DEVELOPPING INTERACTIVE LEARNING MEDIA USING OBS TO CREATE VIDEO LECTURER FOR "PREACHING ISLAMIC HOSPITALITY"

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ABSTRACT

Online learning faces a different set of obstacles than classroom-based learning. So that, it's increases the using of video streaming and lecturer as media for teaching and learning activities. The use of this media in learning al Quran Hadith is intended to attract student's interest in designing blended learning model which combine both classroom-based learning and online learning systems. This media is important in considering that the materials of al Quran Hadith emphasizes more on memory. So that, playing videos repeatedly can help students to remember the materials. The type of this study is a research and development (R & D) which focuses on the developping interactive learning media using OBS studio application to create video lecturer on the material of "preaching Islamic hospitality. The model used in this study is the Borg and Gall's model which is simplified into eight steps, they are: 1). Preliminary research, 2). Planning, 3). Initial product development, 4). Initial product trial / limited trial, 5). Preliminary product enhancement, 6). Larger field trial, 7). Final product test. The products produced from this research are in the form of video lecturer that has been validated by some experts, they are: material experts, media experts and students's responses as user. Based on the assessment and response, it was concluded that the interactive learning media using OBS studio application to create video lecturer was regarded feasible to be used and developed.

Keyword: Learning media, video lecturer, OBS

1. INTRODUCTION

Entering the middle of March 2020, education in Indonesia was faced with extraordinary and unpredictable challenges. Education in schools is forced to adopt high and modern technologies, shifting into online learning, adopting them fully or partially [1]. This modality is only suitable for students in the disruption of 4.0 era and recently done in

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[1] Cyryl Koshyk, *Education in Pandemic Crisis Implementation via ICT Online Technologies*, *International Symposium on Computer Science, Computer Enginering and Educational Technology* (Germany, 2020).

Covid-19 pandemic [2]. Learning in the Covid-19 pandemic cannot be done conventionally. It needs the using blended learning which combine between conventional learning and online learning. It also needs to be brought in the fields of computer science and technologies (ICT) with a strong focus on online learning systems and it's platforms. Learning in this method is often structured with a balance between synchronous and asynchronous approaches.

Synchronous methods of learning involve the points in time where the students are interacting in real-time with either their teacher or other students [3]. These can be carried out by applying and implementing the newest technology, such as: e-module, text or video chat, lectures being delivered via video conference software, e-learning and many other various platforms for online learning that allow an online milieu to simulate structured class events across the geographical distance of the students. Learning with this model, educator does not only give a homework to students, but also guide them to understand the materials [4]. Luckily, since the covid-19 virus storm his hit, the Minister of Education and Cultural (Mendikbud), Mr. Nadiem Makarim has instructed schools in Indonesia to use online applications to support teaching and learning activities during pandemic of covid-19 [5].

However, it is also commonplace for asynchronous methods of learning engagement to outweigh the synchronous methods due to the limited resource of the teacher, the schedules of the students being less structured than a traditional. Student who is attending class at consistent times each week and the ease or flexibility of utilizing the LMS as the primary tool for learning communications, experience, and assessment [6].

The influence of the application of technology in learning in the era of the Covid-19 pandemic brings its own challenges to the world of education, including: 1). Learning emphasizes 'what students do', not what the teacher does, 2). Learning is no longer limited

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[2] Evi Fatimatur Rusydiyah, *Teknologi Pembelajaran (Implementasi Pembelajaran Era 4.0)*, I. (Surabaya: UIN Sunan Ampel Press, 2019). 115

[3] James M. Mathews, "Using a Studio-Based Pedagogy to Engage Students in the Design of Mobile-Based Media," *English Teaching* 9, no. 1 (2010): 87–102.

[4] Resti Sekar Hanisa, "Dampak Pembelajaran Daring Terhadap Perilaku-Perilaku Religius Di Tengah Situasi Social Distancing Akibat Pandemi Covid-19," *Al Ulya Jurnal Pendidikan Islam* 5, no. 2 (2020): 226–238.

[5] Sevima, "5 Kebijakan Pendidikan Masa Darurat Corona," *Sevima*, last modified 2020, https://sevima.com/5-kebijakan-pendidikan-masa-darurat-corona/.

