

Utilization of online learning media during the COVID-19 pandemic in teaching and learning activities by teachers at MTs muhammadiyah karangkajen

Nur Fitri Mutmainah^{a,1,*}, Silvi Lailatul Mahfida^{b,2}

^a Public Administration, Faculty of Economic, Social, and Humaniora Sciences, Universitas 'Aisyiyah Yogyakarta, Nogotirto, Gamping, Sleman 55292, Indonesia

^b Nutrition, Faculty of Helath Sciences, Universitas 'Aisyiyah Yogyakarta, Nogotirto, Gamping, Sleman 55292, Indonesia

¹ nurfitri@unisyogya.ac.id; ² silvilailatul@unisyogya.ac.id

* Corresponding Author

ABSTRACT

The Covid-19 pandemic has forced the government to issue regulations for various sectors including the education sector to reduce face-to-face learning activities so that teaching and learning activities were carried out online. Some of the teachers of MTs Karangajen still have not mastered digital media so that teachers find it difficult to prepare effective media and materials for students. Training for teachers are needed to master the skills of preparing learning materials digitally. The expected impact is that teachers are able to design learning media independently and can be better understood by students. The purpose of this activity is to provide understanding and train teachers to be able to use and implement online learning by optimizing powerpoints and learning videos. The method of activity is observation, socialization and training. A total of 15 teachers participated in the activities held at the school. All participants can access training materials online and actively participate in the training. The results of the activity are in the form of a design of learning materials made by the trainee teachers themselves. It is hoped that the design can be implemented in more effective learning and improve student understanding.

KEYWORDS

Online;
Media;
Learning;
Training;
Teachers



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1. Introduction

The learning process is essentially a two-way interaction process that involves communication between teachers and students. This communication process consists of the delivery of messages (learning materials) between the sender (teacher) to the recipient (students). The message conveyed requires the use of appropriate media so that learning can run effectively and efficiently. This condition causes the use of learning media to be one of the supporting factors for the optimal learning process. Learning media are all tools and materials that can be used to achieve educational goals such as radio, television, books, newspapers, magazines, and so on. The importance of learning media in supporting the learning process is often overlooked by teachers for various reasons. There are several reasons that teachers have not used the right learning media, including the limited time to prepare them, it is difficult to find the right media, and also the unavailability of sufficient funds.

Research on learning during the COVID-19 pandemic has been studied by previous researchers. Impact of the COVID-19 pandemic on Caribbean Medical Students: A cross-sectional study investigated by Thind [1]. Students' perspectives on distance learning during the COVID-19 pandemic: A case study of Western Michigan University, USA researched by Al-Mawee [2]. The WhatsApp application to support online learning during the COVID-19 pandemic in Indonesia was researched by Mulyono [3]. Teachers' attitudes towards the use of social media (SM) in online learning in the midst of the COVID-19 pandemic: the effect of using social media by teachers and scholars during physical distancing was studied by Jogeza [4]. Evaluating the knowledge and skills of surgical clerks during the covid 19 pandemic: The experience of single centers in Indonesia was researched by Setiawan [5]. Reverse class: How Bangladeshi

higher education institutions (HEIs) can move forward during the COVID-19 pandemic is researched by Khan [6]. The combination of virtual slides and online lecture learning in oral pathology laboratory courses is a suitable teaching mode during the COVID-19 pandemic studied by Yu [7]. Educational response to the COVID 19 pandemic, special edition proposed by UNICEF: Editorial review researched by Reuge [8]. The Malaysian Undergraduate Challenges Dataset and Future Preferences for E-learning During the COVID-19 Pandemic were researched by Looi [9]. The Impact of the COVID-19 Pandemic on Student Learning in Universities in Afghanistan was investigated by Noori [10].

Using the extended Technology Acceptance Model to understand the use of e-learning by students during Covid-19: the context of Indonesian sports science education researched by [11]. Suddenly completely online: A case study of a mixed university course moving online during the Covid-19 pandemic was researched by [12]. Jordanian academic ophthalmologists' perceptions and experiences with E-Learning for undergraduate programs during the COVID-19 pandemic were investigated by [13]. The prospects and limitations of e-learning applications in private universities amid the COVID-19 lockdown in Nigeria were investigated by [14]. Dataset of e-learning System Acceptance among College Students in the Condition of the COVID-19 Pandemic was studied by [15]. The role of social media in spreading panic among primary and secondary school students during the COVID-19 pandemic: An online questionnaire study from the Gaza Strip, Palestine was investigated by [16]. Informational impact of network media, psychological reactions to the COVID-19 pandemic, and online knowledge acquisition: Evidence from Chinese students studied by [17]. Online teaching and learning in universities during the COVID-19 pandemic lockdown period was studied by [18]. Impact of the COVID-19 pandemic on residency and fellowship training programs in Saudi Arabia: A national cross-sectional study investigated by [19]. The impact of e-learning modalities for medical students at KSA during the COVID-19 pandemic was investigated by [20].

