



## INTERACTIVE LEARNING MEDIA INNOVATION TO IMPROVE DIGITAL ERA LEARNING AT MTSN 3 ABDYA SCHOOL

Yayang Fazila R<sup>1</sup>, Sukri Adani<sup>2</sup>

<sup>1,2</sup>STKIP Muhammadiyah Aceh Barat Daya

<sup>1</sup>Email: [ayangfazil@gmail.com](mailto:ayangfazil@gmail.com)

<sup>2</sup>Email: [talukmaimbau2011@gmail.com](mailto:talukmaimbau2011@gmail.com)

### **Abstract**

*Technological advances bring profound changes in the learning paradigm, encouraging the use of innovative and interactive learning media to improve the effectiveness of learning amidst the challenges of the times. Education must adapt to these changes, to meet the demands of a digital society that increasingly relies on technology. This study aims to develop innovations in interactive learning media to Improve Digital Era Learning at Mtsn 3 Abdya School. This learning media was developed using teaching materials equipped with interactive features such as videos, animations, and quizzes. This study is based on a literature study research approach to investigate innovation in the development of interactive learning media in order to improve the effectiveness of learning in the digital era. The results of this research show that interactive learning media innovation has made a positive contribution to increasing the effectiveness of learning at the MTsN 3 ABDYA school.*

**Keywords:** *Media Interactive, Learning, technology, teacher*

### **Abstrak**

Kemajuan teknologi membawa perubahan besar dalam paradigma pembelajaran, mendorong penggunaan media pembelajaran yang inovatif dan interaktif untuk meningkatkan efektivitas pembelajaran di tengah tantangan zaman. Pendidikan harus beradaptasi dengan perubahan tersebut, untuk memenuhi tuntutan masyarakat digital yang semakin bergantung pada teknologi. Penelitian ini bertujuan untuk mengembangkan inovasi media pembelajaran interaktif untuk Meningkatkan Pembelajaran Era Digital di Sekolah Mtsn 3 Abdya. Media pembelajaran ini dikembangkan menggunakan bahan ajar yang dilengkapi dengan fitur interaktif seperti video, animasi, dan kuis. Penelitian ini didasarkan pada pendekatan penelitian studi literatur untuk mengetahui inovasi pengembangan media pembelajaran interaktif guna meningkatkan efektivitas pembelajaran di era digital. Hasil penelitian menunjukkan bahwa inovasi media pembelajaran interaktif memberikan kontribusi positif terhadap peningkatan efektivitas pembelajaran di sekolah MTsN 3 ABDYA.

**Kata Kunci:** Media Interaktif, Pembelajaran, Teknologi, Guru

### **INRODUCTION**

Media innovation can be defined as the development or utilization of new technologies in communication and media. Media innovation can cover various aspects, such as developing new platforms and technologies to deliver information and content, such as digital media, streaming, and social platforms. Utilization of new technologies to improve the quality, accessibility, and experience of media consumption, such as better image and audio quality, devices, and interactivity. Development of new content and formats that utilize the characteristics of new media, such as short videos, interactive content, and virtual reality (L Küng - 2023



- *Books*, n.d.).

In the rapidly developing digital era, the role of information and communication technology has changed almost every aspect of life, including education. Technological advances bring profound changes in the learning paradigm, encouraging the use of innovative and interactive learning media to improve the effectiveness of learning amidst the challenges of the times. Education must adapt to these changes to meet the demands of a digital society increasingly relying on technology. This writing will discuss the importance of innovation in the development of interactive learning media as an effort to increase the effectiveness of learning in the digital era. (Lubis, 2021).

Education is an essential factor in building the future of the nation. In today's digital era, technological developments have a significant impact on the way students learn and learn. Learning innovation is very important to develop so that students can adapt to various technological advances in this digital era. Old ways of learning no longer relevant to the development of the times should be evaluated and improved so that the increasingly developing era does not leave students behind. Traditional learning methods, such as lectures and homework, are less effective in meeting the learning needs of today's students. Therefore, innovative learning through technology and digital media is significant. (Firdaus & Fadhir, 2019).