[6] Daniel Kaufmann, "Using OBS to Create Video Lectures for Online Counseling Students," *Journal of Instructional Research* 8, no. 2 (2019): 70–76.

by distance and classrooms, but has led to 'virtual' spaces, 3). From 'paper based' to 'online'. 4). From physical facilities to the network [7].

Multimedia plays a main role for teachers in changing the way and learning styles of students, especially in gathering information and processing it as a part of the learning process [8]. This is a reason for educators to use and develop certain multimedia as a learning media. Multimedia will provide its own variation in online learning process because it can guarantee maximum learning interactions. This interactive multimedia can make students actively involved in learning [9].

There are many kinds of interactive multimedia that can be used in learning, including interactive learning media using OBS studio application to create video lecturer. The use of video lecturer created by using OBS studio application as an interactive learning media has many advantages because OBS studio can support online learning, both in real-time and recording via YouTube, LMS or websites [10].

The use of video lecturer created by using OBS studio application that combines text elements in the form of power points with graphics, images, sound, scene and many sources can be used as an alternative solution [11], especially for learning al Qur'an Hadits which is known as rigid and dogmatic subject matter. Moreover, the theme presented was "preaching Islamic hospitality".

2. LITERATURE REVIEW

a. Interactive learning media

The word media comes from the Latin "medius". It is the plural of the word "medium". It literally means middle, intermediary or introduction [12]. Meanwhile in Arabic, the media is said "*wasaa'il*" (intermediary) or an introduction to messages

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[7] Yohannes Marryono Jamun, "Dampak Teknologi Terhadap Pendidikan," *Widyatama* 20, no. 10 (2018): 175–185.

[8] Marliat & Budiarto Dwi, *Media Dan Metode Pembelajaran*, *Metode Pembelajaran*, I., vol. 03 (Palembang: CV. Amanah, 2010).

[9] Talizaro Tafonao, "Peranan Media Pembelajaran Dalam Meningkatkan Minat Belajar Mahasiswa," *Jurnal Komunikasi Pendidikan* 2, no. 2 (2018): 103.

[10] Daniel Kaufmann, "Using OBS to Create Video Lectures for Online Counseling Students," Journal of Instructional Research 8, no. 2 (2019): 70–76.

[11] Munir, Multimedia Concepts & Applications in Education, vol. 58, 2012.

[12] Zainuddin Tanjung, *Media Pembelajaran*, *Buku Ajar*, 2013.

from sender to message recipient [13]. Susilana and Riyana implicitly say that learning media includes tools that are physically used to convey the content of teaching materials, such as: books, tape recorders, cassettes, video cameras, video recorders, slide films (picture frames), photos, pictures, graphics and others [14].

While, the word learning derived from the basic word 'learn'. It is defined by the American Heritage Dictionary as "to gain knowledge, comprehension or mastery through experience or study" [15]. According to *UU Sisdiknas* Number. 20 Th 2003, learning is a process of interaction between students and educators and learning resources in a learning milieu [16]. H. Malik said that learning media consists of everything used to transmit messages (learning materials). So that, it can stimulate the attention, interest, thoughts and feelings of learners in activities to achieve certain learning objectives [17]. In other words, the components of learning resources or physical vehicles that contain instructional material in the student's environment that stimulates students to learn is called learning media.[18].

b. Video lecturer

Video tutorial consists of two words, they are video and lecturer. Video derived from the Latin word 'vidi' or 'visum', which means seeing or having sight [19]. Video is also defined as an electronic signal processing technology that represents a moving image. Meanwhile, according to the Big Indonesian Dictionary, video means: 1). The part that transmits the image on the television set; 2). A recording of a live picture or television program to be broadcast on a television set [20]. There are two kinds of video, they are: 1) Analog video, which is defined as a video that encodes information in the form of images with varying voltages and or the frequency of a signal, 2) Digital

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[13] Mihmidaty Ya'cub, "Media Pendidikan Perspektif Al Quran Hadits Dan Pengembangannya," *CENDEKIA : Jurnal Studi Keislaman* 4, no. 2 (2018).

[14] Rudi Susilana and Cepi Riyana, Learning Media: Nature, Development, Utilization, and Assessment, Second. (Bandung: CV. Wacana Prima, 2008).

