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Using FlipPDF Application to Make Interactive Digital Module during Covid-19 Pandemic

Arief Hidayat
Computer Science Department,
Wahid Hasyim University
Semarang, Indonesia
rifmillenia @gmail.com

Fandy Indra Pratama
Computer Science Department,
Wahid Hasyim University
Semarang, Indonesia
fandy@unwahas.ac.id

Jeni Nadik
Computer Science Department,
Wahid Hasyim University
Semarang, Indonesia
jeni.nadik94@gmail.com

***Abstract*—The teacher feels the boredom of students learning independently at home and completing school assignments. Therefore , there is a need for innovation in providing learning modules that attract students ' attention and are interactive . One of these innovations is to package learning modules digitally and interactively. It aims to improve teacher competence in packaging interactive digital learning modules using the FlipPDF application. The method used to carry out the service is in the form of training and workshops. This activity was attended by 30 teachers of SMK NU Ungaran, Semarang Regency. From the results of these community service activities, the ability of teachers to package interactive digital modules using the FlipPDF application increased by 95%. Beginner teachers who have never used or are familiar with the FlipPDF application can easily package and publish interactive digital modules online. The involvement of instructors and assistants in each session really helps teachers to practice packaging interactive digital modules. The participants were very enthusiastic about participating in the training and hoped that this training would be sustainable.**

Keywords—FlipPDF; interactive; digital; learning module

I. INTRODUCTION

The industrial revolution 4.0 has brought a series of changes in human life. At the same time, the presence of the Industrial Revolution 4.0 has opened up various opportunities for business actors, governments, and individuals, but also brings the challenge of widening the gap between community groups. The World Economic Forum in the 2018 Global Competitiveness Report stated that there are ten conditions that must be met by a country to be able to transform and align itself with the Industrial Revolution 4.0. All of these requirements refer to one main factor, namely innovation which is believed to be the driving force for the transformation and development of the country.

According to [1] the application of Information Technology has now spread in almost all fields, including schools or colleges. Schools as institutions in charge of managing the learning process, either in the form of direct or indirect learning. The need for Information Technology is closely related to the role of a teacher to master Information Technology as a mediator of the teaching and learning process.

Given that the teacher's task is so heavy, it is necessary for teachers to always update their knowledge, insight, and skills towards the expected professional development. Regulation of the Republic of Indonesia number 19 of 2005 concerning National Education Standards indicates the importance of paying attention to the quality of learning in order to improve the quality of education in schools. The government's good efforts need to be followed up by school educational institutions, both public and private, by holding scientific activities that can develop teacher potential through seminars, training, workshops and others on an ongoing basis so that teachers become professionals who have the ability to improve the quality of learning in schools, in turn. improving the quality of education will be realized and become a reality [2]. According to [3] it has been found in various studies that the quality of teachers is consistently one of the most important factors of the quality of learning. Furthermore, qualified teachers are able to teach students effectively in accordance with resource and environmental constraints.

On the other hand, [2] view that improving the quality of education can be realized by optimizing The Total Quality Management (TQM) model in schools. This theory explains that the quality of education with this TQM model includes three abilities, namely academic, social, and moral abilities. This theory also states that school quality is determined by three variables, namely school culture, learning process, and school reality.

As of March 2020 with the issuance of Circular Letter Number 2 of 2020 concerning Prevention and Handling of Covid-19 in the Ministry of Education and Culture and Circular Letter Number 3 of 2020 concerning Prevention of Covid-19 in Education Units, all students from all levels of Education have studied online (on line). Several applications to support the effectiveness of learning that are applied by each educational unit are different, for example using LMS, google classroom, Schoology, Edmodo, and others [4] The impact is a shift in the direction of learning, from face to face to face to face virtual (Pure), the use of technology is the main thing and students are required to learn independently with the teacher's role as a facilitator.

