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Increase Students' Motivation in Learning Science by Developing Instructional Media in The Form of Powtoon

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Abstract. Online learning that has been carried out more or less in the past year has caused student studying saturation. The provision of material through Youtube videos, articles or handouts in pdf form is generally done by teachers. In fact, technology has provided many alternatives that can be used as more interesting learning media, for example Powtoon. Therefore, this study aims to provide training to teachers in developing materials in the form of Powtoon in order to increase students' learning motivation, especially during online learning. This research includes community service research. The steps taken are; 1) Pre-implementation, in the form of needs analysis, 2) Implementation, in the form of training with Powtoon development materials as learning media, filling out questionnaires, independent work, discussions and 3) Post-implementation, in the form of evaluation of activities. The implementation of the training showed the enthusiasm of the participants as seen from the life of the discussion session. Based on the questionnaire filled out by the participants, the implementation of the training has been well implemented with suggestions for adding other innovative media materials, and improving teacher competence in other matters. In addition, the results of the development and use of Powtoon media carried out by participants showed that students were enthusiastic and motivated in learning.
Keywords: Learning media, Powtoon, Motivation

Introduction

The COVID-19 pandemic that has occurred for more than a year has caused various changes in activities as a form of new adaptation. Activities in the public have become more restricted than before while still implementing health protocols (Anastasiades, et al., 2021; Fitriyah, et al., 2021). Do not forget also in the world of education, activities are becoming more limited. In fact, currently face-to-face learning in class is still prohibited by the government. Teaching and learning activities are carried out remotely from each student's home (Sadikin & Hamidah, 2020).

Online learning is closely related to the use of technology. Technology is able to assist teachers in preparing teaching materials, learning media and even instruments for assessment during online learning (Astini, 2020; Buchori & Cintang, 2018). Teaching and learning activities are carried out online using the help of online media, such as google classroom, google meet, google form and whatsapp (Sakina, et al., 2020). This online teaching and learning activity has been running for more than a year. Various studies have revealed that students during online learning experience a decrease in learning motivation to a decrease in learning outcomes (Jena, 2020; Munzil, et al., 2022; Rasmawan & Erlina,

2021). This also happened at SMPN 16 Malang. The teacher stated that students experienced boredom in learning because learning activities were only through smartphones and stayed at home. In addition, the teacher also admitted that he did not have much knowledge about today's innovative learning media. The teacher only understands and uses media such as Power Point, PDF files and Youtube videos to present material to students.

Media such as Power Point, PDF files and Youtube videos are very common media used by teachers as student teaching materials during online learning. In fact, currently technology has provided various applications that can be used to create teaching materials with more interesting and interactive uses and results for users. One of those apps is Powtoon (Riskawati, et al., 2021).

Powtoon is an application or website that can be used to design a video with an animation model (Sukmanasa, et al., 2020). Using Powtoon is relatively easy for novice users because there are already many templates that can be used. So, even though the user is not a reliable designer or animator, they can still use Powtoon easily (Sukmanasa, et al., 2020a). This Powtoon has been widely used as a learning medium, as was done by Arif and Muthoharoh in 2021 on the human respiratory system material (Arif & Muthoharoh, 2021). There is also the development of Powtoon as a learning medium on ecosystem component materials (Laksono, et al., 2020). Rosa's research in 2019 resulted in the fact that students experienced an interest in learning to use Powtoon media (Herawati, et al., 2019). Based on these three studies, Powtoon can be a suitable learning media to be used and applied in science learning. Powtoon is still a foreign platform for teachers when compared to other platforms such as PowerPoint (Oktaviani & Mandasari, 2020; Takda, et al., 2021). Several previous studies have discussed a lot about the benefits of Powtoon in learning, but have not discussed how the process of providing skills using Powtoon for teachers to improve learning.

Residents in the US who work as teachers think that teacher competency development is necessary and very important to be carried out regularly. This is because in order to meet the demands of the times experienced by students who continue to change (Parsons, et al., 2019). This is also the case in Slovenia, teachers state that teacher development needs to be carried out continuously as a renewal of the competencies they have (Makovec, 2018). With increasing competence, learning will also be effective in accordance with the times (Özgenel & Mert, 2019). This teacher competency development effort supports teacher professionalism. Teacher competencies that can be developed are in terms of learning strategies, learning media, teaching materials, learning processes to evaluation methods (Aldahmash, et al., 2019; Babakina, et al., 2021; Liliarti & Kuswanto, 2018; Rahardjanto, et al., 2019).