Information and communication technology that continues to develop requires teachers to be able to use internet media as a learning medium and support the optimal learning process, especially during the COVID-19 pandemic. Optimizing the use of power points, making learning videos, and recording can be an alternative to using the internet, which is also important so that the material presented has an attractive appearance and inspires students' enthusiasm to focus on the material presented. The reasons stated above can be solved by using internet-based learning media. Using online information technology for deaf students during COVID-19: A closer look at the experiences researched by Alshawabkeh [21]. The effect of requested self-study in a reverse history class was investigated by van Alten [22]. The role of Satisfaction on Perceived Value and the Continuity Relationship of the Use of E-Learning was investigated by Nugroho [23]. A Comparative Study of Machine Learning Approaches for Amazon Review was investigated by Rathor [24]. Dental students' perceptions of online learning were investigated by Asiry [25].

Bit density estimation from real-time drilling data using deep learning with online calibration was researched by Arnø [26]. Teaching citizen scientists to categorize disorders using machine learning-guided training was researched by Jackson [27]. Translation of learning objectives in medical education using high and low fidelity simulations: The learner's perspective was investigated by Naylor [28]. Developing nursing and midwifery students' capacity to cope with bullying and aggression in clinical settings: Student evaluation of learning resources was investigated by Hogan [29]. Peer-Assisted Learning Associated with Team-Based Learning in Dental Education was investigated by Al Kawas [30].

The effect of pandemic-based online education on teaching and learning systems was investigated by Selvaraj [31]. Should the online mathematics learning environment be adapted to the individual's cognitive profile was investigated by de Mooij [32]. Blended Learning System Using Social Media for Students: The Case of Tahsin Education researched by Romadhon [33]. Assessing the spatiotemporal correlation of the data for short-term traffic prediction using the multi-task learning researched by Mena-

Yedra [34]. Examining the learning effect of live streaming video game instruction via Twitch was investigated by Payne [35].

Online statistical learning tracking: Word segmentation in a target detection task was investigated by Lukics [36]. Recommendations for obtaining online swing weights from citizens in environmental decision making were investigated by Aubert [37]. A New Method for Identifying Short Text Authors Using a Combination of Machine Learning and Natural Language Processing Techniques was investigated by Vijayakumar [38]. Simultaneous EEG, eye tracking, behavior and screenshot data during online German learning were investigated by Notaro [39]. Use of online interactive tools in an open distance learning context: A student's perspective of health studies researched by Maboe [40]. Online learning for undergraduate health professional education during COVID-19: attitudes and perceptions of Jordanian medical students researched by Muflih [41]. The experience and perspective of social media in learning and teaching in universities was investigated by Purvis [42]. The Effectiveness of Online Learning with Facilitation Methods researched by Zulfikar [43]. Online waiting time prediction that supports situation-aware production control was investigated by Gyulai [44]. The pros and cons of online education as a measure to reduce carbon emissions in higher education in the Netherlands were investigated by Versteijlen [45].

MTs Muhammadiyah Karangkajen is one of the educational institutions of Muhammadiyah Charity that currently needs to increase the capacity of human resources to deal with the dynamics of the environment that is currently happening. Aspects of human resource capacity development related to the ability in online learning will also increase the achievement of the material to be conveyed by educators.

The number of students for each batch has increased from 2013 to 2019. Although the 2017-2018 academic year has decreased significantly, this is because it is related to changes in the student admission system by the Ministry of Education. Meanwhile, in 2018-2019 to 2019-2020 there was an increase with the number of students from 463 to 477. With the condition of a large number of students, education personnel need to use appropriate methods in learning so that later the achievement of the material to be conveyed can be carried out properly. The number of teachers for Civil Servants of the Ministry of Religion is 7 people, Foundation teachers are 3 people, and non-permanent teachers are 25 people, so the total number of teachers is 35 people.

