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Development of Scribe Video Learning Media Based on Problem Based Learning (PBL) in Economic Learning

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ABSTRACT

This research is a development research with the aim of knowing the development and feasibility of Problem Based Learning-based video-text learning media in the learning media course and the development of teaching materials. The research method used was a Research and Development (R&D) approach with a modified Thiagarajan 4D model. The data analysis used descriptive quantitative and qualitative data analysis techniques. Based on the results of the study, it shows that the development of Problem Based Learning-based video-text learning media in economic learning in instructional media courses and the development of teaching materials can clarify concepts and motivate student learning. For product quality, it is considered feasible to be developed with the criteria of validity, practicality, effectiveness. The validity value is shown from the score of the material and design expert team at the very valid validity level. The results of the practicality test processing showed that the responses of lecturers and students stated that the media was very practical. In terms of effectiveness, the learning outcomes obtained by an average student score were satisfactory and entered the criteria very effectively. The video scribe media was tested in small groups and gave a positive response and was declared fit for use in large group learning groups.

Keywords: learning media, video scribe, PBL

INTRODUCTION

The rapid development of educational technology encourages the learning process to utilize technology-based learning media (IT). In order for learning to be carried out effectively and efficiently, teachers must have the skills to design learning with the help of technology (Sanjaya, 2013: 198).

The learning environment will be a supporting factor for students in the learning process and teachers must be able to play a role in motivating students by providing learning resources, materials, and the latest media which will later be useful in providing new experiences for students who are educated (Rusman, 2013: 325). According to Trianto (2010: 88), successful learning is influenced by the selection of the media used. The use of media designed by the teacher will be more meaningful, because the teacher knows more about the learning and character of the students. (Sukiman, 2012: 190). Thus, the realm of learning objectives is influenced by the media designed and used in learning. Various types of technology-based media include films, slides, photos, videos (Wulandari, 2016: 6). Learning in the economic education study program uses IT 95%, the problem that arises is the lack of interaction between lecturers and students. The problem is that students do not fully interact in on-line communication, some are actively interacting, another problem is that

students' interest in reading is still lacking. The important role of the media as one of the factors in the delivery of information, therefore media development is a solution to overcome problems in the Economic Education Study Program.

Videoscribe is one of the media that provides features in the form of images and handwriting, as well as design animations on a white screen to clarify the concept of the material (Audain, 2014: 112). The function of VideoScribe is as a tool that functions to summarize material to be more practical, interesting and increase the imagination of its users (Chun, 2013: 8). According to Daryanto (2010: 88), by using this media the material will be presented into videos that can be shown online or offline which will support direct and distance learning. The results of Musyadat's (2015) research stated that based on the results of research, videoscribe media was declared eligible for support learning, so that students focus more on understanding the material, interaction goes well, material is conveyed well and improves learning outcomes. Another study by Wahyuni & Sulistiyo (2017) the implementation of learning with interactive compact disc media based on videoscribe is more effective in supporting learning. According to Wulandari (2016: 62), videoscribe is a medium that can increase student interest in learning.

The advantages of videoscribe include increasing visual and audio power, clarifying material concepts, increasing motivation and enthusiasm (Air et al, 2015: 7-11). This study aims to determine the feasibility and develop a Problem Based Learning-based videoscribe learning media in the subject of learning media and development of teaching materials.

LITERATURE REVIEW

Learning Media

According to Heinich (Rusman et al., 2011: 169) media is a means of communication channel. Media comes from Latin which is the plural form of the word "medium" which literally means "intermediary" which is an intermediary between the message source (a source) and the receiver (a receiver). The National Education Association (NEA) or the American Educational Communication and Technology Association (Sadiman in Rusman et al: 2011: 169) defines media as all forms and channels used by people to convey messages or information. So according to Rusman et al (2011:169) television, films, photos, audio recordings, videos, projected images, printed materials, and the like are communication media. If the media carries messages or information for instructional purposes or contains teaching purposes, then the media is called learning media.

Learning media, according to Gerlach & Ely (Asyhar, 2011), has a broad scope, which includes humans, materials or studies that build conditions that enable students to acquire knowledge, skills or attitudes. Learning media includes all the resources needed to communicate in learning, so that the form can be in the form of hardware (hardware), such as computers, projectors, televisions, and software (software) used on the hardware.