So, in order to improve teacher competence in providing more interesting teaching materials for students, a community service activity was carried out in the form of training on the manufacture and use of Powtoon for student teaching materials. Training activities are able to provide knowledge for teachers and directly train competencies with independent work activities in them (Fitriyah, et al., 2021). This training activity was conducted at SMPN 16 Malang. It is hoped that if teachers have skills in making teaching materials using the help of Powtoon, online learning will be more interesting so as to increase student motivation in learning and learning objectives can be achieved.

Methods

This study is based on evidence gathered from community service research in classroom. It was conducted in a SMPN 16 Malang. The research participants were 65 SMPN 16 teachers who taught different subjects and agreed to participate in this research.

Participants were obtained by conducting an initial survey of teachers using google forms. This research is a mixed method that collected by instruments were observation sheets of need assessment, participant response quistionnaires. By providing debriefing to teachers in operating Powtoon as a science learning medium, it will be followed by an increase in students' learning motivation. In collecting data there are several stages of activities that will be carried out.The stages of the activities carried out are in accordance with Figure 1.

Figure 1. Three stages of research.

1. Pre-implementation
   The research team conducted an analysis to find problems in the target location. The activities carried out were by conducting interviews with the Principal of SMPN 16 Malang and distributing questionnaires to the teachers of SMPN 16 Malang. Then, it was decided the type of service activities carried out at SMPN 16 Malang. The research team also developed a plan in order to realize service activities at SMPN 16 Malang. The things that are arranged are the implementation schedule, the required instruments, the division of tasks for the committee and presenters.
2. Implementation
   The research team carried out community service activities at SMPN 16 Malang. Activities are carried out online through Zoom Meetings. Delivering training materials in the form of making and using Powtoon as an innovative learning medium for students during the COVID-19 pandemic. After that, the participants did independent work by operating Powtoon to make science learning media, followed by a question and answer discussion about the difficulties experienced in operating the media, and ended with taking responses about the teacher's views regarding the existence of Powtoon as an interactive learning media device after implementation.
3. Post implementation
   The research team carried out activities by analyzing the results of the training participants. These results are in the form of reports from teachers who have implemented learning media using the Powtoon application in the classroom, after which it is related to students' motivation in learning science.

Results and Discussion

This study finds out the increase in students' learning motivation in science subjects through improving the skills of teachers in developing learning media using powtoon. The explanation in this study is based on community service activities carried out at a junior high school in a city in East Java, Indonesia. Therefore, preliminary findings about teacher skills, workshop activities to improve teacher skills, and how concrete evidence of

improving teacher skills in developing digital learning media, namely Powtoon will be explained after the workshop.

Table 1. Need analysis activites carried out at Teachers of SMPN 16

Number	Facts of need analysis
1.	Student learning motivation decreases
2.	Students experience boredom in online learning
3.	Use of learning media in the form of Google Classroom, Google Meet, Google Form
4.	Provision of teaching materials in the form of printed books, ebooks (in PDF format), news articles and learning videos from Youtube.
5.	The teacher is not familiar with the Powtoon platform and application.
6.	Teachers feel the need to develop skills for the achievement of online learning implementation.

Based on the table 1 above, it can be said that it is necessary to hold training for teachers at SMPN 16 Malang in order to prepare for online learning. This online learning is in the form of providing teaching materials that are more innovative than the teaching materials used today in order to minimize student boredom in learning. These teaching materials can be created with the help of the powtoon platform and application. So, the activities carried out at SMPN 16 Malang are teacher training in developing teaching materials for students using the Powtoon application. This will be followed by motivation to learn science in students and provide new experiences with more interactive media.

Training activities are carried out online through the zoom meeting platform. The core activity of this training is the delivery of materials on powtoon and demonstrations of making teaching materials using Powtoon. The speaker said about the meaning, use, access and use of powtoon. There is also a demonstration of examples of making teaching materials using powtoon. An example of the results of teaching materials using Powtoon can be seen in Figure 2.

