H5P Framework Training for Learning Videos with Quiz for Sekolah Kebangsaan Dato' Sagor Malaysia Teachers

Pelatihan Kerangka Kerja H5P Untuk Membuat Video Pembelajaran dengan Kuis Bagi Guru Sekolah Kebangsaan Dato' Sagor Malaysia

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Abstract
H5P (HTML5 Package) is an open-source framework that allows content creators to easily create and share interactive content on the web. H5P training for creating videos with quizzes is designed to introduce users to the basic concepts of creating interactive videos involving questions or quizzes for learning purposes. Training usually involves several stages, such as introducing H5P, creating videos with quizzes, testing and maintenance, and implementation strategies. For this reason, the aim of this service is to provide training to teachers at Sekolah Kebangsaan Dato' Sagor Malaysia to be able to make learning videos with quizzes assisted by H5P. This service was carried out for 25 teachers at Sekolah Kebangsaan Dato' Sagor Malaysia in a hybrid manner using various approaches, namely the active participation approach, activity orientation approach, program approach and independence approach. The results of the service show that the use of H5P for teachers can provide a more interesting, adaptive and measurable learning experience for students, while giving teachers the opportunity to adapt their teaching methods to continuously changing technological needs and developments. Apart from that, the service has also shown that the specified success indicators have been achieved, namely ≥75% of teachers understand the benefits and use of H5P to make learning videos, attendance at every meeting is 100%, and all teachers can make learning videos with quizzes assisted by H5P

Keywords: Training activities, videos with quizzes, HTML5Package

Abstrak
H5P (HTML5 Package) adalah sebuah framework sumber terbuka yang memungkinkan pembuat konten untuk membuat dan membagikan konten interaktif di web dengan mudah. elatihan H5P untuk membuat video dengan kuis udirancang untuk memperkenalkan pengguna pada konsep-konsep dasar dalam menciptakan video interaktif yang melibatkan pertanyaan atau kuis untuk tujuan pembelajaran. Pelatihan biasanya melibatkan beberapa tahap, seperti pengenalan H5P, pembuatan video dengan kuis, pengujian dan pemeliharaan, serta strategi implementasinya. Untuk itu, tujuan pengabdian ini adalah memberikan pelatihan kepada guru di Sekolah Kebangsaan Dato' Sagor Malaysia untuk dapat membuat video pembelajaran dengan kuis berbantuan H5P. pengabdian ini dilakukan kepada 25 guru di Sekolah Kebangsaan Dato' Sagor Malaysia secara hybrid dengan berbagai macam pendekatan, yaitu pendekatan partisipasi aktif, pendekatan orientasi kegiatan, pendekatan program, dan pendekatan kemandirian. Hasil pengabdian menunjukkan bahwa penggunaan H5P bagi guru dapat memberikan pengalaman pembelajaran yang lebih menarik, adaptif, dan terukur bagi siswa, sambil memberi kesempatan kepada guru untuk menyesuaikan metode pengajaran mereka dengan kebutuhan dan perkembangan teknologi yang terus berubah. Selain itu, pengabdian juga telah menunjukkan tercapaianya indikator keberhasilan yang ditetapkan yaitu ≥75% guru memahami manfaat dan penggunaan H5P untuk membuat video pembelajaran, kehadiran disetiap pertemuan sebesar 100%, dan semua guru dapat membuat video pembelajaran dengan kuis berbantuan H5P

Kata kunci: Kegiatan pelatihan, video dengan kuis, HTML5Package

1. INTRODUCTION

The rapid development of technology requires the education sector to take part in implementing it in the classroom (Hakim, 2021; Wening & Santosa, 2020; . This is because technology can be a very useful tool in supporting the learning process (Suhardiana, 2019; Wahyudin & Ramadhan, 2023; Tekege, 2017). Learning and integrating technology in education

not only enriches the learning experience, but also supports student development and prepares them for an increasingly digitally connected future (Liriwati, 2023; Melati et al., 2023). One What is needed in teaching in class is a learning video. However, if you only use a learning video, students tend not to see it until the end. So variations are needed in making learning videos.

Integrating quizzes into learning videos can be a solution to keep students paying attention to the video until the end (Musfa'ah et al., 2022). One platform that can be used to create quiz integrated videos is H5P. H5P (HTML5 Package) is an open source framework that allows content creators to create and share interactive content on the web easily (Azzahra & Septiaji, 2023; Utari et al., 2022). It leverages HTML5 technology to create various types of content that are interactive and can be embedded within online learning platforms, websites, and various other web platforms.