Facing a pandemic situation that is not certain when it will end, and referring to Permendiknas Number 16

of 2007 concerning Academic Qualification Standards and Teacher Competence, teachers must be able to utilize IT. The use of the internet as a communication network in the online learning process has begun to be massively promoted. During the pandemic, the need for internet use increased by 30 to 40% [5]. The government through the Ministry of Education and Culture provides a quota of 50 GB for teachers, lecturers, and parents/students for one semester to support online learning. It is expected that the learning process that involves students, teachers and parents can run optimally.

Based on the analysis of the problem situation experienced by partners (SMK NU Ungaran), several problems related to online learning can be identified, namely: lack of interest and motivation of students when studying learning modules provided by teachers, lack of understanding of teachers in making digital and interactive learning modules. Teachers have the ability to apply IT but online learning modules still tend to be monotonous and less varied. Therefore, the community service team will hold training and assistance in making interactive digital learning modules with the Flip PDF application to improve the professional competence of teachers at SMK NU Ungaran.

II. Interactive Digital Module

The quality of education is influenced by the availability of learning facilities, the use of time, and the use of learning media or teaching materials [6]. Learning requires media, there are learning media in hardfile form such as learning books, worksheets, modules and handouts [7]. The softfile forms are e-books, slides, and digital modules [8] [9]. Digital modules can be used as learning media because they have the advantage that they can be accessed anywhere and integrated content by video, audio, and images that help understand lessons [10] [11] [12]. The advantages of digital modules include economical manufacturing costs, more efficient to carry, strong and will not wear out over time, and can be equipped with images, video, audio and animation [13]. Applications that support the creation of digital modules are the Flip PDF application [14], with the formats provided by Flip PDF are (.exe), (.app), (.fbr), and (.html) [10]. This Flip PDF application is very easy to use in learning, can be used to create teaching materials, and the operation is easy so that it can be used by those who are not very proficient at operating computers [15] [16]. In addition, the application used for making e-modules uses a professional flip pdf that includes videos, images, animations so that the learning process is not monotonous in writing only [17].

III. Method

To support this activity, the Wahid Hasyim University Implementation Team offers an approach method used by [18] in the training process through the following stages:

1. Identification of Needs. At this stage, a needs analysis is carried out to help determine the type and level of partner needs, in this case SMK NU Ungaran based on the problems faced, the gap between expectations and reality, or new conditions that are expected.

2. Planning. At the planning stage, data is collected and an approach is formulated according to the needs identified in the first stage. Several things are formulated at this stage, among others: training objectives, participant prerequisites, operational costs, number of participants, qualifications of instructors (teachers), and testing strategies.

3. Development. The development stage includes the preparation of lesson plans or trainer guides, participant guides, training aids, supporting materials, test and evaluation tools.

4. Implementation. This is the realization or implementation of all the details of the training plan. For the implementation of the training, using the lecture, demonstration and workshop methods.

5. Evaluation. The next stage includes evaluating the program format, content, materials, materials, instructors, and logistics. Training evaluations can be in the form of participant feedback, instructor evaluations, independent evaluations by colleagues or training professionals, or on-the-job evaluations conducted by supervisors through direct observation of trainees after they have applied the training materials.

6. Implementation. This last stage is to apply the resulting output in the form of an Interactive Digital Learning Module that has been produced from training services in the actual learning process. Of course, the assistance from UNWAHAS continues according to the planned schedule.

SMK NU Ungaran in this case as a partner participating as a training participant as well as an educational institution where the application of the Interactive Digital Learning Module is expected to later be used as a supporter of the learning process as a form of improving the quality of learning that has existed so far. use of this Interactive Digital Learning Module. Centralized training activities were held in the school's computer laboratory as many as 30 teachers of SMK NU Ungaran, because it was seen from time efficiency and effectiveness. All transportation, consumption and other costs are borne by the Implementing Team, while for the implementation of the results of the training, assistance will be provided from the Implementing Team to SMK NU Ungaran in accordance with the objectives of this activity.

IV. Result and Discussion

Teacher competency improvement training in the form of making interactive digital modules that can be used in online and offline learning. The Flip PDF app includes apps that are easy to build and use. This application is free, interactive, very fun and can be accessed anywhere and anytime, only requires quota when publishing.