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[16] *Law No. 20 of 2003 concerning SISDIKNAS*, 2003.

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[18] Sukiman, *Pengembangan Media Pembelajaran*, ed. M. Alaika Salmulloh, Pertama. (Yogyakarta: Pedagogia, 2012). 26.

[19] Hamdan Husein Batubara and Delila Sari Batubara, "Penggunaan Video Tutorial Untuk Mendukung Pembelajaran Daring Di Masa Pandemi Virus Corona," *Muallimuna : Jurnal Madrasah Ibtidaiyah* 5, no. 2 (2020): 21.

[20] Tim Penyusun Kamus Pusat Bahasa, *Kamus Besar Bahasa Indonesia* (Jakarta: Pusat Bahasa Depdiknas, 2008). 1608.

video, which is defined as a video consisting of series of digital images that displayed quickly at a constant speed [21].

The word lecturer is defined as: 1). Guidance by a teacher or tutor to someone or some amounts of students, 2). Teaching given by a lecturer [22]. So, the video lecturer is a series of live pictures that are displayed by the teacher which contains learning messages to help students understand a learning material as a form of guidance and visualization of learning models in real situations [23].

c. *Open broadcaster software* (OBS) *studio application*

Open broadcaster software (OBS) studio is free and open-source video recording and livestreaming application that it's easy to make lecturer video as learning materials [24]. It's free because this application can be downloaded and used without any paying [25]. Open source means that the OBS studio application is an equipped with the source code that we can contribute to develop.

This OBS studio application has several advantages, they are: 1). It has a good performance in capturing and mixing video or audio in real time. There are many scenes that contain multiple sources, including images, capture windows, browser windows, text, capture cards, webcams and so on. 2). Unlimited number of scenes can be switched from one scene to another without leaving the program. 3). Powerful, easy-to-use configuration options. This includes duplicating what is already created and adding sources with the new ones. 4). An efficient settings panel and which is equipped with many configuration options which can change each recording or broadcast option [26].

As an alternative learning media for the pandemic era, video lecturer can be used as an alternative media in teaching and learning activities. Researches results from Pep Simo (2010) [27], Iwantara (2014) [28], Hamdan Husain Batubara (2016) [29], Sofyan Hadi

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[21] Saprudin, Abdullah, and A Rasid Haerullah, Ade, Saraha, "EDUKASI - Jurnal Pendidikan," *Edukasi, Jurnal Pendidikan Islam* 13, no. 2 (2015): 454.

[22] Bahasa, *Kamus Besar Bahasa Indonesia*. 1473

[23] Saprudin, Abdullah, and Haerullah, Ade, Saraha, "EDUKASI - Jurnal Pendidikan." 455.

[24] Https://jagad.id/download/obs-studio/, "OBS Studio, Pengertian Kelebihan Dan Kekurangan," 2020.

[25] Ian Paul, "OBS Studio, The Most Powerful Screen Capture Tool," 2021.

[26] Https://jagad.id/download/obs-studio/, "OBS Studio, Pengertian Kelebihan Dan Kekurangan."

[27] Pep Simo et al., "Video Stream and Teaching Channels: Quantitative Analysis of the Use of Low-Cost Educational Videos on the Web," *Procedia - Social and Behavioral Sciences* 2, no. 2 (2010): 2937–2941, http://dx.doi.org/10.1016/j.sbspro.2010.03.444.

(2017) [30], Edy Candra (2018) [31], and Sridevi (2019) [32], all of them show that the positive impact of using video in learning as an effective educational media. However, the problem currently plaguing educators is how to develop them coherently, so that, they become attractive and effective teaching material. That's why the author presents research on developing interactive learning media using OBS studio application to create video lecturer by implementing the Borg & Gall model.

3. METHOD

The type of this study is research and development. This research incudes activities that teachers undertake to innovate and introduce new products, services, and test the extent of products effectiveness [33]. This research is focused on the developing interactive learning media, especially interactive video lecturer using open broadcaster software (OBS) studio application. Indeed, research on developing interactive learning media using video lecturer is not entirely new, but it has a different with other researches, where using OBS studio application has more complete scenes and sources than another research developed before.