The main advantage of H5P is its ability to create a variety of interactive content, such as interactive quizzes and exercises, interactive presentations, simulations and educational games, interactive videos, mind maps and interactive infograms (Chabibie & Hakim, 2016). These advantages make H5P very popular among educators, trainers, and content creators because of its flexibility and easy integration with various online learning platforms such as Moodle, WordPress, Drupal, and others. With H5P, content creators can create interactive materials without the need for in-depth programming skills because the platform provides an intuitive user interface. In addition, H5P has the advantage of being an open and community-based resource, allowing users from various backgrounds to contribute, share and develop new content for the benefit of education and learning (Isroqmi et al., 2023).

H5P is an online learning platform that allows content creators to create various types of interactives, including videos with quiz elements (Bakri, 2021; Hakim et al., 2022; WIcaksono et al., 2023). H5P training for creating videos with quizzes is generally designed to introduce users to the basic concepts of creating interactive videos involving questions or quizzes for learning purposes. Such training usually involves several stages, such as an introduction to H5P, creation of videos with quizzes, testing and maintenance, and implementation strategies.

This kind of training is usually suitable for teachers, instructors, or anyone who wants to enrich their online learning experience with more interactive and interesting content. In this way, they can create learning videos that are more interesting and effective for their students or audiences. Additionally, this kind of training can also involve step-by-step demonstrations in the use of H5P tools, use case examples, and interactive discussions to ensure trainees truly understand the concepts being taught.

However, Sekolah Kebangsaan Dato' Sagor Malaysia has never used this platform as a video maker. In fact, with the advantages of this platform, it can make learning videos made by teachers there more interesting and will definitely be seen by students until the end. For this reason, this service aims to provide training to teachers at Sekolah Kebangsaan Dato' Sagor Malaysia regarding making learning videos with quizzes assisted by H5P.

2. METHOD

The community service (PkM) method is carried out through training/workshops for teachers at Sekolah Kebangsaan Dato' Sagor, Perak Tengah Malaysia. Participants were all 25 teachers at the school. To achieve successful implementation of community service, the PkM team uses several approaches to achieve the stated service goals. The approaches taken are the active participation approach, activity orientation approach, program approach and independence approach. An explanation of each approach is explained as follows:
a. The active participation approach is an approach that emphasizes the active role of partners in training activities in making learning videos with quizzes using H5P.
b. The activity orientation approach is an approach aimed at achieving planned targets/outputs.

c. The program approach is carried out through mentoring and training regarding making learning videos with quizzes assisted by H5P for teachers at Sekolah Kebangsaan Dato' Sagor Malaysia

d. The independence approach is an approach that aims to find out the results of the training that has been carried out and evaluate activity programs for partners. This approach is useful for finding out the extent to which partners are able to independently create learning videos with quizzes assisted by H5P.

Implementation of community service is carried out in 4 stages, namely preparation, implementation, evaluation and reflection. An explanation regarding this stage is presented in the next section. Meanwhile, the methods for implementing the program in order to resolve partner problems at Sekolah Kebangsaan Dato' Sagor Malaysia are presented in detail in Table 2.

Table 2. Community Service Implementation Methods

No	Details of the Problem	Implementation Method
1	Partner does not know HTML5Package (H5P) for creating interactive content on the web	Providing outreach regarding the use of the HTML5Package (H5P) for creating interactive content on the web
2	Partners do not know the features, advantages and disadvantages of H5P	Provide knowledge to partners regarding the features, advantages, and disadvantages of H5P
3	Partners don't know how to make and the benefits of H5P for making learning videos with quizzes	Providing assistance and training in making learning videos with quizzes with the help of H5P

Several methods for implementing the PkM program in Table 2 have been discussed and coordinated with partners. Partners have actively participated in a series of PkM programs according to the agreed schedule. So that partners will always participate in the designated socialization, mentoring and training activities. In this case, partners contribute to providing a place for program implementation, LCD projectors, microphones, training rooms, and data/documents needed to support the success of this community service program. Partners have also committed to running the program well so that PKM targets can be achieved and maximized. Evaluation will be carried out at the beginning, middle and end of the activity. At the start of the activity, we will evaluate the partner's level of understanding regarding the material that will be provided regarding making educational games. The purpose of this initial evaluation is to determine the level of success of training activities. How to evaluate using a questionnaire instrument.