According to Rusman et al (2011: 172) the learning process can work well if students are invited to use all their senses. The more senses that are used to receive and process information, the more likely it is that the information is understood and understood and can be retained in memory. From this, it is clear that learning media is a fairly important element in the learning process.

According to Asyhar (2011: 27) as a communication process, learning is often faced with various obstacles known as barriers and noise. These barriers can be grouped into: (1) psychological barriers, such as interests, attitudes, beliefs, opinions, intelligence, and knowledge; (2) physical barriers, such as illness, fatigue, limited senses, and physical disabilities; (3) cultural barriers, such as differences in customs, social norms, beliefs, and exemplary values; and (4) environmental constraints. The number of barriers and noise in the learning

process can be eliminated with the help of the media.

Tutorial Video

According to Asyhar (2011: 73) video media can be classified as audio-visual media. Audio-visual media can display image (visual) and sound (audio) elements. In the Big Indonesian Dictionary, literally the definition of video is a recording of live images or television programs through television shows. In other words, video is a moving image accompanied by sound (Prastowo, 2014: 341).

According to Prastowo (2014: 342), with a combination of visual and audio materials, educators can create a higher quality learning process because communication takes place more effectively. Day and Back in Prastowo (2014: 342) after conducting literature investigations for almost 50 years concluded that presentations using audio and visual provide more knowledge than using only one of the two senses.

According to Prastowo (2014:344) video or film teaching materials have at least five properties, namely: the ability to improve perception, the ability to increase understanding, the ability to increase transfer, the ability to provide reinforcement or knowledge of the results achieved, and the ability to increase retention. The video elements according to Prastowo (2014: 349) can be seen in the structure of the teaching materials, namely: titles, learning instructions, basic competencies or subject matter, supporting information, exercises, and assessments.

Video Scribe

Video Scribe is one of the software used in making videos. This software is made by Sparkol Ltd. To use this software, you need a computer with a minimum specification of a Pentium III/800 processor. 1 GB RAM, 100 GB hard disk, Microsoft Windows XP+SP1, DVD compatible recorder, and monitor with 1,024 x 768 x 32 resolution. VideoScribe is software that can be used by lecturers and students to create whiteboard-style animation for learning (VideoScribe for Education). The user only inserts images and text into the canvas.

In VideoScribe there are many variations of letters and font colors as well as animated images that support making videos. In the add text window, to add a sentence is done by simply typing in the typing box. To change the variety of letters and colors can be set directly in the window. In the add image window, you can select the animation category you want to use. The animation used can be in the form of animations that are already available on VideoScribe or can also use animations that are on computer storage or search automatically using the internet network. To set the display time for text and images, add effects for displaying text and images, adjust how text and images move, and various other settings needed can be done in the properties window.

Problem Based Learning

Problem Based Learning (PBL) is one of the learning models that can help students to improve the skills needed in the current era of globalization.

Some definitions of Problem Based Learning (PBL):

1. According to Eggen et al (2012), Problem Based Learning (PBL) is a set of teaching models that use problems as a focus to develop problem-solving skills, materials, and self-regulation.
2. According to Arends (Trianto, 2011), Problem Based Learning (PBL) is a learning approach in which students are faced with authentic (real) problems so that they are expected to be able to construct their own knowledge, develop high-level skills and inquiry, become independent students, and increase his confidence.
3. According to Supinah (2010), suggests Problem Based Learning is a learning approach that begins with giving problems to students where the problem is experienced or is a student's daily

experience. Then students solve the problem to find new knowledge.

From several descriptions regarding the definition of Problem Based Learning, it can be concluded that Problem Based Learning is a learning model that exposes students to real world problems to start learning and is one of the innovative learning models that can provide active learning conditions for students. Problem Based Learning is curriculum development and learning process. In the curriculum, problems are designed that require students to gain important knowledge, make them proficient in problem solving, and have their own learning strategies and skills to participate in teams. The learning process uses a systemic approach to solve problems or challenges needed in everyday life.

MATERIALS & METHODS

This research is a Research and Development (R&D). According to Sugiyono (2014) research and development is a research method used to produce certain products, and test the effectiveness of these products. Research and development is a research that aims to produce new products through the development process (Mulyatiningsih, 2014:161). It can be concluded that Research and Development (R&D) is research with the main results of the product, to improve the quality of the product by conducting a development test.

