reached anytime and anywhere.

After carrying out product dissemination, a small group product trial was then conducted on XII DPIB students at SMK Islam 1 Blitar. Based on (Gay in Husein, 1999) (Suwandi, 2021) in R&D research for relatively small populations using a minimum subject of 20% of the total population.

Results from the small group trial (20 students) from the entire total population, an average value of 91.54% was obtained, the validity criteria were included in the Very Good category (No Need for Revision). Based on the results of the trial in the large group (60 students) of the total population, an average value of 86.79% was obtained, the validity criteria were included in the Very Good category (No Need for Revision).

Based on the opinion expressed (Riduwan et al., 2015) learning videos can be said to be feasible if the percentage obtained is more than $\geq 61\%$. In line with Riduwan's opinion, the Tiktok video-based learning media for software and interior design applications with the material of "Applying 3D drawing commands" is very feasible to be used as an alternative learning media to increase student motivation and learning outcomes.

In addition, from each group test, the reliability test results using the SPSS program in the small group trial stage were 0.649 and the reliability test results in the large group trial were 0.705. Based on the opinion narrated by Churniawan in 2016 in the reliability test if you get an alpha value > 0.6 , the reliability level has been met.

Evaluation

Learning activities using this learning video are evaluated with a project-based post-test, students are asked to create a home room design using the SketchUp application, this post test is carried out to determine the extent of student capture of the tutorials presented in the video and understanding related to the material presented. Based on the post test, the majority of students are skilled in making room designs with a shorter period of time, compared to before watching this learning video. Students know some quick ways or hacks to create designs. From the results of this post test, it can be concluded that this tiktok video-based learning media can help improve student learning outcomes.

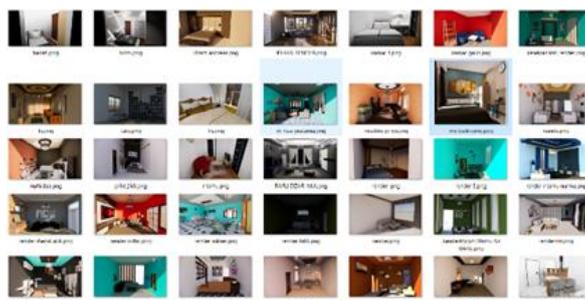


Figure 4. Student Post-Test Design Results

Conclusion

The learning media developed, namely Tiktok video-based learning media for class XII Interior Design and Information Modeling Design (DPIB) Software Application subjects, presents material on applying 3D drawing commands consisting of introducing SketchUp basic tools, 3D plan drawing tutorials, introducing Extensions/Plugins, and 3D image export tutorials from SketchUp. This research and development process have several stages including analyzing potential and problems, and then continuing with data collection, and lastly continuing with the media design stage. The results of the validation of Tiktok video-based learning media according to media experts get a score with an average percentage of 94.8% that shows the criteria for validation of media is very feasible. The results of the small group trial of Tiktok video-based learning media for students obtained a score with a percentage of 91.54% which based on the validation criteria table, it's in very good category, and the results of the large group trial of video-based learning media to students received a score with a percentage of 86.79%. Based on the opinion narrated (Riduwan et al., 2015) learning videos can be said to be feasible if the percentage obtained is more than $\geq 61\%$, therefore, Tiktok video-based learning media is suitable for use as a learning media.

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