Development of Learning Modules and Interactive Digital Content to Increase Student Interest and Learning Motivation at SMA Kallista Batam

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Abstract

This study aims to address the issue of low student interest and motivation at Kallista Batam School, caused by the monotonous conventional teaching methods and limited interaction between teachers and students. The one-way teaching approach, which does not actively involve students in the learning process, leads to a lack of concentration and enthusiasm in participating in lessons. As a solution, the author developed interactive digital learning modules using PowerPoint, quizzes, and application-based learning media to enhance student engagement in the learning process. The methods used in this study are the Diffusion of Science and Technology (Iptek) and Substitution of Iptek, which aim to integrate educational technology into teaching to improve student understanding and motivation. The results show that the use of interactive digital learning media successfully created a more engaging and enjoyable learning environment, while encouraging students to actively participate in discussions and quizzes. Based on these findings, it is recommended that similar programs be implemented more widely in schools by providing teacher training in utilizing technology and introducing more interactive tools and applications for learning.

Keywords: *Interactive Digital Learning, Student Motivation, Student Engagement*

INTRODUCTION

The introduction must contain (in sequence) the background Education is one of the factors that will determine a person's success (Heriati, A., Samputri, 2014). Where education is also an important aspect in forming students' character and abilities, especially in preparing them to face future challenges (Salong, Amjad., Pattiasina, Johan., Latuserimala, Gerald, 2024). Education can also be obtained from anywhere, it can be from home, friends, or school (Sukma, 2021). Where education in schools involves three important elements that are interrelated, namely the curriculum, teachers, and also the learning process (Anggraini, Nuri., Herdyana Thessa., Ramadhani, 2024). And in this fast-paced digital era, innovation in learning methods and media is very important to support the success of the teaching and learning process (Sulistyarini, Winda., Fatonah, 2022). One innovation that can be implemented is using a learning module interactive digital interest.

In reality, many students at school, including at Kallista Batam School, face challenges in maintaining their interest and motivation in learning. Lack of active involvement in the learning process is often the main factor causing low levels of student concentration and enthusiasm (Maharani, Arsita Selly., Nasuha, Salsa Umi., Maulida, 2024). Learning that tends to be monotonous with conventional approaches is often unable to arouse students' curiosity to explore more deeply the material being taught. Even though at Kallista School the use of PPT and infocus has been implemented, which is a positive step in improving the visualization of material, sometimes this method of delivery still feels less interesting and not fully effective in motivating students. Apart from that, the lack of utilization of pre-existing modules can also make the learning process feel less structured and optimal. This in turn can have a negative impact on their academic performance.

In response to this challenge, a more interesting and interactive approach is needed to create a more dynamic and enjoyable learning atmosphere. Interactive learning that utilizes technology can be an effective solution in

providing a more interesting and enjoyable learning experience (Irawan, Alfiatul Izzati., Aliyah, Nelud Darajaatul., Darmawan, 2024). With an approach that combines elements of technology, visualization, and direct interaction with the material, interactive digital learning is expected to motivate students to be more actively involved in the learning process (Depita, 2024). And not only does it motivate students to be more active, but by implementing this it is hoped that it can encourage students to be initiative and have a sense of responsibility in solving their learning problems (Lady et al., 2021).

Along with the rapid development of information technology, many studies show that students tend to be more interested in learning that uses digital media which allows them to interact directly with learning material (Putra, 2024). An example of this digital media could be digital Power Point teaching materials that have been designed to be as attractive as possible or by using learning applications such as Baamboozle or Quizizz to further involve students during the learning process (Hermawan, Toto., Khairiani, Dian., 2024). Interactive learning not only increases students' interest in learning, but also encourages them to be more creative, critical and innovative in developing their understanding of material (Milidar, 2024). Therefore, developing interesting interactive digital learning modules is very important to implement at the Kallista Batam School, in order to increase student interest and motivation to learn.

With interactive learning modules, students not only become more active, but also feel more challenged to explore the material more deeply. This will create an exciting and enjoyable learning atmosphere, but still based on achieving competency and academic goals (Hartanti, 2019). Furthermore, this approach can strengthen the relationship between students and the material being studied, make learning more meaningful, and prepare students to become individuals who are better prepared to face

developments in an increasingly digital world (Gulo., Dominika Dewi Strista., Laoli, Bezisokhi., Laoli, Eka Septianti., Lase, 2024).

