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The Role of Validation Expert in Improving the Quality of Material, Language and Visuals in the Development of Hybrid Learning Guides-Based on OBS Application

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ABSTRACT

With the Covid-19 Pandemic, the teacher's role is not only as a teacher in a formal school. This research generally aims to develop teaching materials in Hybrid learning by using video recording and streaming with the Open Broadcaster Software (OBS) application. This research uses research and development procedures or research and development. The research model used in this study is the ADDIE development model. This model has five research stages: Analysis, Design, Development, Implementation, and Evaluation. The results showed that the teaching materials developed in the Hybrid Learning method through Video Recording and streaming assisted by the Open Broadcaster Software (OBS) application were quite good. The results of expert judgments carried out by material experts, media experts, and linguists showed that the average score for the material aspect was 3.9; the media validation score was 3.9, and the language aspect validation score was 3.45. The results of this study indicate that the teaching materials developed in the Hybrid Learning method through Video Recording and streaming assisted by the Open Broadcaster Software (OBS) application are suitable for learning..

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1. INTRODUCTION

The development of education currently is linear with the development of science and technology. Technology has become an important instrument that is integrated into the education and learning process. This is certainly a condition that needs to be utilized as much as possible. The combination of several media used as supporting tools in the learning process can have a reasonable implication in increasing learning effectiveness.

Previous research has been conducted regarding the use of digital technology-based media, showing an increase in students' abilities and performance and technological interventions in learning media development. In general, according to Amri and Rohman (2013), the use of media includes: (1) clarifying messages so that they are not too verbal; (2) overcoming the limitations of time, energy, and senses; (3) generate enthusiasm for learning; (4) enable students to learn independently according to their visual, auditory and kinaesthetic talents and abilities; (5) giving the same stimulus, equating experience and giving rise to the same perception.

There are many significant influences related to this. Increasing interaction between students, the interaction between students and teachers, increasing students' interests in learning and making it easier for teachers to convey material more efficiently and effectively are fundamental influences of the use of technology-based media (Siska & Hadiwinarto, 2022; Wahyuningsih & Putra, 2020; Wiyono, Indeswari, & Prestiadi., 2021).

In addition, the success of the learning process cannot be separated from the various primary and supporting components of learning. Teachers, students, curriculum, environment, and suitable media in conveying learning are the most critical factors in the teaching and learning process so that students gain knowledge according to their interests and needs (Adisel, et al., 2022; Dolong, 2016; Falahudin, 2014; Pane & Dasopang, 2017).

Multimedia-based learning is a form of adaptation to the demands of 21st-century learning. This century is openness or globalization, meaning that in the 21st century, many fundamental changes are very different from the order of life in the previous century (Arifin, et al., 2021; Yunus & Mitrohardjono, 2020; Zhang, 2005). There are many competencies that students must have to be able to compete in this era. To prepare them to adapt to this era, a teacher must have good digital literacy, good adaptability to technological developments in learning, and a new paradigm in viewing a learning process (Borthwick & Hansen, 2017; Falloon, 2020; Hutahaean, 2019).

Learners, in the end, must have the competence to solve problems. They are expected to have the ability to see the real world, which is full of problems to be solved. This requires the ability to analyze, find ways to overcome them and try the solutions that have been formulated.

An educator is expected to be able to utilize technology to facilitate innovative learning activities optimally. Learner-centered learning strategies and methods are suitable for encouraging students' knowledge and skills development. In this global world, it is not enough for students to only know information and memorize facts; they should be able to think critically and solve problems, and have the skills to communicate and work together. In addition, students must be able to adapt, have initiative, access and analyze information and have a high curiosity.

In a learning process, the teacher must be able to create a learning atmosphere that can develop students' abilities so that they become intelligent, skilled, and have high morals and a social cue so that they can live independently as social beings. A teacher must be able to

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choose the suitable model and skills that support his competence. One of these skills is how a teacher can develop technology-based learning media.