A series of training activities to increase teacher competence in making interactive digital modules during the pandemic began in the preliminary stage on October

1, 2021. In the preliminary stage several partner problems were obtained, including: low interest and motivation of students when doing independent learning using hardcopy learning modules, lack of understanding of teachers in making interactive digital learning modules, teachers have the ability to apply IT but online learning modules still tend to be monotonous and less varied. Furthermore, the community service team coordinates with the principal to determine the time and place of training.

At the partner solution stage, it is divided into three activities, namely planning, implementation and evaluation activities. The planning activity was carried out on October 7, 2021. The community service team and partners (schools) made improvements regarding the facilities and infrastructure to be used, the schedule of events and materials to be delivered. The community service team also prepared several service instruments such as observation sheets and made teacher response questionnaires to the use of the FlipPDF application.

Furthermore, the implementation of training on making interactive digital modules was carried out on 21 s.d. 23 October 2021. This activity was attended by 30 teachers of SMK NU Ungaran consisting of several subject teachers. In the three-day training the team delivered material on all the tools available on Flip PDF, import PDF files, create a table of contents, add text, add shapes, add links, add images, add audio, add videos, add quizzes, and publish (publish) interactive digital modules in online form and share the link to students. After delivering the material, the teacher then tries to make his own learning module using the Flip PDF application which is assisted by tutors in each group.

During the delivery of materials and guided practice, all teachers were active and enthusiastic in participating in the training. Teachers don't hesitate to ask questions when they have problems. One screenshot of the results of the interactive digital learning module that has been made by the teacher. Furthermore, to see how the teacher's response to the creation of an interactive digital learning module using the Flip PDF application as a media to support digital learning, the team gave a questionnaire at the end of the session.

Fig. 1. Feedback on the ease of operating the Flip PDF application

Based on Figure 1, as many as 52.9% of teachers find it easy to operate the Flip PDF application even though this is the first experience for teachers. This is in line with the results of the service, namely as many as 30 participants were able to create and package interactive digital learning modules.

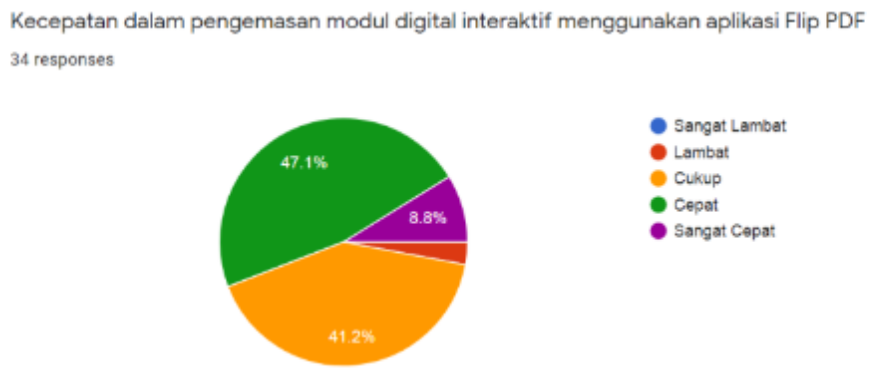

Fig. 2. Feedback on speed in packaging interactive digital learning modules using the Flip PDF application

Based on Figure 2, 47.1% of teachers assessed that the Flip PDF application could provide speed in packaging interactive digital learning modules. This application provides publications in offline and online form, so that teachers can quickly provide the results to students.

Fig. 3. Feedback on the usefulness of learning using interactive digital modules.

Based on Figure 3, as many as 58.8% of teachers feel that the Flip PDF application is useful in the process of making interactive digital learning modules that support online learning. This proves that the interactive digital learning module is an effort to accommodate the problems of learning media in Indonesia that cannot be applied conventionally. Therefore, the Flip PDF application is very helpful for educators in packaging interactive digital learning modules.