3. RESULTS AND DISCUSSION

The results of the service will be discussed at each stage of the activity, starting from preparation, implementation, evaluation and reflection. The explanation and discussion regarding these steps are presented as follows:

Preparation Stage for Community Service Activities

Preparatory activities for implementing community service begin with preparing permits for the school where it will be carried out and studying literature. Literature studies are used to obtain materials that will be used for training. The study material used is the definition, types, advantages and disadvantages of making learning videos assisted by H5P. The material prepared also focuses on the importance of using learning multimedia in the current era and the detailed features available on H5P.

The service team also prepared a module for direct practice for teachers at Sekolah Kebangsaan Dato' Sagor Malaysia in making learning videos. Service activities are carried out in a

hybrid manner, namely the service team at Mercu Buana University Yogyakarta, Indonesia. Meanwhile, the participants were at Sekolah Kebangsaan Dato' Sagor Malaysia, and the team and partners were connected using Zoom Meeting. The participants in this activity were all 25 teachers at Sekolah Kebangsaan Dato' Sagor Malaysia, consisting of teachers in various subjects.

Activity Implementation Stage

The first day's activity where the resource person explained the basic concept of H5P. The interviewee emphasized that H5P is an abbreviation for HTML5Package which is an open source framework used to create interactive content. It enables content creators, including educators to create various types of interactive content such as quizzes, interactive videos, presentations, and simulations that can be easily embedded into learning platforms or websites. H5P is often used in educational contexts to increase student engagement and provide a more dynamic learning experience.

Figure 1. H5P Training Activities

At the next meeting, the resource person from the community service team explained the features of H5P. The important material, namely the H5P features, is presented in Figure 2.

Accordion
Create vertically stacked expandable items

Agamotto
Create a sequence of images that gradually

Arithmetic Quiz
Create time-based arithmetic quizzes

Audio Recorder
Create an audio recording

Chart
Quickly generate bar and pie charts

Collage
Create a collage of multiple images

Column
Column layout for H5P Content

Course Presentation
Create a presentation with interactive slides

Dialog Cards
Create text-based turning cards

Documentation Tool
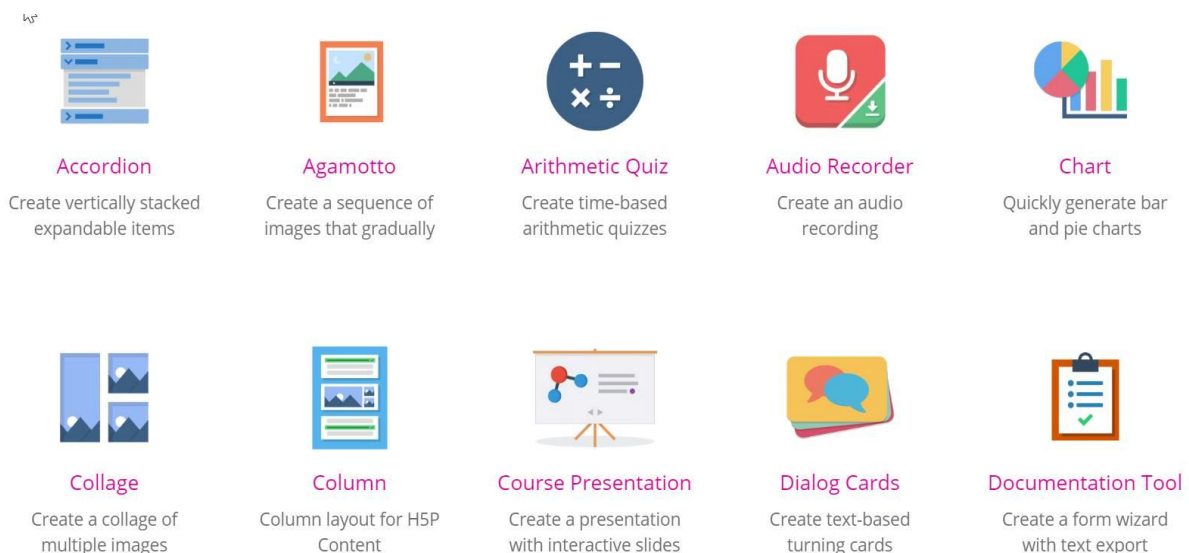Create a form wizard with text export