Previous research was conducted to test the effectiveness of video data in helping improve presentation skills. The results of the study also revealed that the use of video recordings helped improve graduate students' presentation skills in the areas of verbal and non-verbal communication, organization, and audience engagement. This study shows that video recordings effectively improve their presentation skills (Guo, 2013).

In general, research related to recorders shows a positive response to learning recordings using recordings. Several recent studies (Kinash, Brand, & Mathew, 2012; Maynor, Barrickman, Stamatakis, & Elliott, 2013; Van Zanten, Somogyi, & Curro, 2012) report that students value recordings and use them mainly to review learning. Many studies have also found that students value the option to study at their own pace, for example, doing required reading immediately before listening to a recording to maximize their study time to be more effective. Students said they could pause the recording whenever their attention was reduced (Tarr et al., 2015).

Yeung et al. (2016) found that frequently absent students use recorded lectures to make up for missing classes. In addition, students also use a video conferencing application, namely Google Meet, which has a record meeting feature so that if they are unable to take part in a video conference session due to connection problem, they will be able to play back the recordings so they will be able to catch up the materials (Elizabeth et al., 2021).

Learning methods and information technology meet with learning strategies to create a new environment called the learning model. Based on this assumption, the researcher wants to develop recording and streaming media with the help of Open Broadcast Software (OBS), so the learning process will be more effective. The development of recording and streaming media with the help of Open Broadcast Software (OBS) is expected to assist educators in delivering more exciting and innovative learning materials to students so that they are more motivated to learn (Dito, et al., 2021; Fathurohman, 2020). This study aims to determine the theoretical validity of the product developed in the form of teaching materials used in hybrid learning assisted by Open Broadcast Software (OBS).

2. METHODOLOGY

This research uses research and development procedures. The research model that will be used in this study is the ADDIE development model. ADDIE has five research stages: Analysis, Design, Development, Implementation, and Evaluation (Branch, 2009).The development stage is to develop teaching materials in Hybrid Learning through video recording and to stream with the Open Broadcaster Software (OBS) application. In a further development, the feasibility (validity and practicality) of the method to be developed was examined and validated by media experts, material experts, and linguists.

This research involved 3 experts in their field: media experts, material experts, and linguists. Data collection is carried out by the questionnaire method. Data analysis is carried out using descriptive statistics and analytical techniques to reveal the meaning of the data.

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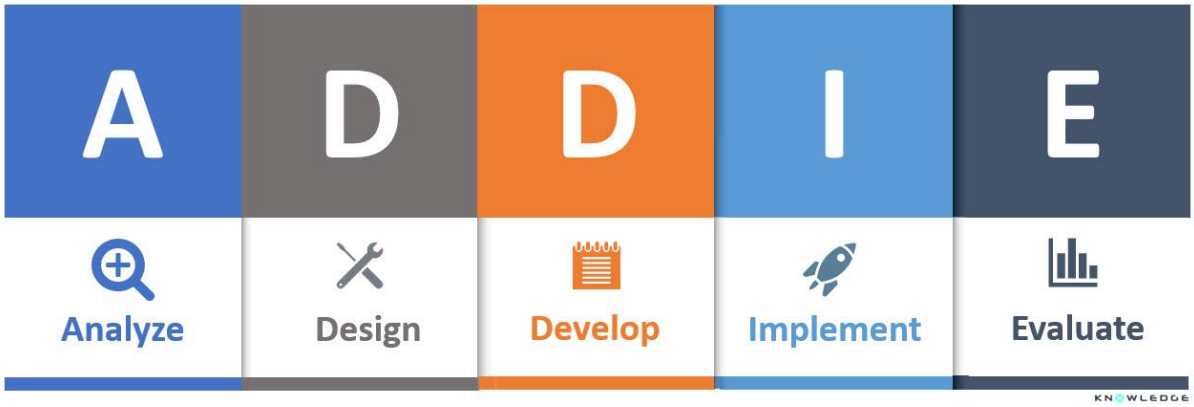

Figure 1. ADDIE Development Model

Identify a cause gap between desire and reality in the learning process. At this stage, the process carried out includes 1. I am analyzing performance gaps in learners 2 and making observations and interviews with respondents, namely educators. Verify the desired performance as well as the methods presented. The steps taken are 1. Setting performance objectives, 2. Collecting data, and 3. Designing the product to be produced. Generate and verify data sources. The steps taken are 1. They are producing Prototype 2. Choosing supporting media for teaching material products, 3. Perform revisions with experts. Preparing the research target environment. The steps taken are to conduct field trials of the products produced. Evaluation is an effort to assess product quality and field trial processes before and after implementation. The steps taken are to carry out an overall evaluation.