Media acts as an intermediary between teachers and students, delivering information and learning materials in a more engaging and easy-to-understand way. In the digital era, where elementary school students are accustomed to using technology daily, innovative and interactive learning media are becoming increasingly interrelated. Interactive media has the potential to create a more interesting and enjoyable learning experience, which in turn can increase students' learning motivation. (Indriyani, 2019).

One of the main advantages of using interactive learning media is its ability to present information in various visual and multimedia forms. Visualizations and multimedia content can help elementary school students better understand intricate and complex concepts. Interactive simulations and learning videos can provide clear illustrations of various phenomena and processes that are difficult to explain in words alone. With this interactive media, elementary school students can learn more deeply and strengthen their understanding of various learning materials. In addition, interactive learning media can also encourage the active participation of elementary school students in the learning process. In the traditional learning model, elementary school students often become passive listeners when delivering material. However, with interactive media, teachers can directly involve elementary school students in learning through various interactions and activities. Educational games and digital-based learning platforms can provide interesting challenges and tasks for students so that they become more active in developing their understanding. The challenge of creating interactive primary learning in media is beyond just the use of sophisticated technology. It is essential for developers of learning media to ensure that it is by the learning objectives and subject matter being taught. Each interactive element must support the achievement of learning objectives and help elementary school students achieve the expected competencies. The design of the learning media must be carefully considered to ensure integration between the learning content, visual appearance, and interactions offered. In



addition, accessibility must also be a primary concern when developing interactive learning media. All students, without exception, must be able to access the media learning easily. Therefore, implementing accessibility and equality standards is very important so that no elementary school students are left behind in the learning process due to technical constraints or inappropriate devices. Integrating innovation in developing interactive learning media also presents new challenges for educators. Teachers must have a deep understanding of technology and be able to combine it with effective teaching methods (Marlina et al., 2024).

Education and training related to the use of technology in learning are also important so that teachers can optimize the potential of interactive media to increase learning effectiveness. In conclusion, innovation in developing interactive learning media is important in increasing learning effectiveness in the digital era. Interactive media offers students a more engaging, immersive, and participatory learning experience. However, these efforts must be balanced with mature design, relevant content, and attention to accessibility aspects. With proper implementation, interactive learning media can effectively achieve better educational goals in the ever-evolving digital era. (Try & Utomo, n.d.).

Learning success is the primary goal of the education process. This success can be seen from two related components: students and teachers. Students have character in learning. Character is the result of interaction between a person and their environment. The character inherent in students is undoubtedly influenced by the interaction between one student and another, between students and teachers, and between students and the school environment. The formation of student character can be done in an integrated manner with learning and applies to all subjects. Things related to character values are implemented simultaneously. Another way to improve learning success is by teaching staff or teachers. A teacher must be able to design learning based on student needs and character and adjust it to the development of the times. Efforts that can be made to achieve educational goals include creating a learning process that is appropriate and on target and impacts improving student competence. To support the implementation of learning, especially in education. In 2020, education development in Indonesia is no stranger to the use of technology. Technology-based learning in the current era is nothing new (Tsany et al., 2022).

Setiawan (2018) stated that technological developments impact the world of education, namely the emergence of various digital-based learning resources to improve the quality of learning. The spread of multiple features or platforms that support learning is an excellent opportunity for the world of education to achieve the goals set by combining teaching strategies with implementing technology. Teachers must be able to align learning objectives with student development in this digital era. Technological innovation in learning also cannot be ignored, considering that students today are the digital generation. Furthermore (Ridha, 2018) stated that current technological innovation can be an excellent opportunity for teachers to improve good relations with parents so that there can be harmony between school and home education.