The research frameworks developed in this study follow Borg & Gall's model, whose step consists of ten steps, they are: 1). Preliminary research, 2). Planning, 3). Initial product development, 4). Initial product trial / limited trial, 5). Preliminary product enhancement, 6). Larger field trial, 7). Product completion of wider field test result, 8). Final product test, 9). Revision or final product completion, 10). Dissemination and implementation [34].

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[28] IW Iwantara, I W. Sadia, and I K. Suma, "The Influence of Using Youtube Video Media in Students' Understanding of Concepts," E-Journal of Ganesha 4 University of Education's Postgraduate Program, no. 1 (2014): 1–13.

[29] Hamdan Husein Batubara and Dessy Noor Ariani, "Using Video as a Media for Learning Mathematics in Elementary Schools / MIs," Muallimuna: Journal of Madrasah Ibtidaiyah 2, no. 1 (2016): 47.

[30] Edy Chandra, "Youtube, Citra Media Informasi Interaktif Atau Media Penyampaian Aspirasi Pribadi," *Jurnal Muara Ilmu Sosial, Humaniora, dan Seni* 1, no. 2 (2018): 406.

[31] Ibid.

[32] M. Sridevi and Mayuri Kharde, "Video Summarization Using Highlight Detection and Pairwise Deep Ranking Model," Procedia Computer Science 167, no. 2019 (2020): 1839–1848, https://doi.org/10.1016/j.procs.2020.03.203.

[33] Sugiyono, "Metode Penelitian Kuantitatif, Kuantitatif, Dan R & D" (Bandung: Alfabeta, 2017).

[34] Taufiqurrochman, "Model Penelitian Pengembangan Borg and Gall (1983)," *Taufiq.Net*, 2020, https://www.taufiq.net/2019/09/model-penelitian-pengembangan-borg-and.html.

Due to limited time and funds, the steps carried out in this study are only involves 8 (eight) steps. While the other three steps are developed in further research. Explicitly, the stages and research steps of the Borg & Gall model can be described in the figure below [35]:
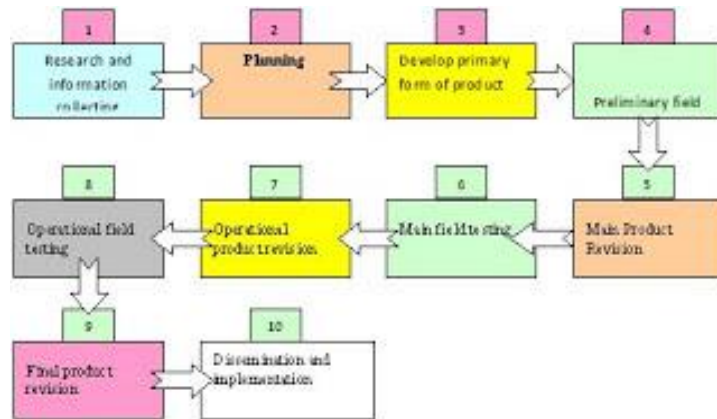

Figure 1. Development steps according to Borg and Gall

The data in this study were achieved by a questionnaire. The next step is analysis. Quantitative data obtained from the results of the assessment from material experts, media experts and student responses as users. Furthermore, this data was analyzed using qualitative descriptive statistics. The data analysis technique uses descriptive statistics which are, then, converted into qualitative data on a scale of 5 [36], as shown in table 1.

Score	Criteria	Range
5	Very good	$X > X_i + 1.80\ Sb_i$
4	Good	$X_i + 0.60\ Sb_i < X \le X_i + 1.80\ Sb_i$
3	Enough	$X_i - 0.60 Sb_i < X \le X_i + 0.60 Sb_i$
2	Less	$X_i - 1.80\ Sb_i < X \le X_i - 0.60\ Sb_i$
1	Very less	$X \le X_i - 1,80 Sb_i$

Table 1. Criteria for the results of expert and user responses

Note:

X_i = Ideal mean = ½ (max score + min score)

Sb_i = Ideal deviation standard = 1 6 ∕ (max score - min score)

