
Feasibility Test of Vlog Media Development With A Science-Edutainment Approach

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Received: February 11th, 2021

Accepted: July 3rd, 2021

Online Published: July 3rd, 2021

Abstract

This research aims to validate the feasibility of VLog media with a science-edutainment approach. This development research uses the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). This research was conducted at Bangkalan Public High School 5, a class VII student population in the Solar System material. The sampling technique used purposive sampling, with a sample of one class VII G. The results showed that the developed profuk could be declared suitable for use with a percentage of media feasibility of 78.6%, feasibility of 92% and an average of 85.3% with very valid category. Based on these results it can be stated that VLog media is feasible to use

Keywords: Media; Science-edutainment; VLog

How to cite this article :

Latifah, D. R., Ahied, M., Wulandari, A. Y. R., & Munawaroh, F.(2021). Feasibility Test of Vlog Media Development With A Science-Edutainment Approach. *IJIS Edu : Indonesian Journal of Integrated Science Education*, 3(2), 157-164. doi:<http://dx.doi.org/10.29300/ijisedu.v3i2.4170>

INTRODUCTION

Natural Sciences (IPA) is a scientific discipline that studies natural phenomena with the scientific method that produces reliable facts (Trianto, 2015). Science as one of the fields of science that must be mastered by students because science is a science that cannot be separated from everyday life. The science learning process can be held interactively, inspiring, fun, challenging, motivating students to be more active in participating, and providing sufficient space for initiative, creativity and independence according to interests, talents and students' physical and psychological development.

Video Blog is a blog that contains stories, experiences, advice or anything through video content which is often referred to as VLog (Schmittauer, 2017). VLog is a combination of video and blog (blog itself is a combination of web and log). VLog is a form of expression of thoughts, opinions, or experiences that are recorded into a film or video and published online via the internet (Chandra, 2017). According to the opinion of (Fidan & Debbag, 2018) VLog is a video composed of several types of media, namely audio, visual and text that can be easily accessed with mobile devices. Based on some of the opinions above, it can be concluded that VLog is a video-blog that contains expressions of thoughts, opinions, or experiences that can be accessed with mobile devices that have been published online.

The Science-Edutainment approach brings students to learn with entertainment or fun nuances but does not deviate from the learning objectives (Abdan, 2014). Through fun nuanced learning, it is hoped that students can happily and easily understand learning without pressure. Fun

nuances can be created with activities, media or teaching materials used by teachers during learning.

Learning media is a tool used to make it easier to convey learning (Taufiq, Dewi, & Widiyatmoko, 2014). Students tend to be interested in learning by using audio-visual media (Fitriyani & Wiyatmo, 2017). In facilitating the achievement of national education goals, an innovation is needed, including both learning strategies and learning media as learning materials used in accordance with Law no. 20 of 2003 (Budiarso, 2016). Therefore, the selection of VLog-based learning media (video blog) is very appropriate in addition to being easy to use, easy to access anytime and anywhere by students. VLog (video blog) is a video-based blog that includes text, sound, video or images (Fidan & Debbag, 2018). Through visualization, it is easier for students to understand the learning they are doing.

This study aims to determine the differences and increase in understanding of concepts after learning using VLog media with a science-edutainment approach in science learning with the material of the solar system.

METHOD

This research includes the type of research and development or Research and Development (R&D). This study uses the ADDIE development model. The ADDIE model consists of five stages, namely analysis (analysis), design (design), development (development), implementation (implementation), evaluation (evaluation). The development design uses the ADDIE model shown in Figure 1.

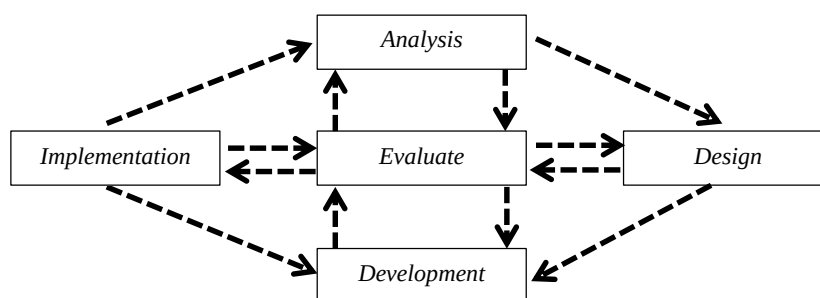


Figure 1. ADDIE Model Development Design Source: ((Tegeh, Jampel, & Pudjawan, 2014)