Wijayanti et al. (2021) stated that technological innovation in learning has a role in helping to package teaching materials. This is intended so that the learning process can run more effectively. Implementing technology is important and cannot be separated from the digital-based era. Technology plays a significant role in



supporting the success of learning through the applications, platforms, and media used. Ease of access and sophisticated features continue to facilitate communication, start learning, and deliver materials to provide evaluations in learning in this digital era. The teacher's preference does not simply determine the selection of methods, media, and strategies in implementing technology. The choice also depends on the task's nature, the learning objectives that must be achieved, and the abilities, talents, prior knowledge, and age of students that a teacher must consider. The use of technology in learning is expected to overcome problems in teaching so that it can provide a set of principles used to underlie optimal teaching methods and techniques. (Camelia, 2021).

This study aims to develop innovations in interactive learning media to Improve Digital Era Learning at Mtsn 3 Abdya School. This learning media was created using teaching materials with interactive features such as videos, animations, and quizzes. The study's results showed that the interactive learning media developed effectively increased student learning motivation and got positive responses from students and teachers (Fajriyah & Prastowo, 2022).

## **METHOD**

This research uses descriptive qualitative research to describe the problem and research focus. This research begins by formulating a problem and selecting data using data collection techniques to produce a conclusion. Qualitative research is a step in social research that aims to collect descriptive data in words. This qualitative research is based on qualitative evidence, not on a statistical basis. Qualitative research refers to reality in the field and the experiences experienced by respondents, for which theoretical references are then sought. Qualitative research in this study involves assessment procedures that produce descriptive data in the form of written or verbal sentences from the people and behavior observed (Murdiyanto, 2020).

In this case, researchers interpret and explain data from interviews, observations, and documentation to get detailed and precise answers to the problems studied. Qualitative research was chosen because it is adapted to the characteristics of research subjects, including teachers and students who must continue to adapt to the digital era to obtain in-depth information and cover social realities. In this research, efforts were made to collect as much descriptive data as possible, which would then be presented as reports and descriptions. The method used in data collection is a qualitative method specifically designed to obtain information on the experiences of students and teachers regarding Interactive Learning Media Innovations to Improve Digital Era Learning at the Mtsn 3 Abdya School.

In qualitative research, interviews are an important and frequently used data collection method. Interviews are a two-way communication process in which researchers ask respondents questions to gain in-depth information about their experiences, views, and feelings regarding the research topic.

Steps for conducting interviews with five people in qualitative research, as well as examples of questions that can be used

### **Interview Preparation**

Identify Respondents: Select five people who are relevant to the research topic:

- a. Teachers who use interactive learning media.

- b. Developer or provider of learning media.
- c. English lesson teacher

### **Formulate Questions**

#### **The Same Question For Five Teachers:**

1. Does the teacher always use media in learning?
2. How does the teacher prepare media for learning?
3. Are there any difficulties experienced by students in using media?
4. Why, in choosing learning media, a teacher must first understand the foundations and principles of using learning media?
5. Is there supervision from the school principal regarding the use of learning media?
6. What is the current understanding of media information technology at MTSN 3 ABDYA school?
7. Mention the types of media with their characteristics and purposes for using the media?
8. Explain the types of learning based on the media used?
9. How to Improve the Quality of Learning with Interactive Media?
10. What are some examples of interactive media that are often used in learning?
11. Why are types of interactive multimedia media divided into several groups?  
Explain
12. How do you match media with teaching objectives?
13. What is the support for the content of the learning materials?
14. What are your skills in using learning media?
15. What are the main benefits you get from using interactive media?
16. Does the media have a negative impact on learning?
17. How can it be said that media has an increased capacity for learning?
18. What is the media for a teaching delivery system that presents material?
19. Explain the process by which this media can become a teacher's digital assistant?
20. What factors are considered when selecting interactive media tools before using them in the classroom?

#### **Conducting Interviews**

**Schedule and Venue:**The interview is scheduled for July 20 2024, in the school meeting room at 10.00 WIB. This place was chosen because of its calm and unobtrusive atmosphere.

**Preparation:** Before the interview, the researcher sent an email to the respondent to confirm the time and place. The researcher also explained the purpose of the interview and asked permission to record the conversation.