The resulting product is videoscribe media for the online learning theme. Research and development model with a device development model approach developed by Thiagarajan. Semmel & Semmel in 1974. There were 4 stages of development, namely, stage 1. define (definition), stage 2. design (design), stage 3. develop (development), and stage 4. dissemination (dissemination).

There is a simplification of the 4-stage development model which is modified into 3 stages, namely 1. defining, 2. designing, and 3. developing, the simplification is carried out due to the limited ability and time of the researcher.

Stage I: Define (Defining)

The define stage is to pay attention and adjust the character and environment during learning. The define stage is carried out in 5 steps, namely the first analysis of learning problems, the second analyzing the student character, the third material analysis, the fourth analysis of learning objectives, the fifth analysis of the task.

Phase II: Design (Design)

The design stage is carried out with the aim of designing the initial learning. There are four steps that must be taken at this stage, namely: (1) determining indicators (2) selecting the appropriate media (media selection) in accordance with the characteristics of the material and learning objectives, (3) selecting the layout or design of teaching materials, and (4) make an initial design according to the selected format

Phase III: Develop (Development)

The development stage is the stage to produce product development which is carried out through two steps, namely: (1) assessment of design experts and material experts followed by revisions, (2) product testing. The purpose at this stage of development is to produce the final form of the learning device after going through revisions based on input from experts/practitioners and data from trial results.

The research location was carried out in the Economic Education Study Program with a design time of 4 months. The subjects in this study were 27 semester 4 students who took courses in learning media and development of teaching materials for the 2019/2020 school year.

Data collection techniques by using:

1. Validation Sheet

The validation sheet functions to obtain input data from the assessment of design experts and material experts. The input is used as a reference in revising or improving the developed videos and modules. The next step is to create a grid to form the basis for

creating a validation sheet. The points made on the validation sheet are based on a literature review in this study.

2. Test

According to Arikunto (2010: 53), the test is a tool or procedure used to find out or measure something in an atmosphere, in a way and with predetermined rules. In this study, the test used aims to measure student learning outcomes. The test is carried out through practice learning with videoscribe.

3. Questionnaire

Lecturer and student assessment questionnaires were used to obtain data on statements and opinions of lecturers and students. The lecturer and student assessment questionnaires were given using a Likert scale with 5 categories, namely: Very practical, Practical, Doubtful, Impractical and Very Impractical.

Data analysis technique

Data analysis techniques are carried out to obtain quality video products and modules that meet the aspects of validity, practicality and effectiveness. The steps in analyzing the product quality criteria developed are as follows:

1. Validity analysis

Validation sheet is used to analyze the validity. The validation sheet data for the module on the factorization of algebraic terms is analyzed in the following steps:

Tabulation of data by validators obtained from expert lecturers. Data tabulation is done by giving an assessment on aspects of scoring 1,2,3,4 and 5.

Table 1. Criteria for validity

Validity Criteria	Validity Level
85.01%-100%	Very valid
70.01%-85%	Quite valid
50.01%-70%	Less valid
01%-50%	Invalid

(Akbar, 2013)

2. Practical Analysis

Practical analysis is calculated using student and lecturer assessment questionnaires.

P = x 100%
(Sugiono, 2014)

Information:
P = Percentage of student responses
A = Total score obtained
B = Total score ideal

3. Effectiveness Analysis

The effectiveness of videoscribe media on research.

RESEARCH RESULT AND DISCUSSION

This Research and Development is carried out with a 3-stage procedure including:

First stage: Definition

At the definition stage, a needs analysis is carried out. The needs analysis in question is the material that will be delivered in the Learning Media and Teaching Material Development course at the 12th meeting material Development of on-line learning, student characteristics in the economic education study program related to student experience and literacy in learning, student attitudes towards learning materials.

Second stage: Design

The design stage through the selection of media is adjusted to the material and characteristics of students. Next, a problem-based learning-based videoscribe learning media module was designed which would be applied to students from beginning to end. Preparation of the standard format that will be made both images, sounds, selected animations. Choose according to the material needs in the RPS. To be able to study students later during practice, the module has been made as clear as possible, so that students can easily apply it directly.