3. RESULTS & DISCUSSION

3.1 Development of Hybrid Learning methods through video recording and streaming using Open Broadcaster Software (OBS)

This study uses a research and development approach or research and development. The ADDIE research and development model used in this research has procedures arranged in systematic sequences of activities at each stage of development. There are five stages, namely (1) Analysis, (2) Design, (3) Development, (4) Implementation, and ends with (5) Evaluation stage. The research product that will be developed in this study is teaching materials in Hybrid learning through video recording and streaming using Open Broadcaster Software (OBS).

The analysis design and development stage was carried out to develop teaching materials. In developing the learning method, the feasibility (validity and practicality) of the method to be developed will be seen and validated by media and material experts. The stages of development carried out include 1). Stages of needs analysis development of Hybrid Learning through Video Recording and Streaming with the Open Broadcaster Software (OBS) application. At this stage, identification of (1). Perceptions of Educators on the need for innovative learning Models, (2). Learning Models Used During the Pandemic (3). Platforms Used During the Pandemic Period, (4) Knowledge of educators about the Open Broadcaster Software (OBS) Application, and (5). The expected features are in the applications used in hybrid learning. 2). The design and development stage includes the preparation of instructional objectives, the preparation of assessment instruments, the preparation of instructional strategies, and the development of learning materials. 3). The evaluation stage

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consists of theoretical and empirical validation. Theoretical validation is carried out by expert judgment (design experts, media experts, material experts, and language experts.

The results of this study will discuss several important things including the experience of the teacher, experience in conducting counseling, skills, needs and information/knowledge needed in conducting counseling. Based on the data obtained, the majority of teachers already have experience as extension workers or trainers. Table 1 shows the percentage of teachers who have and do not have experience in becoming extension workers/trainers.

3.2 Theoretical Eligibility of Hybrid Learning through Open Broadcaster Software (OBS) Assisted Video and Streaming Recordes

The results of developing Hybrid Learning through video recording and streaming using Open Broadcaster Software (OBS) have been validated through theoretical tests. Several experts were judged according to their respective fields of expertise: media experts, material experts, and language experts.

The feasibility test on aspects of media design includes four aspects of assessment: material content, physical feasibility (size), cover design, and content design. These four aspects are explained into 29 indicators. The feasibility test on material aspects for the development of Hybrid Learning through video recording and streaming using Open Broadcaster Software (OBS) was carried out by material experts covering six aspects which were developed into 20 indicators. The aspects assessed include the components of teaching materials, conformity with the characteristics of students, presentation, the material's accuracy, and the material's feasibility. As for the language aspect feasibility test includes the suitability of language use, term consistency, attractiveness, and content design.

The data from the validation results of media experts, material experts, and linguists can be seen in the following table;

Table 1. Media Expert Validator Results

Aspect	Score	Category
Material Content	3.0	Good Enough
Physical Eligibility	4.5	Good
Cover Design	4.2	Good
Content Design	4.0	Good
Average	3.9	Good Enough

From the results of media expert validation, the assessment results for the material content aspect were 3.0, which was categorized as quite good, and physical feasibility had a score of 4.5 in the excellent category. The scores obtained for the cover design and content design were 4.2 and 4.0, respectively, categorized as good.