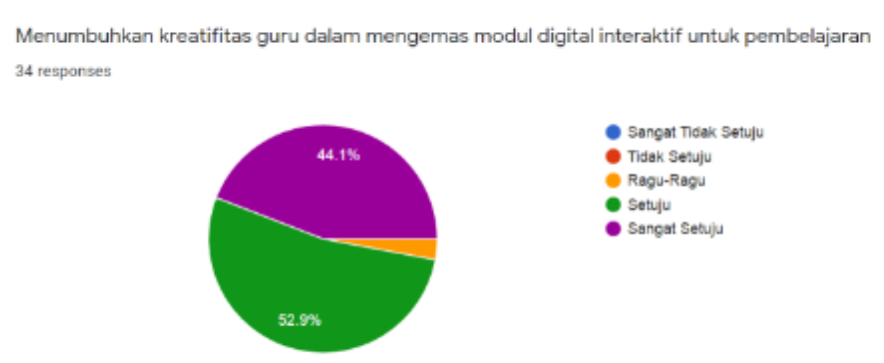

Fig. 4. The results of feedback about fostering teacher creativity in packaging interactive digital modules for learning.

Based on Figure 4, as many as 52.9% of teachers feel that the Flip PDF application can foster teacher creativity in packaging interactive digital learning modules that support online learning. This proves that the packaging of interactive digital learning modules is an effort to foster teacher creativity in making a digital learning module that can attract students to play an interactive role.

Teacher training at SMK NU Ungaran in creating interactive digital learning modules using the Flip PDF application improves teacher skills, especially in the IT field. In addition, this activity also provides a stimulus for teachers to get to know other applications similar to Flip PDF such as Flip HTML5, Anyflip, 3D Pageflip, Kvisoft FlipBook Maker, Sigil, and others. Improving the ability of teachers in the IT field will provide a better variety of learning, especially when online. The teacher's ability to operate learning tools has increased by successfully creating interactive digital learning modules in the Flip PDF application. This indicates that all the tools in the Flip PDF application are not complicated or difficult, so even beginners can easily create interactive digital learning modules using Flip PDF.

V. Conclussion

Teacher training at SMK NU Ungaran in creating interactive digital learning modules using the Flip PDF application went smoothly and received a positive response and was able to improve teacher skills, especially in the IT field. During the training, the teachers were enthusiastic, took notes on explanations that were not listed in the powerpoint, and enthusiastically followed the directions of the presenters. Some indicators of success in this training include the increased understanding of teachers in creating interactive digital learning modules using Flip PDF, the number of teachers participating in the training as planned, and teachers being able to operate the Flip PDF application in online learning.