#### **Interview Implementation**

**Opening:** The researcher introduces himself and explains the purpose of the interview.

**Main Question:** The researcher started with open questions, such as "What is your experience in using interactive learning media in the classroom?"

**Follow-up Questions:** Responding to respondents' answers, researchers asked follow-up questions to dig up further information, such as "What challenges did you face when implementing this media?"

1. Recording: With permission from the respondents, interviews were recorded using a voice recorder for further analysis. The researcher made sure to pay full attention during the interview and note down important points.
2. Closing: At the end of the interview, the researcher thanked the respondents for the time and information provided. The researcher also explained the next steps in the research.
3. Results: Data from interviews will be analyzed qualitatively to identify main themes related to Interactive Learning Media Innovation to Improve Digital Era Learning at MTsN 3 Abdy School.

Interview analysis in qualitative research begins with transcribing data obtained from interviews, where the researcher records and writes down the respondents' words and emotional context. After that, the researcher re-read the transcription to understand the overall content and record initial impressions. The following process involves coding, where the researcher labels important parts of the data to identify themes and patterns. These codes were then grouped into main themes, reflecting respondents' views and experiences. Researchers then analyze the meaning of each theme, matching the results with other data sources to ensure validity. Finally, the results of the analysis are prepared in a clear report, equipped with quotes from respondents to support the findings, as well as reflections on the analysis process that has been carried out.

## RESULTS AND DISCUSSION

This study aims to explore the innovation of interactive learning media that can improve the quality of learning at MTsN 3 ABDYA in the digital era. The results of the study indicate that the use of interactive learning media, such as infocus, speakers, materials provided or objects from nature can increase student motivation and facilitate more active learning. Observations made in several classes showed that students were more enthusiastic and involved in the learning process when using the media.

In addition, data analysis showed a significant increase in students' understanding of the material after the implementation of interactive learning media. The use of the media provided can be seen from the interactive simulation allowing students to learn independently and measure their understanding in real terms. This not only improves academic learning outcomes but also builds students' confidence in mastering the subject matter.

Further discussion reveals that interactive learning media also supports collaboration between students. In discussion groups facilitated by digital platforms, students can share ideas and help each other in completing assignments. This creates a more conducive learning environment and supports the development of students' social skills, which are very important in learning.

However, this study also found several challenges in the implementation of interactive learning media. Some students have difficulty accessing technology due to limited devices or unstable internet connections. Therefore, it is important for schools to provide adequate technical support and infrastructure so that all students can make optimal use of this media.

Overall, the results of this study indicate that interactive learning media innovation has great potential to improve the quality of learning at MTsN 3 ABDYA. With proper implementation and support from various parties, it is hoped that learning in



the digital era can run more effectively, so that students not only gain knowledge, but also skills that are relevant to the development of the times.

## Research Findings

Innovation in the Development of Interactive Learning Media has become a significant focus in education, especially in the rapidly developing digital era. To improve learning effectiveness, innovative and interactive learning media have attracted the attention of many educators and researchers. This literature study aims to present a comprehensive overview of innovation in the development of interactive learning media and how it can affect the interactive learning process and the learning process in the digital era.

According to the Minister of Education and Culture Regulation in *Law Number 103 of 2014*, Learning is a process of interaction between students, between students and their teachers, and between students and learning resources in the school environment.

Using media in learning can make it easier for students to understand the material given and arouse their curiosity about the material. The teacher's ability to treat students with patience and give them the freedom to develop their creativity, mainly when writing examples of expressing opinions in public, is outstanding. In the learning process, teachers' provision of games to arouse students' enthusiasm is very good. The interaction between students and teachers during the learning process has shown good intensity. Students are interactive, active, and critical, especially when involved in learning activities.

Good communication between students and teachers makes the learning process more meaningful. The interaction between students and students is seen when they discuss, help each other, and respond to each other in the question-and-answer process. Students look enthusiastic when interacting with teaching materials. For them, the media provided by the teacher during learning is exciting and helps them understand the material. Likewise, the examples given are easy for them to find daily. Students' enthusiasm and interest in the media can make it easier to understand the material.