Table 2. Material Expert Validator Results

Aspect	Score	Category
Components of Teaching Materials	4.0	Good
Compliance with user characteristics	3.0	Good Enough
Serving	4.0	Good
Accuracy of the Material	4.2	Good
Eligibility of Materials	4.3	Good

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Average	3.9	Good Enough

From the material expert validation results, the assessment results for the component aspects of teaching materials, presentation, accuracy, and feasibility of the material were obtained with scores of 4.0, 4.0, 4.2, and 4.3 in the good category. As for conformity with user characteristics, a score of 3.0 is obtained with a reasonably good category.

Table 3. Linguist Validator Results

Aspect	Score	Category
Language suitability	3.0	Good Enough
Consistency of term usage	4.5	Good
Attraction	4.2	Good
Content design	4.0	Good
Average	3.45	Good Enough

From the validation results of linguists, the assessment results for the suitability aspect of language use obtained a score of 3 in the good category. For the aspects of consistency in the use of terms, attractiveness, and content design, scores of 4.5, 4.2, and 4.0 were obtained, all of which were in the excellent category. From the data generated in the three tables above, it can be seen that the scores given by experts to the development of Hybrid Learning through video recording and streaming using Open Broadcaster Software (OBS) successively by media experts, material experts, and language experts are 3.9, 3.9 and 3.45 which are all quite good. This means that theoretically, the products produced in developing teaching materials in Hybrid Learning through video recording and streaming using Open Broadcaster Software (OBS) are good enough/feasible enough to be used in learning (Hayaty, et al., 2021; Qorib & Zaniyati, 2021).

Figure 2. Display Learning Based on OBS

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Several other studies show that hybrid learning, which combines elements of online and face-to-face learning, can improve student engagement and learning outcomes. As research conducted by Nortvig (2018) revealed that the online environment, interactions between students, teachers, and content are important factors in hybrid learning. The use of technology such as OBS for video recording and streaming has been proven to help in presenting learning material in an interactive and interesting manner (Kristandl, 2021). The quality of teaching materials in hybrid learning, including clarity of language, attractive content design, and consistent use of terms is the focus of research related to hybrid learning (Hall & Villareal, 2015; Keshta & Harb, 2013; Suryadharma et al., 2021). Involving experts in the development of teaching materials, including media experts, material experts and language experts, can improve the quality of the teaching materials produced.

In addition, the evaluation and validation process by experts is very important to ensure that the teaching materials developed meet the specified quality standards. Experts have in-depth knowledge and experience in the field related to the learning materials being developed (Kurilovas et al., 2014). They can assess the accuracy, completeness, and relevance of the material to the learning objectives (Granić, & Ćukušić, 2011). Evaluation by experts is objective because it is not influenced by bias or personal preferences (Cahyaningrum et al., 2021; Granić, & Ćukušić, 2011). Apart from that, experts also ensure that learning materials meet high quality standards, this allows for improvements and refinements to the materials before they are used in learning (Adelstein & Barbour, 2017).

4 CONCLUSION

The development of teaching materials in Hybrid learning through video recording and streaming using Open Broadcaster Software (OBS) begins with a needs analysis. The design and development stage uses a research and development approach. The ADDIE research and development model used in this research has procedures arranged in systematic sequences of activities at each stage of development. There are five stages, namely (1) Analysis, (2) Design, (3) Development, (4) Implementation, and ends with (5) Evaluation stage.

Theoretical evaluation is carried out by expert judgment, namely, media, material, and language experts. The results of empirical validation show that the scores given by experts to develop teaching materials successively by media experts, materials experts, and language experts are 3.9, 3.9, and 3.45, which are all categorized as quite good. This means that theoretically, the products produced in the development of Hybrid Learning through video recording and streaming using Open Broadcaster Software (OBS) are good enough and feasible to be used in learning.

REFERENCES

Adelstein, D., & Barbour, M. K. (2017). Improving the K-12 online course design review process: Experts weigh in on iNACOL National Standards for Quality Online Courses. *The International Review of Research in Open and Distributed Learning*, *18*(3), 48-82.

Adisel, A., Aprilia, Z. U., Putra, R., & Prastiyo, T. (2022). Komponen-komponen pembelajaran dalam Kurikulum 2013 pada mata pelajaran IPS. *JOEAI (Journal of Education and Instruction), 5*(1), 298-304.