Figure 2. H5P Feature Display

Activities at the next meeting included practical training in making learning videos with quizzes assisted by H5P. H5P has a number of functions and advantages that make it popular in educational contexts and interactive content creation. Some of them are (1) Interactive Content Creation: H5P allows content creators to create various types of interactive content such as quizzes, presentations, interactive videos, simulations, memory cards, and others; (2) Content Customization: Users can customize and change content according to their needs with various setting and editing options provided by H5P; (3) Easy Integration: Content created with H5P can be easily embedded into any learning platform, website, or learning management system (LMS) that supports web technologies; (4) Responsiveness and Compatibility: Content created with H5P is generally responsive, meaning it can be accessed and viewed well on a variety of devices such as computers, tablets, or smartphones. Additionally, H5P is compatible with various types of web browsers; (5) High Interactivity: Provides a more interactive learning experience with features such as drag-and-drop, multiple choice, inserting media (images, video, audio), and so on.

Meanwhile, the advantage of H5P is that it is open source, where H5P is open-source software that can be used for free, allowing wider access for users from various backgrounds. H5P is also User-Friendly (Easy to Use), namely the H5P Interface is designed to be easy to use by users without high technical skills. This allows educators to create interactive content without significant difficulty. On the other hand, H5P provides opportunities for educators to create varied, dynamic and interesting learning experiences for students with various types of interactive content. Even through H5P it can increase student engagement because the interactive content created by H5P can increase student engagement because it provides a more fun and interesting learning experience. Overall H5P enables educators to deliver more engaging, interactive, and varied learning experiences for students, while providing easy-to-use tools to create interactive content without requiring advanced technical skills.

Figure 3. Workshop on Making Learning Videos

The activity ended with an explanation by each teacher on making wordwall educational games. At the meeting on Saturday, May 20 2023, each teacher must present and explain to the workshop participants the educational games they have created.
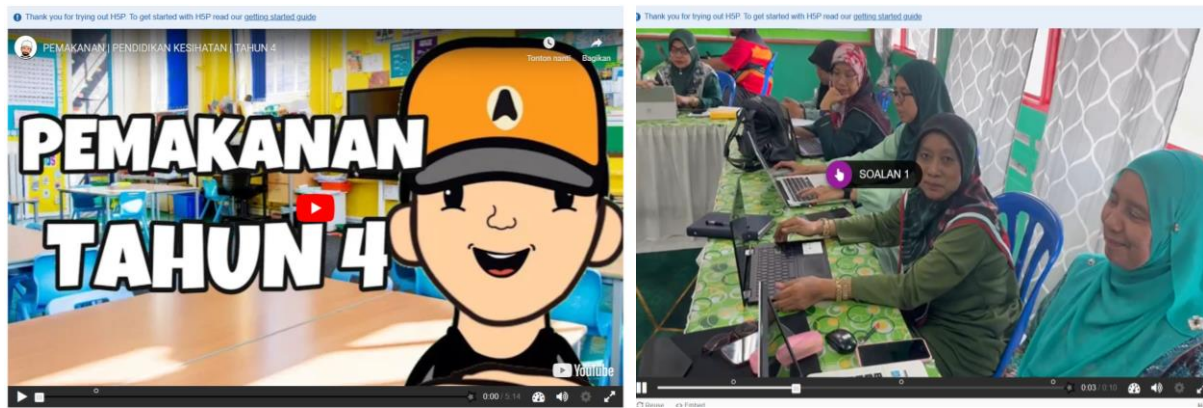
Figure 4. Learning Video Results with H5P

A series of training workshops on making learning videos ended with taking photos together and filling out an evaluation questionnaire regarding the implementation of community service that had been carried out. The results of the evaluation are presented in the next section. The enthusiasm of the participants in this training was very good, seen from the number of participants who attended as many as 25 participants. The training activity lasted for 3 hours 30 minutes, starting at 13.00 to 16.00. This activity was welcomed by the principal of Sekolah Kebangsaan Dato' Sagor, Malaysia, he said that this activity was very useful for improving the competence of teachers at the school. The use of H5P for teachers can provide a more interesting, adaptive and measurable learning experience for students, while giving teachers the opportunity to adapt their teaching methods to constantly changing technological needs and developments. It is the hope of the participants that PkM will continue not only this year but in the years to come by bringing in other programs because learning technology issues continue to develop and always experience dynamic development. Complete activities can be seen on the YouTube channel of the YouTube program studi Pendidikan Matematika UMBY.