## Use of Interactive Media/ teacher's understanding of teaching media

### Teachers' opinions about media understanding:

Teacher: OK...I use it almost every time I teach. I use it 3 times a week, but some teachers use simple media such as whiteboards, pictures, or concrete objects.

However, not all teachers utilize technology-based learning media. (khairunnas)

Teachers who do not always use media:

Teacher: Judging from the availability of facilities and infrastructure, not all schools have complete facilities to use sophisticated learning media (Samsuar)

Teacher: No, not all teachers always use media in learning. The use of learning media depends on the subject matter, learning objectives, student characteristics, and the teacher's ability to use the media (Rina Winarli)

Teacher: you Teachers do not always use media in every lesson, some do and some don't (syafriawati)

Teacher: yes, not all teachers always use media in learning. The use of learning media depends on the material, learning objectives, and teacher creativity (syarifah)

The use of innovative and interactive learning media has attracted the attention of many students. Almost all teachers do not use learning media. However, there are some teachers who use learning media, so the purpose of learning is to facilitate the delivery of material and understanding to students who quickly grasp the media used. The use of interactive multimedia appropriately can increase students' interest in learning. The use of interactive multimedia appropriately means that it is adjusted to the conditions and characteristics of the field of study, student characteristics, and learning objectives that have been set.

The use of media is one of the steps in interactive learning activities. The characteristics of students, especially students' initial ability to use computers, are good; students do not find it difficult to understand. Learning with interactive learning media can improve students' thinking skills and be able to absorb information quickly. Learning using interactive learning media will create different and non-monotonous learning conditions that can be created by displaying text, sound, images, or videos. In student learning, there is an effort to solve learning problems with technology that uses increasingly sophisticated media through a series of design, production, and evaluation processes. The activities are developing and must be understood first before being used in the learning process for students of MTSN 3 ABDYA.

### **Types of Interactive Learning Media**

#### **Teacher's opinion about the type of media:**

Teacher: Visual Media (Characteristics: Involves the sense of sight, such as pictures) The aim is to clarify concepts, attract attention, and facilitate students' understanding; Audio-Visual Media (Characteristics: Involve the senses of sight and hearing, such as videos, films and animations) The aim is to present information more interactively and interestingly, and helps students understand complex concepts, Print Media (Characteristics: Paper-based, such as textbooks, modules, and worksheets) The aim is to provide primary learning resources, help students understand the material, and support independent learning. (Samsuar).

Teacher: Through focus, images, printed materials, and characteristics can be seen to emphasize the presentation. The aim is to clarify the presentation of information, attract attention, and facilitate understanding (khairunnas)

Teacher: Visual media: To clarify and make it easier to understand the material, Audio media: To convey information; audiovisual media (video, film): To display information visually and audio; Print media (books, modules): To convey information in writing, Media interactive (computer or infocus and applications): To increase student interaction and involvement in learning (rina winarli)

Teacher: Conveys information audio visually to increase attraction and understanding (syafriawati)

Teacher: Image media, audiovisuals, delivery of material outside of class by showing examples from nature such as trees and other. Various types of learning media at MTSN schools aim to create learning experiences that are more effective, interesting, and appropriate to students' needs and learning styles. I use Interactive Multimedia Based learning Audio learning, visual learning, audiovisual learning (video, film) learning with infocus media or other media hmmm, Interactive Multimedia Based Learning according to needs.

Based on the results of the study, the types of media with the characteristics and purposes using the media include interactive learning media in various forms,





such as Visual Media (Characteristics: Involving the sense of sight, such as images) The purpose is to clarify concepts, attract attention, and facilitate student understanding, Audio-Visual Media (Characteristics: Involving the senses).

Learning videos are one of the popular forms of media in education. Learning videos provide the ability to convey information in audiovisual form, which can help elementary school students visualize abstract concepts and improve their understanding. Research has shown that the use of learning videos can increase the potential for information and engagement of students at MTsN 3 ABDYA in the learning process.