Validity test is used to get the level of validity of an instrument. The validity test in the development of VLOG media was carried out by 3 experts who were experts in their respective fields, namely as media experts, as material experts, and as science teachers at Public Junior High School 5 Bangkalan. The validity test can use Aiken's V statistical calculations (Hendryadi, 2017) with the following equation.

$$V = \frac{\sum s}{[n(C-1)]} \dots\dots\dots (1)$$

Info:

S = r – lo
lo = lowest score
c = highest score
r = score given by assessor

The instrument validity criteria can be seen in table 1

Table 1 Instrument Validity Criteria

Score	Criteria
$0,81 \leq V \leq 1,00$	Very valid
$0,61 \leq V < 0,80$	Valid
$0,41 \leq V < 0,60$	Quite valid
$0,21 \leq V < 0,40$	Not valid
$0,00 \leq V < 0,20$	Invalid

(Rahmat & Irfan, 2015)

The reliability test in this study used the Borich method known as the Precentage Agreement (PA). According to Borich, the instrument is reliable if the percentage value obtained is more or equal to 75% (Viana & Subroto, 2016). The reliability test equation according to Borich is as follows:

$$PA = 1 - \frac{A-B}{A+B} \times 100\% \dots\dots\dots (2)$$

Infor:

PA : *Precentage Agreement*
A : Higher Score side given
B : Lower Score side given

The instrument validity criteria can be seen in table 2

Table 2 Instrument reliability criteria

Range (%)	Criteria
$0 \leq PA \leq 20$	Less reliable
$20 < PA \leq 40$	Somewhat reliable
$40 < PA \leq 60$	Reliable enough
$60 < PA \leq 80$	Reliable
$80 < PA \leq 100$	Very reliable

Arikunto in (Viana & Subroto, 2016)

RESULTS AND DISCUSSION

Define stage

The results of research conducted at SMP Negeri 5 Bangkalan. The learning material used in the VLog learning media is the solar system.

Design stage

This stage provides a research instrument in the form of a validation sheet on the media developed for expert validators and natural science teachers for class VII G SMP Ngeri 5 Bangkalan. The display of the VLog media product can be seen in the figure 3 and 4



Figure 2. . Title of Vlog



Figure 3. Vlog Appearance

Development stage

The development or development stage, in this third stage, is essentially the activity of translating design specifications into physical form, so as to produce development products. This stage consists of validating material experts and teachers of SMP Negeri 5 Bangkalan.

Implementation Stage

The results of the development are applied in learning to students to determine the effect on students' understanding of concepts. Material

experts, device experts, and science teachers are given products to determine the feasibility level of the VLog learning media. After being validated then analyzed and revised.

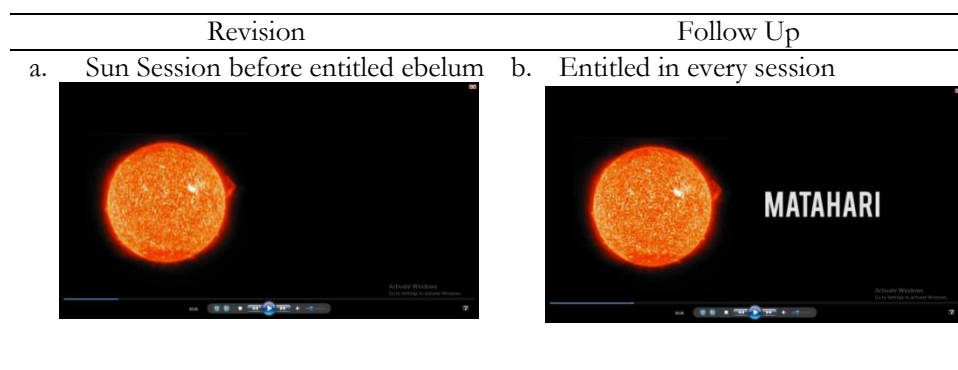


Figure 4. Sun Session before (left side) and after revision (right side)

The validation of the VLog media was carried out by four experts, namely media experts, material experts and concept understanding tests, device experts and junior high school science teachers. The media expert is Mr. M. Afif Effendi S. Kom. M.T., material expert and concept understanding test, namely Mr. Mochammad Ahied, S.Si., M.Sc., device expert namely Mrs. Wiwin Puspita Hadi, S.Si., M.Pd. and a junior high school science teacher, Mrs. Sulistyowati S.Pd.

Media Feasibility Test

The VLog media feasibility test aims to collect data from respondents, namely media experts and teachers of SMP Negeri 5 Bangkalan. The data is then processed to obtain results on the feasibility of the media. Aspects that must be validated by the validator include functions and benefits, visual media, audio media, typography and language. The validation results were analyzed using formulas 1 and 2 can be seen in Table 7..