X = actual score

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[35] Aini Mulyana, "Definiton, Purpose and Steps of Research and Development," (https://ainamulyana.blogspot.com/2016/08/definition-purpose-and-steps-of.html, 2016).
[36] Sugiyono, "Metode Penelitian Kuantitatif, Kuantitatif, Dan R & D." 93

4. RESULTS AND DISCUSSION

Referring to the research methods discussed earlier, the following discussion will describe the development research steps according to Borg and Gall, they are:

a. Preliminary research

The preliminary step in this research is focused on the study of the needs analysis and character of students. The needs analysis is based on the urgent need for innovative learning media to support mixed learning, between an online learning and classroom based, carried out during the second hit of the covid-19 pandemic, where learning is compared between conventional learning in the classroom with online learning in distance learning via online. For this reason, video lecturer is considered as a bridge that combine and mix learning system in which students are equipped with the teaching materials developed, and educators just need to know or to examine the results of student's comprehension toward learning materials given before.

From the aspect of student characteristic, in developing media, educators need to consider a basic knowledge and student skills [37]. The samples are students of IIA 1 at XII grade which consist of 9 boys and 21 girls. Most of them come from villages near the MAN 2 Bojonegoro. From the aspect of handphone signal, they easily reach signal to join a virtual class with their handphone. In addition, student XII grade have an ability in operating a smart phone with its kinds of applications and platforms. Thus, the online learning process will not become a problem for them in the implementation of online learning by using video lecturer as an interactive learning media created by using OBS studio application.

b. Planning

In planning, there are several activities done, such as: determining basic competency (KD), determining learning outcome indicators, determining learning objectives, formulating materials consisting of facts, concepts, and principles that can support competency achievement, formulating learning activities, learning models, strategies and methods, as well as developing assessment instruments to measure learning results, as well as planning for assessment / tests and remedies and

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[37] Sukiman, *Pengembangan Media Pembelajaran*. 55

enrichment. All of this planning written in a learning plan (RPP) document that is made before the day of teaching and learning activities[38].

c. Initial product development

The product created and developed in this study is a video lecturer made using the 32-bit of open broadcaster studio (OBS) application. After the video made, then, it will be shown in a real time learning via streaming or YouTube in online class design. In addition, videos are also recorded to enable students play them back when they get difficult materials to understand. Therefore, each student is given a YouTube link. So that, they can access videos or download them directly from YouTube. To view the product, you can see at the figure below:

Figure 2. An example of a learning video feature using OBS studio application

d. Initial product trial / limited trial

At the trial stage, it takes a small group of students in IIA 1, XII grade at MAN 2 Bojonegoro. It's on January 9th, 2021. The teacher gives a questionnaire consisting of ten statements to six students. It shown that there are two students have high-ability, two other have medium-ability, and two students have low-ability. This questionnaire uses a Likert scale which has a gradation from strongly agree to strongly disagree which can be categorized as follows: strongly agree (SA), agree (A), disagree (D), and

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[38] Ibid. 54

strongly disagree (SD). The results of the percentage of student responses in limited group trials are presented in the following diagram:
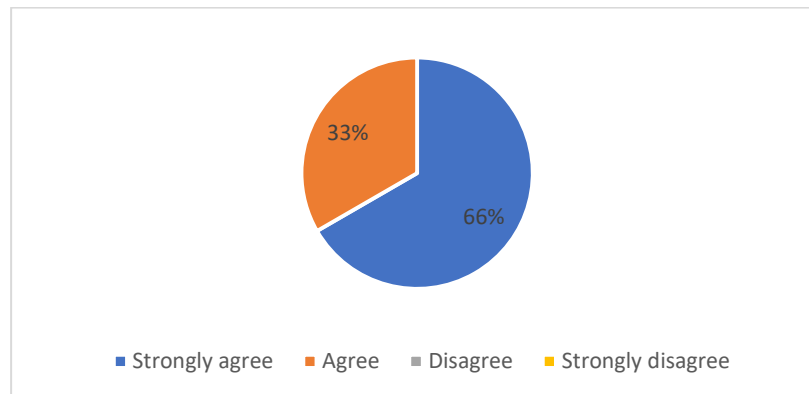