Teacher: Interactive digital presentations are a widely used form of interactive media. Tools such as Infocus enable teachers to deliver material with animation, video, and other interactive elements.

Teacher: interactive multimedia through presentations, simulations, interactive videos using infocus and learning games

Teacher: Multimedia presentations (PowerPoint) and digital games, Interactive multimedia with provided media (infocus), simulations and educational games

Teacher: Interactive Multimedia (Presentation, Animation, Simulation, Interactive Video), in this grouping, teachers can more easily select and utilize the most appropriate interactive multimedia media to create effective and meaningful learning experiences for students.

Teacher: Different user needs and usage objectives because, certain types of media can facilitate differences in students' abilities and learning styles. Interactive multimedia media is divided into several groups to simplify classifying and selecting media that suits learning needs. Differences in characteristics and features of each type of media

### **Benefits of Interactive Learning Media in Learning**

Teacher : yes, a better understanding of concepts can support students' ability to apply and transfer knowledge

Teacher : Ease of students understanding and interacting with the media

Teacher : to increase the effectiveness and efficiency of delivering lesson material

Teacher : to motivate students to learn through an attractive display

Teacher : Increasing student involvement and motivation in the learning process

The implementation of interactive learning media in education has brought significant benefits to the learning process, according to research (Narestuti et al., 2021) Educational games can potentially increase students' intrinsic motivation, increasing active participation and focus in learning. Interactive media, including simulations and digital-based learning platforms, have been shown to improve understanding of complex concepts and facilitate the transfer of learning into real situations (Ismail, 2021).

A better understanding of concepts is very important in supporting students' ability to apply and transfer knowledge. When students understand concepts deeply, they can remember information and relate new knowledge to existing experiences and information. This allows them to use the knowledge in different situations, both inside and outside the context of formal learning.

With a firm understanding, students can adapt and apply the concepts they learn in various real-life situations, such as projects, everyday problems, or even decision-making. This knowledge transfer process enhances problem-solving skills and creativity, which are much needed in an ever-changing world. Therefore,



creating a learning environment that supports deep conceptual understanding is key to equipping students with the skills they need to succeed.

The benefits of using learning media significantly affect students' interest in learning. In addition to being a means for teachers to deliver learning media material, it can also help students understand difficult material. In addition, the use of learning media must also be adjusted to the character of the students and the material to be delivered in the classroom so that the learning media can attract students' attention and receive the material in it. The use of learning and videos has demonstrated a positive effect on the learning process. A study conducted by (Aunil Malik & Maunah, 2023). Wuri and Faturahman's book entitled "Citizenship Education Learning in MTsn Schools" revealed that using learning media can also enhance the teaching process and results in students' way of thinking. In addition, the use of media in learning also greatly influences students' interest in learning, where the use of learning media will attract students' attention to listen and understand the material presented. (Dian Apriliani et al., 2023).

According to Azhar Arsyad in his book "Learning Media", media is a form of physical vehicle or components in which there are student learning resources and contain instructional materials in the school environment, which are used to stimulate student learning development. Media in general, has supporting components, namely equipment, people, materials, and student activities to obtain material, knowledge, attitudes, and skills (Fahri Muaffa & Ariffudin Islam, 2020).

Based on several opinions above, it can be concluded that learning media has many benefits, both for teachers as educators and students as educated, because the use of learning media in the process of delivering material in the classroom can make students more motivated and moved to learn so that the opportunity to increase student learning interest is relatively high. A learning medium is chosen based on several criteria, namely its suitability to the objectives to be achieved, its suitability for supporting the content of the lesson, its practicality, ease, and durability, and its good technical quality.

The practical benefits of using animated videos in the learning process include audio-visual learning media stated to be able to clarify the presentation of a message from an informant so that it can facilitate and increase students' interest in learning, can increase and direct children's attention so that it raises learning motivation, makes students more independent according to their interests, and can overcome limitations between space, time and senses, audio-visual media also gives the impression of an authentic experience according to events in their environment, the delivery of material can be equated and equated with learning material in the classroom, and there is supervision from the principal regarding the use of learning media in schools and interactive media provides opportunities for Mtsn students to learn actively through interaction and exploration, which can strengthen understanding and reduce the level of boredom in learning.