Based on the results of observations and interviews with teachers, it was found that there was no optimal use of learning media through various online platforms. The current condition at MTs Karangkajen is that it is difficult for students to accept the material and learning outcomes taken during the Covid-19 pandemic, so appropriate learning media are needed to be taught. There are limited knowledge and skills of teachers in the use of learning media. There are still teachers who find it difficult to deal with the demands of online learning during the Covid-19 pandemic. This condition causes learning materials and learning outcomes to be less effective.

2. Method

To realize activities in accordance with the problems described above, the community service team coordinates with related partners to carry out community service activities in accordance with the problems faced by partners. The several stages carried out include coordinating related to the needs and availability of facilities that support the implementation of activities, conducting socialization and licensing with the Principal of MTs Muhammadiyah Karangkajen to ensure that partners know the implementation of activities to be carried out related to the technical implementation of service activities which include time, implementation, location, number of target teachers for these activities and the training materials to be taught. Then prepare training materials, carry out training, carry out follow-up activities and prepare activity reports is shown in Fig. 1.

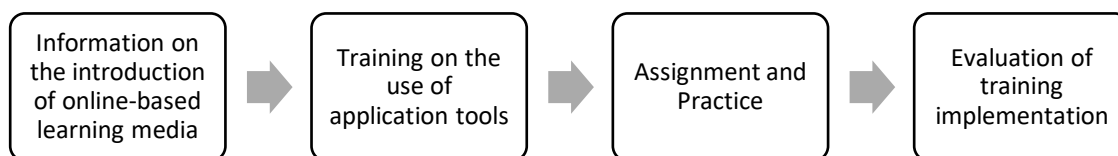


Fig. 1. Activity Implementation Method

After an agreement was made and the readiness of the training materials was carried out, then the implementation of training activities was carried out in which partners and the implementing team invited 15 teachers from all fields of study who taught at MTs Karangajen. Furthermore, the participants will be given training materials and practices for the use of computer-based multimedia for all teachers in the field of study. There are three methods applied in this training, namely the presentation method, the demonstration method and the practical method. The presentation method is applied in the introduction of software, its use and application in making interactive learning media, demonstration methods regarding program operations and practical methods where teachers are invited to be able to practice activities according to the material that has been delivered.

3. Results and Discussion

The form of activity in this service begins with looking for obstacles that exist on the part of the institution in the process of learning activities so far through the method of observation and interviews with principals directly and active discussions together regarding the obstacles that have been felt so far. Partner participation is shown by the activeness of school institution officials, both principals and other teachers in conveying obstacles and obstacles to the implementation of learning that has been carried out. This activity will be held on Saturday, April 10, 2021, at 09.00 – 13.00. This activity was attended by 15 teaching staff from different scientific concentrations. Development of learning media making skills involving all subject teachers so that teacher participation can be comprehensive and the program is more effective.

The first stage of socialization activities carried out at 09.00 is related to the importance of using online media to optimize learning activities. delivered by the resource person as well as the executor of the service activity, Nur Fitri Mutmainah, S.IP., MPA. The second stage of the material dissemination activity was related to the enrichment of interesting learning content delivered by resource person Nur Fitri Mutmainah, S.IP., MPA. The third stage is the implementation of the dissemination of tips and tricks for overcoming the transition process from face-to-face content to online content by the two resource persons implementing the activity. At this stage of socialization, it was carried out very smoothly and with good enthusiasm from the participants, making the service implementation activities run very well. In addition, the speakers also provided various motivations to always be enthusiastic in the face of increasingly large technological advances is shown in [Fig. 2](#).

Motivation is a condition in a person that encourages him to carry out activities to achieve goals, while learning is a process of changes in humans, shown in the form of increasing the quality and quantity of behavior such as increasing skills, knowledge, attitudes, habits, understanding, skills, thinking power and others. Thus, learning motivation is not only the task of students as learning but also teaching staff which is an activity to encourage a person or group of individuals with the aim of improving the quality and quantity of themselves. The last stage is a workshop on optimizing the use of power point learning media and making learning videos. Training materials are provided online via the trainer's google drive link is shown in [Fig. 3](#). The training materials contain about how to prepare presentation materials and the steps in making interactive learning videos. Then it was continued with hands-on practice guided by 2 trainers, namely making learning videos using the Filmora platform.