Table 3. Media Feasibility Validation Analysis Results

N o.	Scoring Aspect	Validator	Average Score	
			Validity (%)	Reliability(%)
1	Function and Advantage	Media Expert & Middle School Teacher	75	93
2	Visual Media	Media Expert & Middle School Teacher	93	100
3	Audio Media	Media Expert & Middle School Teacher	79	89
4	Typography	Media Expert & Middle School Teacher	75	76
5	Language	Media Expert & Middle School Teacher	71	88
Average Scoring Criteria			78,6 Valid	89,2 Reliabel

The results of the media feasibility recapitulation are also depicted through a bar chart which can be seen in Figure 5. Based on the results of the media feasibility test analysis on

VLog media with the science-edutainment approach, the media validation average shows a value of 78.6% which can be seen in table 3 and includes into appropriate criteria for use with

minor revisions. The overall reliability value shows a value of 89.234% which can be seen in table 7 and is included in the very reliable criteria. Based on this analysis, it is known that VLog is

feasible to be used in the learning process in 7th Grade Public Junior High School 5 Bangkalan on solar system material.

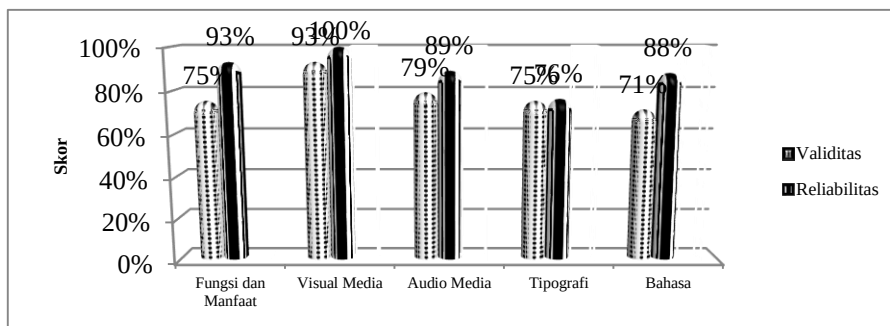


Figure 5. Bar Chart Percentage of Media Eligibility Assessment

Material Feasibility Test

Testing the feasibility of the material in the VLog media aims to collect data from respondents, namely material experts and teachers of SMP Negeri 5 Bangkalan. The data is then processed to obtain results on the feasibility

of the media. Aspects that must be validated by the validator include functions and benefits, visual media, audio media, typography and language. The validation results can be seen in Table 8.

Table 4. Material Feasibility Validation Analysis Results

No	Scoring Aspect	Validator	Average Score	
			Validity (%)	Reliability (%)
1	Content Feasibility	Media Expert & Middle School Teacher	83	94
2	Appearance Feasibility	Media Expert & Middle School Teacher	93	94
3	Language	Media Expert & Middle School Teacher	100	100
	Average		92	96
	Scoring Criteria		Very Valid	Very Reliable

Based on the results of the analysis of the material feasibility test on VLog media, the average percentage of material validation on VLog material shows a value of 92% which can be seen in table 3 and is included in the very valid criteria and is suitable for use without revision. The overall reliability value shows a value of 96% which can be seen in table 3 and is included in the very reliable criteria. Based on this analysis, it is

known that the material contained in the VLog media is suitable for use in the learning process in class VII-G UPTD SMP Negeri 5 Bangkalan on the material of the solar system. The results of the material feasibility recapitulation are also depicted through a bar chart which can be seen in Figure 6.

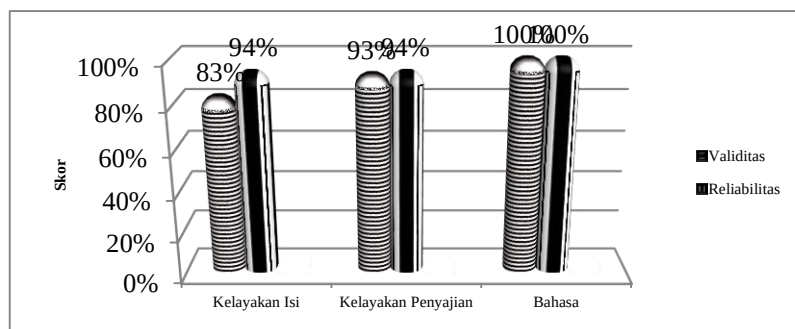


Figure 6. Bar Chart Material Feasibility Rating Percentage

Evaluation Stage

The stages of developing the ADDIE mode carry out an evaluation stage to optimize the VLog learning media on students' learning motivation and understanding of concepts. This evaluation stage uses summative evaluation to determine the effect on student motivation and understanding of students' concepts. This stage is the result of the analysis of the feasibility test by expert validators and the results of student responses at the implementation stage. The results of the data analysis are used as a guide to determine the feasibility of VLog media with a science-edutainment approach.