Amri, S., & Rohman, M. (2013). Strategi pengembangan sistem dan desain pembelajaran. Jakarta: Prestasi Pusaka Karya.

DOI: https://doi.org/10.17509/pdgia.v20i3.52422
p- ISSN p. ISSN 1693-5276 e-ISSN 2579-7700

Arifin, Z., Tegeh, I. M., & Sukmana, A. I. W. I. Y. (2021). Independent learning through interactive multimedia based on problem based learning. *Jurnal Edutech Undiksha, 9*(2), 244-253.

Borthwick, A. C., & Hansen, R. (2017). Digital literacy in teacher education: Are teacher educators competent?. *Journal of Digital Learning in Teacher Education, 33*(2), 46-48.

Branch, R. M. (2009). Instructional design: The ADDIE approach (Vol. 722). New York: Springer.

Cahyaningrum, Y., Suryono, S., & Warsito, B. (2021). Fuzzy-Expert System for Indicator and Quality Evaluation of Teaching and Learning Processes Online Study Programs. In *E3S Web of Conferences* (Vol. 317, p. 05021). EDP Sciences.

Dito, A., Audrey, J., Saputra, R. V. A., & Ardiningtias, S. R. (2021). Pelatihan pembuatan media pembelajaran daring bagi guru SMA menggunakan Open Broadcaster software. *Jurnal Nasional Pengabdian Masyarakat, 2*(1), 28-38.

Dolong, J. (2016). Teknik analisis dalam komponen pembelajaran. *Jurnal Inspiratif Pendidikan, 5*(2), 293-300.

Elizabeth, Triana, et.al. (2021). Pelatihan aplikasi screen recorder dan video conference guna meningkatkan proses belajar mengajar. *ABSYARA: Jurnal Pengabdian Pada Masyarakat. 2*(1), 49 – 55.

Falahudin, I. (2014). Pemanfaatan media dalam pembelajaran*. Jurnal Lingkar Widyaiswara, 1*(4), 104-117.

Falloon, G. (2020). From digital literacy to digital competence: the teacher digital competency (TDC) framework. *Educational Technology Research and Development, 68*, 2449-2472.

Fathurohman, I. (2020). Pembelajaran mata kuliah keterampilan berbahasa indonesia melalui live streaming youtube berbasis Open Broadcast Software dan Whatsapp di era pandemi Covid 19. *Jurnal Educatio FKIP UNMA, 6*(2), 668-675.

Granić, A., & Ćukušić, M. (2011). Usability testing and expert inspections complemented by educational evaluation: A case study of an e-learning platform. *Journal of Educational Technology & Society*, *14*(2), 107-123.

Guo, R. X. (2013). The use of video recordings as an effective tool to improve presentation skills. *Polyglossia, 24*, 92-101.

Hall, S., & Villareal, D. (2015). The Hybrid Advantage: Graduate Student Perspectives of Hybrid Education Courses. *International Journal of Teaching and Learning in Higher Education*, *27*(1), 69-80.

Hayaty, M., Wahyuni, S. N., Putra, A. D., Maemunah, M., Satya, B., & Nurani, D. (2021). Pelatihan pembuatan konten pembelajaran menggunakan Open Broadcast Software. *Abdiformatika: Jurnal Pengabdian Masyarakat Informatika, 1*(2), 61-67.

Hutahaean, L. A. (2019). Pemanfaatan E-Module interaktif sebagai media pembelajaran di era digital. Digital Library Universitas Negeri Medan.

DOI: https://doi.org/10.17509/pdgia.v20i3.52422
p- ISSN p. ISSN 1693-5276 e-ISSN 2579-7700

Keshta, A. S., & Harb, I. I. (2013). The effectiveness of a blended learning program on developing Palestinian tenth graders' English writing skills. *Education Journal*, *2*(6), 208-221.