Fig. 2. Opening and motivating session

Participants first install the software on their respective laptops. Participants were asked to choose a pre-existing power point slide to be used as a video creation material. Participants record themselves while giving an explanation of the contents of the selected presentation slides. Participants then did video editing to integrate PowerPoint slides and recorded material explanations. There are many platforms that can be used by teachers to develop interactive learning media, one of which is a video editing-based platform. However, the development of interactive learning media such as learning videos needs to be supported by adequate facilities and infrastructure. Support for hardware and software devices also affects the success of developing video learning media.

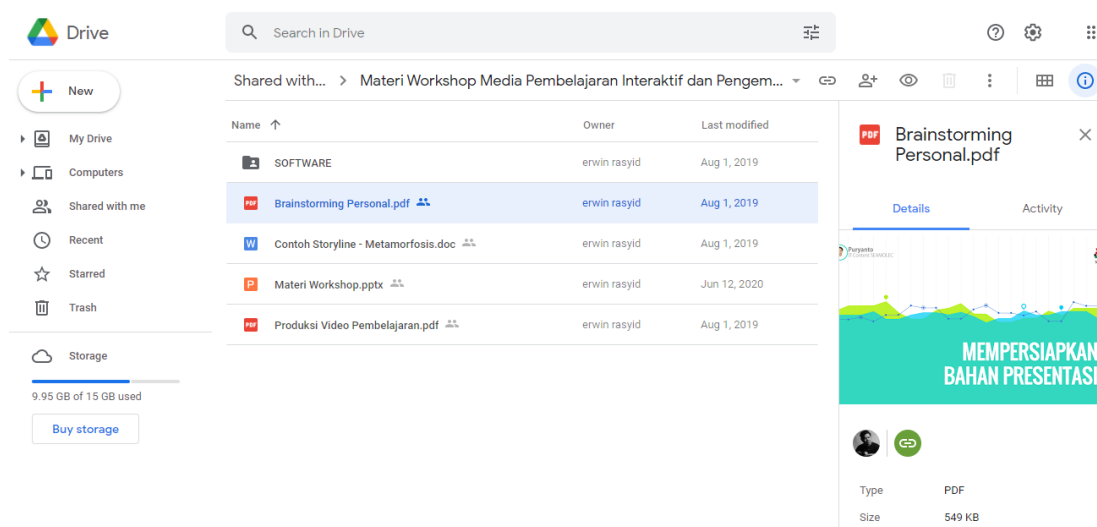


Fig. 3. Compilation of online practice materials in google drive

Participants enthusiastically participated in the training. All participants are willing to bring their own laptop. Some laptops do not support software installation. Some participants have mastered the basic skills of making online learning videos. Participants receive training materials so they can repeat them after the training is complete. Follow-up activities are carried out by showing the results of the learning videos that have been made and asking participants for feedback regarding the implementation of the training. Participants were very enthusiastic because they felt they had gained new skills to deliver material more interactively. The activity constraint was that some of the participants' laptops did not support the installation of the Filmora software so they could not participate in the practice directly. This obstacle was overcome by searching for the software version that supports the participant's laptop system, and several participants joined other participants to listen to the steps for making learning videos is shown in Fig. 4.



Fig. 4. Training session

The obstacles that exist in this implementation are time constraints with limited human resource response capabilities, making the time allocation run very quickly. However, this obstacle can be minimized by delivering learning modules by resource persons to participants which can be studied individually by the participants present.

4. Conclusion

The results of the activities in this community service program have been successfully carried out smoothly and are able to produce outputs in the form of preparing presentation-based online teaching materials and also enriching video-based teaching materials. This success was possible because of the full support of all stakeholders at MTs Karangkajen, Yogyakarta City. Most of the participants were able to use the basic features of the software being taught and tried to make videos independently. Some participants' laptops do not support software, but they can still participate in activities by looking for a suitable version and joining other participants. Suggestions from the implementation of this activity are the allocation of more time so that the implementation of the service can actually run smoothly, can be understood by all participants, and teachers can apply the results of the training to learning strategies.

Acknowledgment

This activity was funded by the University of 'Aisyiyah Yogyakarta and also supported by MTs Karangkajen City of Yogyakarta as activity partners, as well as students of the Public Administration and Nutrition Study Program of the University of 'Aisyiyah Yogyakarta who have assisted in the implementation of this community service activity.

Author Contribution

To realize activities in accordance with the problems described above, the community service team coordinates with related partners to carry out community service activities in accordance with the problems faced by partners.

Funding

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Conflict of Interest

The authors declare no conflict of interest.

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