Figure 5. Group photo

Service Activity Evaluation Stage

This community service activity is also evaluated to determine the perceived usefulness of the activities carried out. This evaluation was carried out before and after the service activities were carried out to determine the participants' knowledge regarding making learning videos assisted by H5P. To evaluate the implementation of service, the service team distributed questionnaires that had to be filled out by all participants. This questionnaire sheet was distributed using Google Form and a summary of the results of filling out the questionnaire before and after the implementation of the service is presented in Table 2.

Table 2. Questionnaire Results

Indicator	Before	After
Knowledge and understanding related to leraning videos	88%	100%
Knowledge and understanding of HTML5Package	0%	92%
Knowledge and understanding fo H5P features	0%	88%
Making learning videos using H5P	0%	100%
Ease of creating lerning videos with quizzes	0%	100%
Implementation of H5P in leraning	0%	80%
Average	**14,7%**	**93,3%**

The evaluation results in Table 2 show that on average, participants previously did not know about using the H5P framework as a platform for creating interactive learning videos with quizzes, but after being given training, all participants were able to understand, create and implement the use of H5P in learning. Some indicators were not optimal because at certain meetings not all participants attended the training held. However, in the manufacture and ease of manufacture, all participants can achieve the maximum. Meanwhile, for implementation in learning, not all teachers use it, but as many as 80% of participants have implemented the benefits of wordwall in learning.

Reflection Stage of Community Service Activities

In addition to the indicators in evaluating participants' knowledge, the service team also reflected on a series of service activities carried out:

a. Implementation of community service can achieve the stated goal, namely providing training in making interactive learning videos with the integration of quizzes in it using H5P.

b. The material and topics presented at each meeting were appropriate and interesting, with as many as 96% of teachers providing very interesting reflections on the material presented.

c. For each material presented at each meeting, 88% of those present provided very useful reflections. This means that every material presented can be understood by participants.

d. The training which was held for 1 week received a good response with the clarity of the concepts and simulations, this was shown by participant reflections where 84% of participants gave these comments.

e. Community service with the theme of using the H5P framework to create learning videos with quizzes is very useful for learning purposes in schools where as many as 92% of teachers provide reflections on this option.

The results of the analysis of the indicators in the questionnaire show that almost all participants have increased their knowledge regarding the use and utilization of the H5P framework in learning. Apart from that, the results of the service show that the specified success indicators have been achieved, namely ≥75% of teachers understand the benefits and features of H5P, attendance at each meeting is 100%, and all teachers can make learning videos with quizzes assisted by the H5P framework. Teachers at Sekolah Kebangsaan Dato' Sagor Malaysia have utilized H5P to create interactive learning videos in their lessons. Therefore, this community service has achieved the specified indicators of success and the goal of making teachers at the school able to understand and use the WordWall educational game has been achieved.

4. CONCLUSION

The community service carried out is training in making learning videos with quizzes assisted by H5P. This activity begins with an explanation of the basic concepts of H5P, several alternative applications/websites for making learning videos, and practice making learning videos with quizzes assisted by H5P. Apart from that, this service is also focused on providing knowledge and understanding to Sekolah Kebangsaan Dato' Sagor Melaysia teachers regarding the benefits of H5P, the existing features and how to make them. The results of the service show that the specified success indicators have been achieved, namely ≥75% of teachers understand the benefits and use of H5P for making learning videos, attendance at each meeting is 100%, and all teachers can make learning videos with quizzes assisted by H5P. Therefore, this community service has achieved the specified indicators of success and the aim is to make teachers at the school able to understand and use H5P as a website for making learning videos with quizzes.

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REFERENCES

Azzahra, I. S. S., & Septiaji, A. (2023). Pengembangan Model Evaluasi Keterampilan Berbahasa Memirsa Siswa Berbantuan Video Interaktif Berbasis Html5 Package (H5P). *Diglosia: Jurnal Pendidikan, Kebahasaan, dan Kesusastraan Indonesia*, *7*(2).

Bakri, R. (2021). Pengembangan Modul Digital Interaktif dalam Pembelajaran Statistika Terapan menggunakan Learning Management System Berbasis Moodle di Masa Pandemi Covid 19. *Indonesian Journal of Learning Education and Counseling*, *4*(1), 75-85.