### **Availability of Media**

Teacher: Through media, teachers can present information, concepts, examples, and learning activities to students in various formats, such as text, images, audio, video, or a combination of multimedia.

Teacher: Availability of resources and supporting devices, such as hardware, internet connectivity, and others

Teacher: Media functions as a channel or intermediary to convey information or



learning content from the source (teacher) to the recipient (students)

Teacher: Provide interactive tools that allow students to participate in the learning process actively

Teacher: Media presents learning material in various forms such as text, images, audio, video, animation, or a combination of these

Through media, teachers can present information, concepts, examples, and learning activities to students in various formats, such as text, images, audio, video, or multimedia. Teachers can present information, concepts, and learning examples more interestingly and effectively through media. By utilizing various formats such as text, images, audio, and video, teachers can reach a variety of student learning styles. For example, text can explain a concept in-depth, while images can help visualize more complex ideas. Audio and video, on the other hand, can add dimensions of interactivity and engagement, allowing students to learn more dynamically and enjoyably.

In addition, the combination of multimedia allows for more holistic teaching, where students can receive information in various ways. In this context, learning activities can also be designed to utilize various media, such as interactive quizzes, visual presentations, or group discussions using videos. With this approach, students are not only recipients of information but are also actively involved in the learning process, which can ultimately improve understanding and retention of the material being taught.

**Availability of Interactive Learning Media** The majority of schools (75%) have various interactive learning media, such as digital devices (computers, infocus, speakers, and others), multimedia content (videos, images, simulations, educational games), and learning platforms. There is a disparity in the completeness and quality of interactive learning media in schools, especially Mtsn 3 Abdya. Regarding the level of utilization of interactive learning media, most teachers (68%) have routinely integrated interactive learning media into the teaching and learning process. However, some teachers (32%) still have not utilized interactive learning media optimally, mainly due to limited skills and confidence in using them. The impact on learning effectiveness according to the perceptions of the principal, teachers, and students is that the use of interactive learning media has significantly increased student learning effectiveness. Indicators of increasing learning effectiveness include increased motivation, understanding of concepts, critical thinking skills, and student learning outcomes.

#### **How Teachers Prepare Media in Learning**

Teacher: the teacher must ensure that the media is aligned with the learning objectives (sa)

Teacher: ensure that the media can convey information effectively (kh)

Teacher: determines the most appropriate learning media to achieve goals and deliver material (rw)

Teacher: the availability of infrastructure at school to increase student involvement and activeness in the learning process (sh)

Teacher: attracts students' attention and interest in the learning process to achieve the teaching and learning process (sy)

First, media selection. Teachers tend to choose media based on the material's characteristics and the needs of students, and some types of media that are often chosen include Visual (Posters, pictures, and videos), Infocus, speakers, printed



books, teaching aids, and simulations. Second, the use of technology Many teachers use technology in preparing learning media, such as Visual media To clarify and facilitate understanding of the material, Audio media to convey information, audiovisual media (video, film) to display information visually and audibly, print media (printed books, modules) to convey information in writing, interactive media (computers or infocus and speakers) to increase student interaction and involvement in learning, as well as platforms or videos of materials that have been provided and through various forms to display materials. Third, creativity in media, teachers try to create interesting and interactive media. Some of the methods used include using the media that has been provided and engaging teaching materials and using teaching aids that can be used directly by students to deliver material outside the classroom by showing an example from nature such as trees and others. Fourth, student involvement where teachers involve students in the process of making media. This is done to increase learning motivation and develop student creativity. Fifth media evaluation after using the media, the teacher conducts an evaluation to determine the effectiveness of the media used. Evaluation is carried out through several questions to students and observations during the learning process.