The results of the VLog media feasibility test with a science-edutainment approach to increase learning motivation and understanding of concepts consist of validity tests and rehabilitation tests carried out by experts, namely media, material experts, device experts and UPTD teachers at SMP Negeri 5 Bangkalan. A product is said to be feasible if the value is 0.61 V 0.80 (Rahmawati & Supramono, 2015) Meanwhile, according to Borich in Viana and Subroto (2016) an instrument is declared good if the percentage value of reliability obtained is more or equal to 75%. Based on the data from the media feasibility test in table 3 by media experts and UPTD teachers of SMP Negeri 5 Bangkalan, it shows that VLog media is feasible to use without revision with an average validity percentage of 78.6%. The reliability results of the VLog media feasibility test are also of good value with an average percentage of 89.2% as shown in table 7.

The feasibility test of VLog media is reviewed from five aspects, namely functions and benefits, visual media, audio media, typography and language. Based on the data recapitulation, the validity of the function and benefit aspects get a value of 75% with a reliability value of 93% which can be seen in table 7. These results show

that the aspects of the function and benefits of Vlog media are feasible to use without revision. The use of media with technology that involves students can increase the level of student understanding (La Caze, 2017).

Based on table 3 the visual aspect of the media got a validity value of 93% with very valid criteria and a reliability value of 100% with very reliable criteria. This shows that the visual media on VLog media is good or feasible to use without revision. Good visual media will be easy to attract students to learn. In accordance with what was said (Arsyad, 2014) the use of teaching media in the learning process can generate new desires and interests, generate motivation and stimulate learning activities.

Based on the audio aspect of the media, the validity value is 79% in the valid category and the reliability value is 89% in the very reliable category. This is in accordance with the opinion (Fidan & Debbag, 2018) regarding VLog in the form of videos composed of several types of media, namely audio, visual and text that can be easily accessed with mobile devices. The good audio and visual, the more it attracts students' attention and students' learning motivation and understanding of concepts increases.

Based on the typography aspect, it got a validity value of 75% with a valid category and a reliability value of 76% with a reliable category. Accuracy in choosing letters is one of the factors that need to be considered in designing VLog media. According to Sihombing in (Sulistiawati, Prabowo, Ihya, & Ulumuddin, 2017) typography has a very important role in determining the success of a form of visual communication. This also affects the visuals of the VLog media which can convey messages in a clear and easy-to-read form.

Factors that need to be considered in making VLog media are language, in VLog the language used is easily understood by students.

Based on the language aspect, it gets a validity value of 71% with a valid category and a reliability value of 88% with a very reliable category. As explained by Smaldino, Lowther & Russell in (Risabethe & Astuti, 2017) the use of age-appropriate language will meet the quality standards of technology and learning media. This means that the VLog media uses language that is easily understood and understood by age-appropriate students.

Material validation assessment includes 3 aspects, namely the feasibility of content, presentation and language. Based on table 8 the feasibility of the material gets a validity value of 92% with a very valid category and a reliability value of 96% with very reliable criteria.

Based on table 4, the content feasibility aspect gets a validity value of 83% with very valid criteria and a reliability value of 94% with a very reliable category. This shows that the content of the material is in accordance with the Core Competencies and Basic Competencies used and is suitable for use as a learning resource. The material used is science material for class VII, KD 3.11. Analyzing the solar system, the rotation and revolution of the earth, the rotation and revolution of the moon, and their impact on life on earth.

Based on table 4, the appearance feasibility aspect got a validity value of 93% with very valid criteria and a reliability value of 94% with very reliable criteria. This shows that the presentation of the material on the VLog media has been presented well. Presentation of material using media will make it easier for teachers to convey learning and attract students' attention and interest in learning (Arsyad, 2014).

Based on table 4, the language aspect gets a validity value of 100% with very valid criteria and a reliability value of 100% with very reliable criteria. This shows that the language used in VLog media to convey material on the solar system is easy to understand and understood by students. The choice of language must also be age-appropriate with students so that students can more easily digest the material presented (Risabethe & Astuti, 2017).

CONCLUSION

VLog media with a science-edutainment approach is appropriate to be used as a learning medium on the material of the solar system. The average results of the product feasibility test are 85.3% with media feasibility 78.6%, and material feasibility 92%. The feasibility test on the VLog

media product obtained very valid criteria, which means that it is suitable for use in science learning with solar system material.

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