Chabibie, M. H., & Hakim, W. (2016). Pengaruh penerimaan teknologi dengan kebergunaan web. *Ultimacomm: Jurnal Ilmu Komunikasi*, *8*(1), 37-59. https://doi.org/10.31937/ultimacomm.v8i1.943

Hakim, L. (2021). Transformasi Pendidikan Agama Islam: Strategi Dan Adaptasi Pada Era Revolusi Industri 4.0. *Jurnal Education and Development*, *9*(4), 760-766.

Hakim, L., Hidayat, I., & Amalia, D. R. N. (2022). Penerapan Teknologi Tur Virtual Tur Dalam Mata Pelajaran Sejarah Di SMK Minhajut Thullab Menggunakan Moodle Dan H5P. *Pedagogy: Jurnal Ilmiah Ilmu Pendidikan*, *9*(1), 103-108. https://doi.org/10.51747/jp.v9i1.907

Isroqmi, A., Rohana, R., & Septiati, E. (2023). Pemanfaatan E-learning Moodle Sebagai Laboratorium Matematika Virtual di Universitas PGRI Palembang. *Indiktika: Jurnal Inovasi Pendidikan Matematika*, *5*(2), 244-254. https://doi.org/10.31851/indiktika.v5i2.11653

Liriwati, F. Y. (2023). Revolusi Digital dan Merdeka Belajar: Meningkatkan Daya Saing Siswa di Era Teknologi. *Journal Innovation In Education*, *1*(3), 221-231. https://doi.org/10.59841/inoved.v1i3.284

Melati, E., Kurniawan, M., Marlina, M., Santosa, S., Zahra, R., & Purnama, Y. (2023). Pengaruh Metode Pengajaran Berbasis Teknologi Terhadap Kemampuan Berbicara Dalam Pembelajaran Bahasa Inggris Di Sekolah Menengah. *Jurnal Review Pendidikan Dan Pengajaran (JRPP)*, *6*(4), 14-20.

Musfa'ah, A., Slamet, J., & Arbi, A. P. (2022). Pelatihan Pembuatan Video Pembelajaran Berbasis KineMaster untuk Pendidik di SDN Petemon X/358 Surabaya. *Jurnal Abdidas*, *3*(4), 748-755. https://doi.org/10.31004/abdidas.v3i4.658

Suhardiana, I. P. A. (2019). Peran teknologi dalam mendukung pembelajaran bahasa Inggris di sekolah dasar. *Adi Widya: Jurnal Pendidikan Dasar*, *4*(1), 92-102. https://doi.org/10.25078/aw.v4i1.934

Tekege, M. (2017). Pemanfaatan teknologi informasi dan komunikasi dalam pembelajaran SMA YPPGI Nabire. *Jurnal FATEKSA: Jurnal Teknologi Dan Rekayasa*, *2*(1).

Utari, D. A., Miftachudin, M., Puspandari, L. E., Erawati, I., & Cahyaningati, D. (2022). Pemanfaatan H5P Dalam Pengembangan Media Pembelajaran Bahasa Online Interaktif. *Jurnal Pendidikan Bahasa dan Sastra Indonesia Metalingua*, *7*(1), 63-69. https://doi.org/10.21107/metalingua.v7i1.14896

Wahyudin, A. Y., & Ramadhan, R. (2023). Pendampingan Penyusunan Perangkat Pembelajaran Berbasis Mobile Bagi Guru Sman 5 Bandar Lampung. *Journal of Social Sciences and Technology for Community Service (JSSTCS)*, *4*(2), 201-207. https://doi.org/10.33365/jsstcs.v4i2.3104

Wening, M. H., & Santosa, A. B. (2020). Strategi kepemimpinan kepala sekolah dalam menghadapi era digital 4.0. *JMKSP (Jurnal Manajemen, Kepemimpinan, Dan Supervisi Pendidikan)*, *5*(1), 56-64. https://doi.org/10.31851/jmksp.v5i1.3537

Wicaksono, V. D., Yusuf, A., Paksi, H. P., Windasari, W., & Pramana, A. (2023, October). Pelatihan Pengembangan Modul Digital Berbasis Kurikulum Merdeka Bagi Guru Sekolah Dasar. In *Prosiding Seminar Nasional Pengabdian Masyarakat LPPM UMJ* (Vol. 1, No. 1).