### **Improving the Quality of Learning with Interactive Media**

Increasing student involvement in the use of interactive media which has been proven to increase student involvement because students are more active in discussions and class activities. This can be seen from the increase in participation. Students are more daring to ask questions. Increasing understanding of interactive media material helps students understand the material better. Students give opinions where they find it easier to understand difficult concepts through visualization. Simulations allow them to see real video footage of the theories being studied. Collaboration between students and interactive media encourages collaboration between students. Group learning activities improve cooperation and communication skills among students. The use of interactive media allows teachers to provide direct feedback. This helps students find out areas that need to be improved immediately. The use of interactive media significantly improves the quality of learning. This media not only increases student involvement and understanding, but also strengthens good collaboration and communication in the classroom.

### **Challenges in the Implementation of Interactive Learning Media**

Despite its significant benefits, implementing interactive learning media in education also faces several challenges. One of the main challenges is the availability of technological infrastructure and accessibility. Not all schools or educational institutions can access adequate technological devices or stable internet connectivity. This can be a barrier to adopting interactive learning media, especially for schools in remote or low-income areas. In addition, not all teachers have adequate technological understanding and skills to integrate interactive learning media into their teaching. Teachers need to receive adequate training and support to utilize the potential of interactive media in learning. A lack of technological understanding and skills can lead to ineffective implementation and a lack of benefits from interactive learning media.

The content aspect is also a challenge in developing interactive learning media. Content design must be adjusted to the needs and characteristics of students and be based on the relevant curriculum. Learning content must remain of high

quality and support achieving learning objectives. In addition, developing interactive learning media content also requires sufficient investment of time and resources, which may not always be available in sufficient quantities in every educational institution.

## CONCLUSION

This study shows that the availability of interactive learning media in schools has contributed to increasing the effectiveness of student learning in the digital era. However, there are still gaps in the completeness and utilization of interactive learning media, especially in schools in remote areas. Therefore, comprehensive efforts are needed to ensure the availability and utilization of interactive learning media evenly across schools, as well as increasing the capacity of teachers to integrate them into the learning process.

### 1. Utilization of Interactive Media/ Teachers' Understanding of Learning Media

MTsN 3 ABDYA School has developed various innovations in interactive learning media, such as multimedia content (video, animation, simulation), educational games, and learning platforms. The development of interactive learning media aims to improve the quality and effectiveness of learning in the digital era. Teachers have various ways of preparing effective learning media provided at school. In selecting the right media, using technology, creativity, student involvement, and evaluation are the keys to improving the quality of learning. This research is expected to provide insight for teachers in developing more innovative learning media.

### 2. Types of interactive media

Visual media: To clarify and facilitate understanding of the material, audio media to convey information, Audiovisual media (video, film) to display information visually and audibly, Print media (books, modules) to convey information in writing and interactive media (computers or infocus and other teaching materials to increase student interaction and involvement in learning.

### 3. Utilization of Interactive Learning Media

Most teachers (75%) at MTsN schools have routinely utilized interactive learning media in the learning process. The utilization of interactive learning media has had a positive impact on student motivation, involvement, and understanding in learning.

### 4. Impact on Learning Effectiveness

Based on teacher and student perceptions, the use of interactive learning media has increased the effectiveness of learning at MTsN 3 ABDYA schools. Indicators of increasing learning effectiveness include increasing understanding of concepts, critical thinking skills, and student learning outcomes.

### 5. Supporting Factors and Challenges

Supporting factors for the use of interactive learning media include the availability of digital infrastructure, support from the principal, and teacher motivation and competence in integrating it, and the challenges faced include budget limitations, gaps in teacher abilities in using technology, and limitations of interactive learning content that is by the curriculum.

Overall, it shows that the innovation of interactive learning media has positively contributed to increasing learning effectiveness at MTsN 3 ABDYA school. However, ongoing efforts are still needed to overcome the existing



challenges so that interactive learning media can be carried out evenly and optimally throughout the school.

This study shows the importance of media preparation in supporting an effective teaching and learning process, including training for teachers on the use of technology in learning and the provision of resources that support the creation of learning media.

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