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References

[1] K. S. Mahedy, "Peranan Teknologi Informasi dalam Meningkatkan Kualitas Pendidikan," *J. Pendidik. Teknol. dan Kejuru.*, vol. 6, no. 2, Aug. 2009.
[2] M. Saifulloh, Z. Muhibbin, and H. Hermanto, "Strategi Peningkatan Mutu Pendidikan di Sekolah," *J. Sos. Hum.*, vol. 5, no. 2, Nov. 2012.
[3] M. Yunus, "Profesionalisme Guru dalam Peningkatan Mutu Pendidikan," *Lentera Pendidik. J. Ilmu Tarb. dan Kegur.*, vol. 19, no. 1, pp. 112–128, Jun. 2016.
[4] S. Zuhriyah and B. W. Pratolo, "Exploring Students' Views in the Use of Quizizz as an Assessment Tool in English as a Foreign Language (EFL) Class," *Univers. J. Educ. Res.*, vol. 8, no. 11, pp. 5312–5317, Oct. 2020.
[5] W. Nur Hidayat, H. Suswanto, C. Wijaya Kristanto, A. Pramudya Wardhani, A. Hamdan, and R. Kartika Sari, "The Effectiveness of Interactive Digital Evaluation Training for Improving Teacher Skills in the Covid-19 Pandemic Period," in *2020 4th International Conference on Vocational Education and Training (ICOVET)*, 2020, pp. 310–314.
[6] A. Rifandi, "Mutu Pembelajaran dan Kompetensi Lulusan Diploma III Politeknik," *J. Cakrawala Pendidik.*, vol. 5, no. 1, May 2013.
[7] A. B. Anomeisa and D. Ernaningsih, "Media Pembelajaran Interaktif menggunakan PowerPoint VBA pada Penyajian Data Berkelompok," *J. Pendidik. Mat. Raflesia*, vol. 5, no. 1, pp. 17–31, Mar. 2020.
[8] E. A. Simarmata, G. S. Santyadiputra, and D. G. H. Divayana, "Pengembangan E-Modul Berbasis Model Pembelajaran Project Based Learning pada Mata Pelajaran Pemrograman Desktop Kelas XI Rekayasa Perangkat Lunak di SMK Negeri 2 Tabanan," *Kumpul. Artik. Mhs. Pendidik. Tek. Inform.*, vol. 6, no. 1, p. 93, Feb. 2017.
[9] I. K. A. Winaya, I. G. M. Darmawiguna, and I. G. P. Sindu, "Pengembangan E-Modul Berbasis Project Based Learning pada Mata Pelajaran Pemrograman Web Kelas X di SMK Negeri 3 Singaraja," *J. Pendidik. Teknol. dan Kejuru.*, vol. 13, no. 2, Oct. 2016.
[10] A. Nurhidayati, S. C. Putro, and T. Widiyaningtyas, "Penerapan Model PBL Berbantuan E-Modul Berbasis Flipbook dibandingkan Berbantuan Bahan Ajar Cetak Pengaruhnya terhadap Hasil Belajar Pemrograman Siswa SMK," *Teknol. dan Kejuru. J. Teknol. Kejuruan, dan Pengajarannya*, vol. 41, no. 2, pp. 130–138, Sep. 2018.
[11] I. M. Suarsana, "Pengembangan E-Modul Berorientasi Pemecahan Masalah untuk Meningkatkan Keterampilan Berpikir Kritis Mahasiswa," *JPI (Jurnal Pendidik. Indones.*, vol. 2, no. 2, Oct. 2013.
[12] I. M. Tirta, "Pengembangan E-Modul Statistika Terintegrasi dan Dinamik dengan R-shiny dan mathJax," *Pros. Semin. Mat. dan Pendidik. Mat. Vol 1 No 1 Pros. Semin. Nas. Mat. 2014*, 2014.
[13] R. Ummah, E. Suarsini, and S. R. Lestari, "Pengembangan E-modul Berbasis Penelitian Uji Antimikroba pada Matakuliah Mikrobiologi," *J. Pendidik. Teor. Penelitian, dan Pengemb.*, vol. 5, no. 5, p. 572, May 2020.
[14] B. Nafi'ah and S. Suparman, "Pengembangan E-Modul Program Linear Berorientasi Higher Order Thinking Skills dengan Pendekatan Saintifik untuk Siswa SMK Kelas X," *Pros. SENDIKA*, vol. 5, no. 1, p. 134, May 2019.
[15] S. S. Murtafiah, "Pengembangan E-Modul KD Menerapkan Pembuatan Website Kelas XI BDP di SMKN 1 Jombang," *J. Pendidik. Tata Niaga*, vol. 7, no. 2 SE-Articles, Sep. 2019.
[16] T. Yunianto, H. S. Negara, and S. Suherman, "Flip Builder : Pengembangannya Pada Media Pembelajaran Matematika," *TERAMPIL J. Pendidik. dan Pembelajaran Dasar*, vol. 6, no. 2, pp. 115–127, Dec. 2019.
[17] R. Seruni, S. Munawaoh, F. Kurniadewi, and M. Nurjayadi, "Pengembangan Modul Elektronik (E-Module) Biokimia pada Materi Metabolisme Lipid menggunakan Flip PDF Professional," *JTK (Jurnal Tadris Kim.*, vol. 4, no. 1, pp. 48–56, Jun. 2019.
[18] A. Suryana, *Panduan Praktis Mengelola Pelatihan*. Jakarta: EDSA Mahkota, 2006.