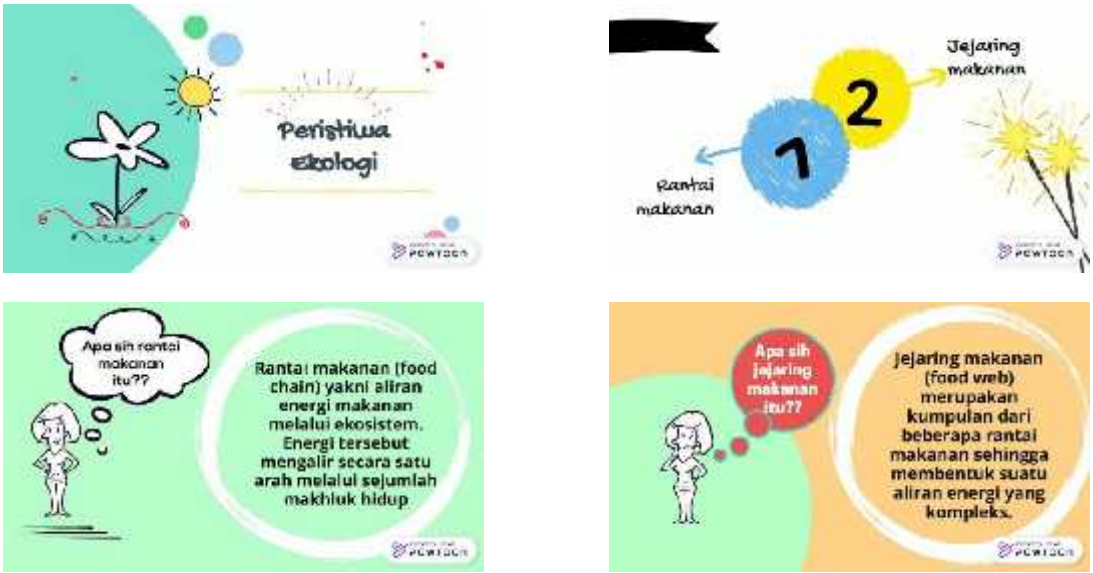

Figure 2. Samples of examples of teaching materials using Powtoon by presenters during training

It can be seen from Figure 2 that the Powtoon display is in the form of an animated cartoon. Basically, making Powtoons is similar to Power Point. However, Powtoon has more interesting features like animated cartoons. With the preparation of materials and creative effects from users, teaching materials produced from Powtoon will have an interesting storyline for presenting material for students.

After presenting the material, the trainees did independent work by creating and developing teaching materials using Powtoon for the subject matter taught in class. Then, the results of these developments are tested in learning in their respective classes. The results of the development and testing of Powtoon made by the participants were presented and discussed in the training forum on the second meeting day. The results of the participants' independent work and discussion resulted in the fact that the teachers of SMPN 16 Malang felt that making teaching materials with Powtoon was a way that did not make it difficult for teachers, producing interesting teaching materials compared to Power Point. When presenting the teaching materials that have been developed in class, students look enthusiastic about the teaching materials. Some students also responded that teaching materials with Powtoon made by the teacher were interesting so that they made learning activities more fun. This is also in line with previous research which states that Powtoon is able to increase students' interest and motivation in teach (Yuliani, et al., 2021; Abdi, et al., 2021). In addition, the use of Powtoon can also realize learning objectives are achieved according to research that proves that Powtoon is able to improve student learning outcomes (Nurdiansyah, et al., 2018; Siregar & Frisnoiry, 2019; Syafitri, et al., 2018). This indicates that Powtoon can indeed be used as a supporting application in creating and developing learning media or teaching materials (Communication, et al., 2022; Oktaviani & Mandasari, 2020)

Service activities in the form of training were closed with data collection in the form of participant responses during the training. The teacher of SMPN 16 Malang as a participant admitted that this kind of training was very beneficial for teachers. This kind of training is able to improve the competence of teachers in preparing the learning process with the help of the latest technology and create fun learning (Anastasiades, et al., 2021; Babakina, et al., 2021). The principal also expressed his gratitude to the Science Education Study Program, State University of Malang, which has held training at his school. It is hoped that in the next activity, teacher training can be carried out again in developing other innovative and interesting media.

Conclusion

In order to improve teacher competence in carrying out online learning during the COVID-19 pandemic, community service activities have been held in the form of teacher training in the creation and use of the Powtoon application to provide teaching materials at SMPN 16 Malang. The teacher looks enthusiastic and feels helped in preparing more interesting and innovative online learning. It is hoped that training for teachers in other topics can be carried out

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