Kinash, S., Brand, J., & Mathew, T. (2012). Challenging mobile learning discourse through research: Student perceptions of Blackboard Mobile Learn and iPads. *Australasian journal of educational technology, 28*(4), 639-655.

Kristandl, G. (2021). "All the world'sa stage"–the Open Broadcaster Software (OBS) as enabling technology to overcome restrictions in online teaching. *Compass: The Journal of Learning and Teaching at the University of Greenwich*, *14*(2), 1-16.

Kurilovas, E., Serikoviene, S., & Vuorikari, R. (2014). Expert centred vs learner centred approach for evaluating quality and reusability of learning objects. *Computers in Human Behavior*, *30*, 526-534.

Maynor, L. M., Barrickman, A. L., Stamatakis, M. K., & Elliott, D. P. (2013). Student and faculty perceptions of lecture recording in a doctor of pharmacy curriculum. *American journal of pharmaceutical education, 77*(8), 1-7 .

Nortvig, A. M., Petersen, A. K., & Balle, S. H. (2018). A literature review of the factors influencing e-learning and blended learning in relation to learning outcome, student satisfaction and engagement. *Electronic Journal of E-learning*, *16*(1), pp46-55.

Pane, A., & Dasopang, M. D. (2017). Belajar dan pembelajaran. *Fitrah: Jurnal Kajian Ilmu-Ilmu Keislaman, 3*(2), 333-352.

Qorib, A., & Zaniyati, H. S. (2021). Penggunaan Open Broadcast Software Studio dalam mendesain video pembelajaran era pandemi. *Syaikhuna: Jurnal Pendidikan Dan Pranata Islam, 12*(1), 87-98.

Siska, J., & Hadiwinarto, H. (2022). Learning islamic religious education in state elementary schools using technology-based media. *Jurnal basicedu, 6*(1), 1-7.

Suryadharma, I. G. A., Jampel, I. N., & Sudarma, I. K. (2021). Interactive Learning: The Use of Multimedia with Hybrid Models in Balinese Language Subjects for Grade VII Students. *Indonesian Journal Of Educational Research and Review*, 514-524.

Tarr, J., Farrington, S., Pittaway, J., Bird, M. L., Hoffman, K., Douglas, T., & Beh, C. L. (2015). Challenges for this place or any place: Student preferences for lecture 'places' in a blended learning environment. In *38th HERDSA Annual International Conference* (Vol. 38, pp. 446-458).

Van Zanten, R., Somogyi, S., & Curro, G. (2012). Purpose and preference in educational podcasting. *British Journal of Educational Technology, 43*(1), 130-138.

Wahyuningsih, S., & Putra, I. N. T. D. (2020). The implementation of technology-based media in improving english speaking skill of hospitality students in Mataram tourism college. *Jo-ELT (Journal of English Language Teaching), 7*(2), 96-104.

Wiyono, B. B., Indreswari, H., & Prestiadi, D. (2021, June). The use of technology-based communication media in the teaching-learning interaction of educational study

DOI: https://doi.org/10.17509/pdgia.v20i3.52422
p- ISSN p. ISSN 1693-5276 e-ISSN 2579-7700

programs in the pandemic of Covid 19. *In IEEE 11th International Conference on Electronics Information and Emergency Communication (ICEIEC)* (pp. 1-5). IEEE.

Yeung, A., Raju, S., & Sharma, M. D. (2016). Online lecture recordings and lecture attendance: investigating student preferences in a large first year psychology course. *Journal of Learning Design, 9*(1), 55-71.

Yunus, M., & Mitrohardjono, M. (2020). Pengembangan tehnologi di era industri 4.0 dalam pengelolaan pendidikan Sekolah Dasar Islam Plus Baitul Maal. *Jurnal Tahdzibi: Manajemen Pendidikan Islam*, *3*(2), 129-138.

Zhang, D. (2005). Interactive multimedia-based e-learning: A study of effectiveness. *The American Journal of Distance Education, 19*(3), 149-162.

DOI: https://doi.org/10.17509/pdgia.v20i3.52422
p- ISSN p. ISSN 1693-5276 e-ISSN 2579-7700