Figure 3. Diagram of student response results in limited group evaluation

From the results of the limited trials, it's known that four students (67%) seemed enthusiastic and very agreeable, and the remaining of two other students (33%) agreed with the media presented on the material of "preaching Islamic hospitality".

e. Preliminary product enhancement

From the initial product trial / limited trial above, it's found that there is one of the slides shown in the video contained too much material. So that, it's needed to be split into two slides to make it easier to understand. In addition, there is another revision asked by the media expert where the teacher planned to use cards to match, but it must be deleted. The teacher just to make a display of two column of sentences to match (matching sentences).

f. Larger field trial

The larger and extensive trial takes all of students of IIA 1, XII grade at MAN 2 Bojonegoro which held on Saturday, January 9th, 16th and 23rd, 2021. It involves 30 students, consisting of 9 male students and 21 female students. The larger field trial was conducted to obtain comprehensive information about the quality of video lecturer media products using the OBS studio application. This larger field trial phase is also intended to see the practicality of the media made. Based on this trial, it's concluded that the video tutorial media using OBS studio application were regarded effective. This effectiveness of the media can be seen from the results of the students response scores after using the video tutorial using OBS studio application. This trial is conducted after the completion of teaching and learning activity process where

students are given one hour to do daily assessment (PH). From these 30 students, there are 24 students or 87 % get more than KKM and stated complete, the other 6 students or 23 % get too little scores and stated incomplete.
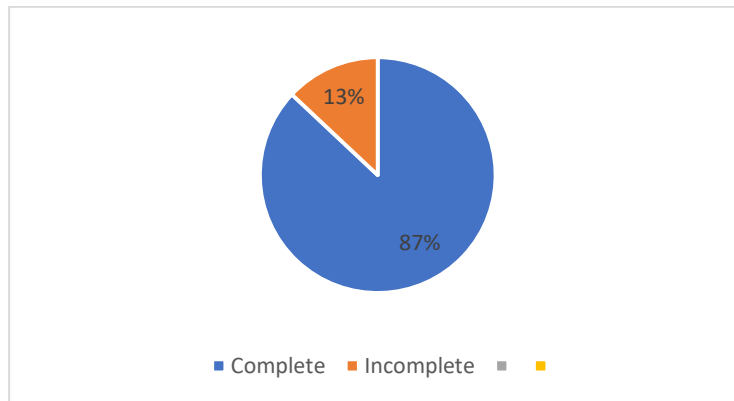

Figure 4. Diagram of daily assessment test results in limited groups

Thus, the use of video lecturer media using the OBS studio application for the material "preaching Islamic hospitality" can be said effective with the achievement of completeness of 86.7%.

g. Final product test

The final product test is obtained from the assessment from material expert, media experts and student's response. The assessment from both two experts about video lecturer using OBS studio application, under the title of "preaching Islamic hospitality", shows that it's regarded as "very good" and can be said that it's valid. So that, it can be disseminated in all around MAN 2 Bojonegoro. The following table shows the results of the questionnaire recapitulation from the three assessors in the following table.

Assessor / Validator	Rating result	Percentage	Category
Material expert	76	83%	Very good
Media expert	55	76%	Very good
Student (user)	18	75%	Good
Average		78%	Very good

Table 2. Rating scores from experts and users

5. CONCLUSION

Based on the discussion above, it can be concluded that video lecturer as an interactive learning media created using OBS studio application can be used in teaching and learning activities in the school and it's regarded as a good innovation to motivate students in joining learning activities during the Covid-19 pandemic. The mixed learning that has been conducted by mixing class room based and distance learning will be more completed by this innovation. So that, the results of student comprehension can be increased.

From the aspect of feasibility, the results of the questionnaire from material experts, media experts and student's response as users show that video lecturer as an interactive learning media created using OBS studio application on the material of "preaching Islamic hospitality" get the very good category, the assessment of material experts obtained a percentage of 83%, while the media expert's assessment obtained a percentage of 76%. Meanwhile, the response of students as user obtained a percentage of 75%. If we make an average for the three percentages above, it is found that the percentage rate is 78% which it can be categorized very good. Base on this data, it can be concluded that interactive learning media using OBS studio application to create video lecturer is regarded very suitable to use as an alternative learning media for educators to help them improving student's comprehension to the subject matter.

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