Through the development of interactive digital learning modules that are designed in an attractive way, it is hoped that learning experiences can be created that are not only effective in achieving educational goals, but also fun and motivate students to continue learning and developing. Therefore, this research aims to develop a digital learning module that can increase student involvement and motivation in the learning process at the Kallista Batam School.

METHOD

To solve the problems faced by Kallista Batam School, the author uses two main approaches, namely the Science and Technology Diffusion Method and the Science and Technology Substitution Method. These two methods aim to integrate educational technology (Science and Technology) in the learning process in order to increase student involvement, motivation and understanding of the learning material provided.

a. Science and Technology Diffusion

Science and technology diffusion refers to the process of spreading technology and scientific information that is applied to improve the quality of learning (Rahmatullah, Asep., Mutoharoh., Hanifah, Jihan., Pratama, 2024). In this context, the science and technology diffusion method aim to introduce and implement technology-based interactive digital learning modules in schools. It is hoped that this learning module can reach students more effectively through digital media which allows them to interact directly with the learning material.

This science and technology diffusion process involves several steps:

- Proper Technology Identification
  Select appropriate technology, such as learning applications, interactive

platforms, and visual aids, that can enhance the student learning experience.

- Provide training to teachers to implement this technology in their learning activities. This aims to ensure that teachers can make maximum use of technology in the teaching process.
- Application of Technology in Learning Using technology in learning, such as learning videos, interactive simulations, and digital quizzes, can attract students' attention and speed up their understanding of the material being taught.
- Evaluation and Feedback Collect feedback from students and teachers regarding the effectiveness of using technology in learning to make improvements and further development.

b. Science and Technology Substance

Science and Technology Substitution is an approach that focuses on replacing traditional teaching methods with more interactive and interesting technology (Arni, Sitti., Herwana., Jayanti, 2022). In this context, the science and technology substitution method prioritize the use of interactive digital learning modules as a substitute for conventional teaching methods which tend to be monotonous. And also, with utilization *website* an interactive quiz created with the aim of honing students' learning abilities and so that students can participate actively and be directly involved in teaching and learning activities.

The steps in this science and technology substitution method are:

- Analysis of Student and Teacher Needs Analyze the needs of students who need learning materials that are more interesting and relevant to current technological developments. Apart from that, analysis was also carried out on teacher readiness in using technology in learning.
- Development of Digital Learning Modules Develop technology-based learning modules that are interactive and easily accessible to students. This module is designed with features that allow students to interact directly with the material, such

as quizzes, discussion forums, and learning videos.

- Implementation of Modules in Learning Applying digital learning modules that have been developed in teaching and learning activities, so that students can learn in a way that is more fun and easier to understand.
- Monitoring and Evaluation Conduct regular monitoring to evaluate the impact of using digital modules on student motivation, engagement and learning outcomes. The results of this evaluation are used to improve and update the modules used. All learning materials that have been created in the form of 2 Learning Modules, 10 Power Points, and 10 Quizzes were handed over to one of the Kallista Batam School teacher representatives located on Jl. Orchad Boulevard, Belian, Batam City, Riau Islands. 29464.

Figure 1. Interactive Learning Materials in the form of Power Points for Marketing Materials *(Marketing)*

Figure 2. Interactive Learning Materials in the form of Power Points for Financial Materials *(Finance)*

Figure 3. Contents of interactive learning materials in the form of PowerPoint
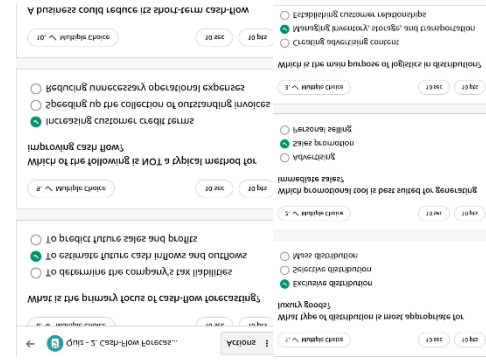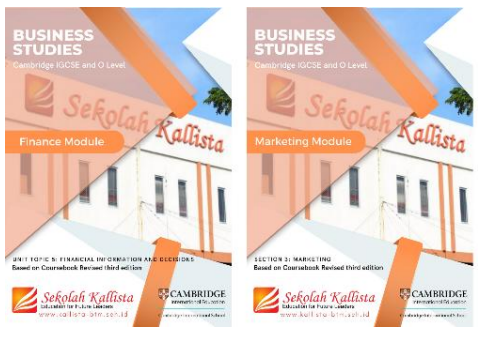