Here's the result of making a videoscribe

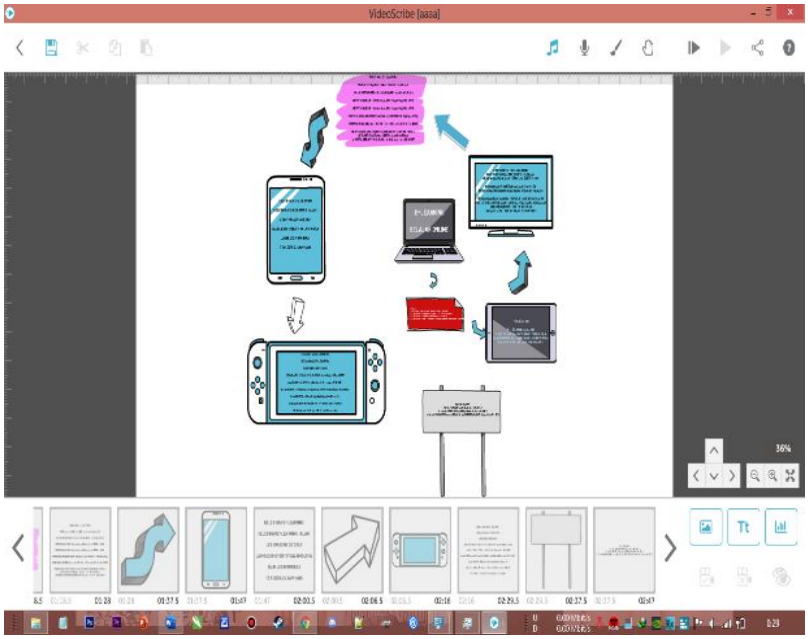


Figure 1. Videoscribe Registration Process
(Source: Research document)

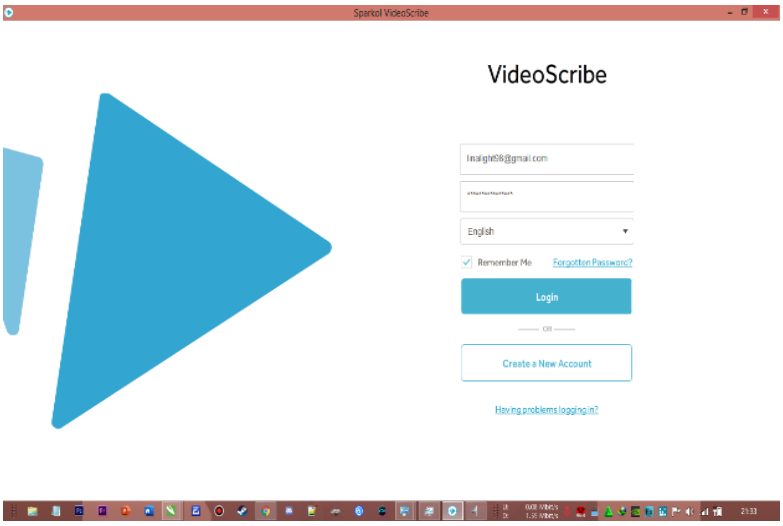


Figure 2. Videoscribe video design
(Source: Research document)

Here is the final result of making, you can create according to the existing material. The results will give a good response when uploaded on youtube.com.

Third stage: Development

At this stage, testing and validation of media products are carried out according to learning standards, goals and objectives. The evaluation of the results of the validation of material experts and media experts is in appendix 3. The products that have been validated are then revised according to the suggestions of media design and material design experts. The revised media was then tested on students during the 11th face-to-face lecture. The theme of on-line learning. Lecturers who teach using these media, study program lecturers are involved in evaluating learning on the media developed by providing responses, input and responses to the media used both modules and videoscribes in learning. Students after taking the lecture also provide feedback or responses to the media. The final result of this research and development is a PBL-

based videoscribe learning media product packaged in the videoscribe learning module.

To assess the feasibility of the media and the quality of quality products by analyzing the validity, practicality and effectiveness.

In the media validity test, it is assessed by design experts and material experts. Media expert validation is carried out once. The number of statements presented is 15 statements and 5 aspects. The goal is a Problem Based Learning-based videoscribe product that is developed into a quality product in terms of format, organization, attractiveness, font shape or size, and space.

Table 3. Media Expert Validation Value

No	Vulnerable Value (i) Quantitative	Average Value	Qualitative Category
1	$\bar{X} > 63$	$\bar{X} > 4,2$	Very Good
2	$51 < \bar{X} \leq 63$	$3,4 < \bar{X} \leq 4,2$	Good
3	$39 < \bar{X} \leq 51$	$2,6 < \bar{X} \leq 3,4$	Enough
4	$27 < \bar{X} \leq 39$	$1,8 < \bar{X} \leq 2,6$	Not Enough
5	$\bar{X} < \bar{X} \leq 27$	$\bar{X} < \bar{X} \leq 1,8$	Very Less

Table 4. Media Expert Validation Results on Each Aspect

No.	Rated aspect	Value
	Format	13
	Organization	23
	Attractiveness	12
	Font shape or size	13
	Space (blank space)	4
Total		**64**
Value Range		$\bar{X} >$ **4,2**
Average Value		**4,27**
Value Category		**Very Good**

The final average of media expert validation is 4.27 in the range Mi + 0.6 Sbi < X Mi + 1.8 Sbi with an average of > 4.2 or very good criteria.

Table 5. Conversion of Validity Level Percentage by Design Experts

No.	Rated aspect	Validity value%	Validity Level
	Format	86,6%	Very valid
	Organization	92%	Very valid
	Attractiveness	80%	Enaugh valid
	Font shape or size	86,6%	Very valid
	Space (blank space)	80%	Enaugh valid
Validity value Average		**91,42%**	**Sangat valid**

Based on the description above, it can be stated that the final average of media expert validation is 4.27 on the "Very Good" criteria, while the percentage of the overall validity value is 91.42% or at the "Very Valid" validity level. These results support research (Akbar, 2013) which states that the media is declared valid if the results of the combined validity show the results of 70%. It can be concluded that the learning media according to media experts is suitable for use in learning.

Material Expert Validation Value Conversion
Stage I

Table 6. Conversion of Material Expert Value

No	Vulnerable Value (i) Quantitative	Average Value	Qualitative Category
1	$\bar{X} > 63$	$\bar{X} > 4,25$	Sangat Baik
2	$51 < \bar{X} \leq 63$	$3,4 < \bar{X} \leq 4,2$	Good
3	$39 < \bar{X} \leq 51$	$2,6 < \bar{X} \leq 3,4$	Enaugh
4	$27 < \bar{X} \leq 39$	$1,8 < \bar{X} \leq 2,6$	Not Enaugh
5	$\bar{X} < \bar{X} \leq 27$	$\bar{X} < \bar{X} \leq 1,8$	Very Less

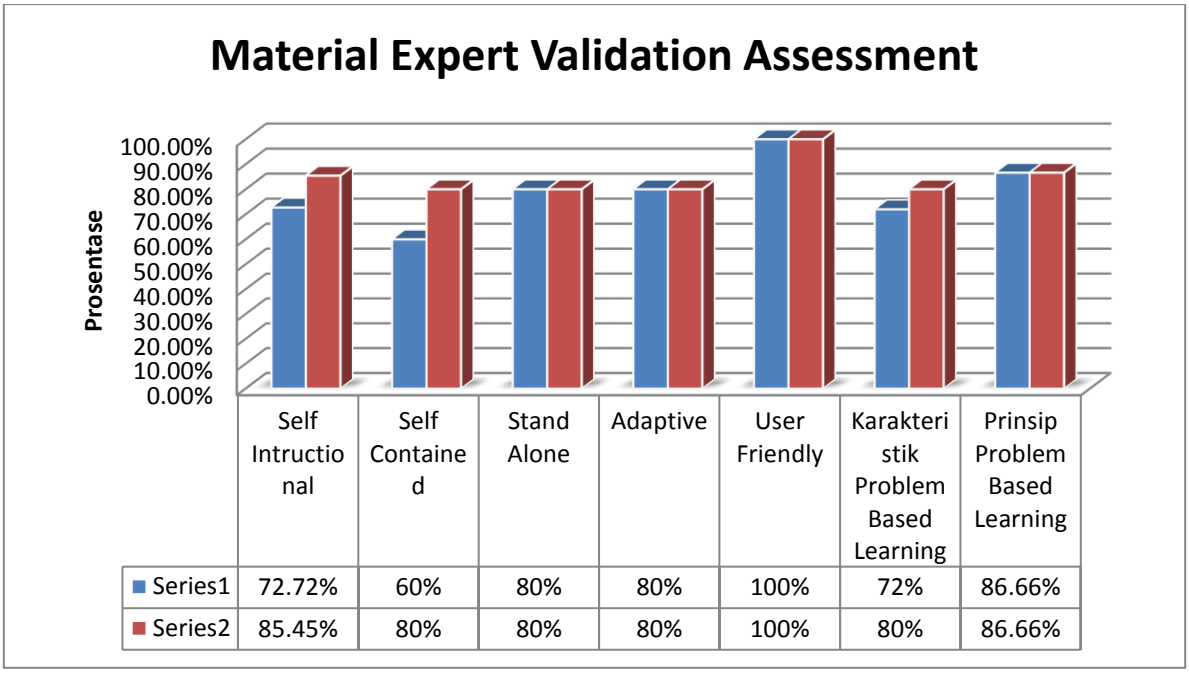
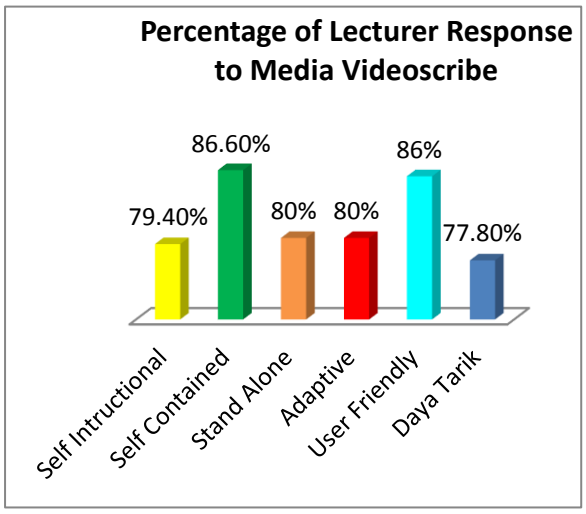