Figure 4. Learning Module for Marketing and Financial Materials

Figure 5. Contents of the Learning Module

Figure 6. Interactive Quiz for Marketing and Finandical Materials
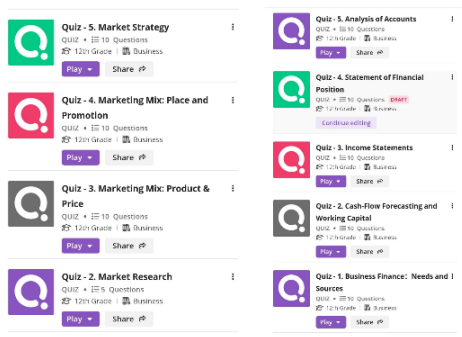

Figure 7. Interactive quiz questions for Marketing and Financial Materials

RESULTS AND DISCUSSION

The implementation of digital learning media at Kallista Batam Center School is carried out during class hours, with the aim of increasing student involvement and motivation in learning. The author explains the material in front of pupils and students using a digital learning module, Interactive PowerPoint, and digital educational games in the form of a quiz that has been prepared previously.

The implementation process begins with delivering the material directly in front of the class, where the author uses PowerPoint which has been designed in an interesting and informative way. These presentations contain a variety of engaging visual elements, such as images, graphs, and videos, designed to help students understand the material in a more interactive and fun way. The author not only reads the material, but also invites students to participate actively, for example by asking questions that encourage discussion, or asking students to provide opinions regarding the topic being discussed. This approach aims to ensure that students are not only passive listeners, but also more involved in the learning process.

After the presentation of the material, to deepen understanding and maintain student involvement, an interactive quiz was conducted. This quiz is prepared based on the material that has been presented and is carried out using a digital platform which makes it easier for

students to participate directly. This quiz is designed not only to test students' understanding, but also to provide a more dynamic and fun atmosphere. With this quiz, students feel more challenged to answer the questions provided, while also learning while playing. The author has created an account on Quizizz which contains a collection of questions that the author designed for a total of 10 learning materials. The author also provides information on the Quizizz account in the form of e-mail And password to all teachers at Kallista Batam High School who teach business classes so they can use the account and apply it in class during learning.

CONCLUSION

The implementation of interactive digital learning media at the Kallista Batam School can be said to be successful, based on the author's direct experience when teaching students in class. The learning media used, such as PowerPoint which is designed with colorful characters and interesting animations, has succeeded in creating a learning atmosphere that is not boring. A PowerPoint design that only contains important points also makes it easier for students to focus on the core material without having to re-read the entire content of the material, so that the understanding process becomes more efficient.

Apart from that, the use of quizzes as part of the learning process succeeded in attracting students' attention and raising enthusiasm. With quizzes arranged interactively, students feel more challenged and motivated to answer the questions asked, which in turn increases their involvement in the lesson. All of these elements have proven successful in eliminating the boredom that often arises in conventional learning, and replacing it with a livelier and more interesting atmosphere. By creating this interesting and interactive content, teachers and schools find it very helpful in improving learning. More creative content means teachers don't just rely on traditional methods, but can also use various websites or applications to create more interesting material. This gives teachers the freedom to design material that suits students' needs, so that the learning atmosphere becomes more enjoyable and easier to understand. Apart from that, technology also makes it easier for teachers to access various resources that can help in the teaching process, so that learning becomes more effective and efficient.

From these results, it can be concluded that the application of learning methods that integrate interactive digital learning media has proven effective in increasing student motivation and creating more active involvement in the learning process. Attractively designed media, as well as fun quizzes, are important factors in increasing student enthusiasm and providing them with a more enjoyable and useful learning experience. Therefore, the use of interactive digital learning media can be used as a solution to improve the quality of learning at Kallista School Batam.

SUGGESTION

As a recommendation for further PKM activities related to this program, it is recommended to: further develop learning modules digital interactive by adding a wider variety of features, such as interactive simulations, learning videos, discussion forums or using other learning methods. To increase the sustainability of this program, it is also recommended to do regular training for teachers in making maximum use of digital technology in the teaching process. This ensures that the use of technology remains effective and can be easily adapted to various learning situations. It is hoped that this further development will be possible to improve the quality of learning at Kallista School Batam and open up opportunities for students to be more actively involved in the digital learning process.

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