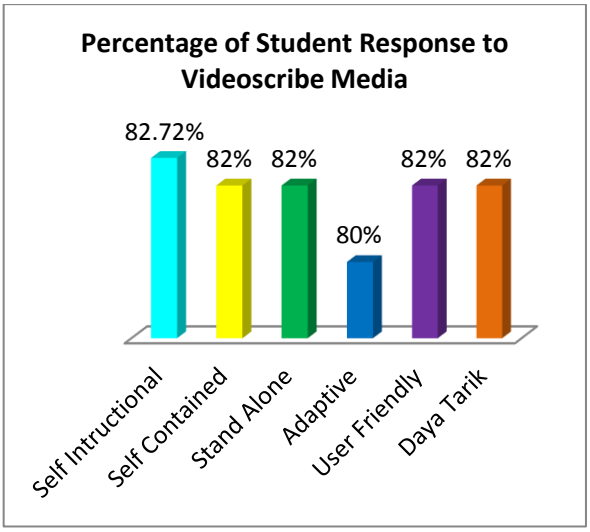
Figure 4. Material Expert Validation Assessment
(Source: Results of data processing)

Based on the description above, it can be stated that the final average of material expert validation is 4.25 on the "Very Good" criteria, while the percentage of the average value of validity is 85% or at the "Sufficiently Valid" validity level. It can be concluded that the learning media according to material experts is appropriate for use in learning.

Practicality data was obtained from the responses of lecturers and students through a questionnaire. The questionnaire given is in the form of 19 statements.



Based on the picture above, the lecturers' responses to aspects 1,2,3,4,5,6 to the videoscribe learning media as a whole obtained an average of 80.34 including the criteria for Very Practical. This supports Maharani's research (2018) which states that media is practical if it can be implemented in the field which shows the response of users who use it find it easy to understand the material.



Based on the table above, the lecturers' responses on aspects 1,2,3,4,5,6 to videoscribe as a whole obtained an average

percentage of 82.21% which entered the criteria for Very Practical.

These results support Erlia's research (2019) which states that videoscribe media is portable which can be studied wherever students are.

Based on the effectiveness test, it was found that the average learning outcomes of 20 students in a large group after applying the videoscribe media with an average value of 85.1 obtained a post test score of 70 which was included in the Very Effective criteria. These results support the research of Fadilah, Ahmad (2019) who stated that the videoscribe learning media received a positive response from small-scale trials and was suitable for use on a large scale.

CONCLUSION

Problem Based Learning (PBL)-based videoscribe media can be declared valid according to the results of the assessment data of media design experts and material experts at the level of validity in the very valid category. The results of the processing of the practicality test showed that the responses of lecturers and students stated that the media entered the practical criteria. In terms of effectiveness, the learning outcomes obtained with average student scores that are satisfactory and fit into the criteria are very effective. Videoscribe media has been tested in small groups and has given a positive response and is declared suitable for use in large group learning groups. These results show that videoscribe media is able to motivate students in learning to solve problems, able to illustrate complex or abstract concepts in learning, able to present fun learning, able to invite students to learn storytelling, narrative, and design, able to implement to students making exercises and assignments more interesting, able to be a presentation tool for students in demonstrating their knowledge in class, videoscribe media is able to support distance learning. This means that the videoscribe media is suitable for further use to support online learning.

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REFERENCES

1. Air, Jon., Eric Oacland and Chip Walters. (2015). *The Secrets Behind The Rise of Video Scribin*g. UK: Sparcol Books.
2. Akbar, Sa'dun. (2013). *Instrumen Perangkat Pembelajaran*. Bandung: Remaja Rosdakarya.
3. Arikunto, Suharsimi. (2010). *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: PT Rineka Cipta.
4. Audain, Jon. (2014). *The Ultimate Guide to Using ICT Across The Curriculum For The Primary Teachers*. British: Bloomsbury.
5. Chun, Yi Min. (2013). *Newslatter: Office of Integrated Medical Education (5th ed)*. Univercity of Toronto. Faculty of Medicine
6. Daryanto, D. (2010). Media pembelajaran. *Yogjakarta: Gava Media*.
7. Fadillah, A., & Bilda, W. (2019). Pengembangan Video Pembelajaran Berbantuan Aplikasi Sparkoll Videoscribe. *Jurnal Gantang*, *4*(2), 177-182.
8. Kumalasani, M. P. (2018). Kepraktisan penggunaan multimedia interaktif pada pembelajaran tematik kelas IV SD. *Jurnal Bidang Pendidikan Dasar*, *2*(1A), 1-11.
9. Mulyatiningsih, Endang. (2014). Metode Penelitian Terapan Bidang Pendidikan. Bandung. Penerbit Alfabeta.
10. Musyadat, I. (2015). *Pengembangan media pembelajaran berbasis video scribe untuk peningkatan mata pelajaran Sosiologi kelas X MAN Bangil* (Doctoral dissertation, Universitas Islam Negeri Maulana Malik Ibrahim).
11. Pratiwi, E. D., Latifah, S., & Mustari, M. (2019). Pengembangan Media Pembelajaran Fisika Menggunakan Sparkol Videoscribe. *Indonesian Journal of Science and Mathematics Education*, *2*(3), 303-309.
12. Rusman (2013). *Metode-Metode Pembelajaran: Mengembangkan Profesionalisme Guru*. Jakarta: PT Raja Grafindo Persada.
13. Sanjaya, W. (2013). Penelitian Pendidikan Jenis, Metode dan Prosedur. *Jakarta: Kencana.*
14. Sugiono. (2014). *Metode Penelitian Pendidikan Pendekatan Kuantitatif,*

Kualitatif, dan R& D. Bandung. Penerbit Alfabeta.
15. Sukirman. (2012). *Pengembangan Media Pembelajaran.*Yogyakarta: PT Pustaka Insan Madani.
16. Thiagarajan, Sivasailam., et al. (1974). *Instructional Development for Training Teachers of Exceptional Children: A SourceBook.* Washington DC: National Center of Improvement of Educational Systems.
17. Trianto, M. P. (2010). Mendesain Model Pembelajaran Inovatif-Progresif: Konsep, Landasan dan Implementasinya pada kurikulum Tingkat Satuan Pendidikan (KTSP). *Jakarta: Kencana*.
18. Trianto. *(*2011). *Model Pembelajaran Terpadu Konsep,Strategi Dan Implementasinya*. *Dalam Kurikulum Tingkat Satuan Pendidikan (KTSP)*. Jakarta: Bumi Aksara
19. Wahyuni, N. (2017). Pengembangan Media Pembelajaran Compact Disc Interactive (CD-I) Berbasis Video Scribe Menggunakan Model Pembelajaran Advance Organizer Pada Mata Pelajaran TKB Kelas X Tav Di SMK Negeri 3 Surabaya. *Jurnal Pendidikan Teknik Elektro*, *6*(2).
20. Wulandari, D. A. (2016). *Pengembangan Media Pembelajaran Menggunakan Sparkol Videoscribe dalam Meningkatkan Minat Belajar Siswa pada Mata Pelajaran IPA Materi Cahaya Kelas VIII di SMP Negeri 01 Kerjo Tahun Ajaran 2015/2016* (Doctoral dissertation, Universitas Negeri Semarang).

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