THE RELEVANCE OF LEARNING MODELS THROUGH AUDIO-VISUAL INTERACTIVE MEDIA AND MOBILE: CHALLENGES AND ASPIRATIONS IN THE ERA OF TECHNOLOGICAL DISRUPTION

Nurhafid Ishari[1]
Universitas Islam Syarifuddin Lumajang, Indonesia
hafid.ishari@iaisyarifuddin.ac.id

Berly Wijayanti[2]
Universitas Islam Syarifuddin Lumajang, Indonesia
berlysecond207@gmail.com

Abstract

The purpose of this research is to deeply analyze the relevance of learning in primary education through an interactive learning model based on audiovisual and mobile technology in the era of technological disruption. The scope of this research is limited to the learning applied in Madrasah Ibtidaiyah. This research uses a Research & Development (R&D) approach to design, develop, test, and evaluate the effectiveness of the produced learning media. This research addresses the challenges and measures the aspirations for the quality of learning amidst the rapid technological advancements in the digital era, especially in the education of Alpha generation students. In addition, this research contributes as a reference for teachers in making policies to develop learning in madrasah ibtidaiyah that are relevant to the times.

Keywords: *Interactive Learning, Interactive Audio-Visual and Mobile Media, Technological Disruption.*

مستخلص البحث

الهدف من هذا البحث هو التحليل المتعمق لأهمية التعلم في التعليم الابتدائي من خلال نماذج التعلم التفاعلية السمعية والبصرية والمتنقلة في عصر الاضطراب التكنولوجي. يقتصر نطاق هذا البحث على التعلم التطبيقي في المدرسة الابتدائية. يستخدم هذا البحث منهج البحث والتطوير (R&D) لتصميم وتطوير واختبار وتقييم فعالية وسائل التعلم الناتجة. يجيب هذا البحث على التحديات ويطرح أفكارًا حول التطلعات إلى جودة التعلم في ظل التطور السريع للتكنولوجيا في العصر الرقمي، وخاصة في التعلم لطلاب جيل ألفا. علاوة على ذلك، يساهم هذا البحث كمرجع للمعلمين في وضع سياسات تطوير التعلم في المدرسة الابتدائية بما يتناسب مع التطورات الحالية.

الكلمات المفتاحية: *التعلم التفاعلي والوسائط التفاعلية السمعية والبصرية والمتنقلة والاضطراب التكنولوجي.*

INTRODUCTION

The rapid development of information and communication technology has had a significant impact on various aspects of life, including education. In the context of education, technology

becomes a very important tool to improve the quality of learning and facilitate more effective and efficient teaching. Today, many students are more interested in accessing information through digital media, such as watching videos or playing educational games, rather than reading conventional textbooks. This indicates a change in preference in the way students learn and access information.

This ever-evolving technology has a huge impact on all aspects of life, including education. One of the most visible changes is the increasingly technology-based way of learning, where digital tools are starting to be used to facilitate the teaching and learning process.[1] For example, children who were used to book-based learning now spend more time watching audiovisual content through various digital platforms.[2]

The sophistication of technology that is easily accessible, from children to adults, has changed the way students access information. This change requires educators to find learning methods that are not only interesting, but also effective in improving the quality of learning.[3] On the other hand, learning methods that are monotonous and only rely on books as the main source can make students quickly feel bored and less interested. Therefore, a new approach is needed that utilizes technology-based interactive media to create a more enjoyable learning atmosphere.

In today's digital era, technology has brought a significant impact on various sectors of life, including in the field of education. The utilization of digital technology such as audio-visual and mobile-based interactive learning media is increasingly important in improving the quality of education, especially in basic education. The use of YouTube as a learning media has been proven effective in increasing student engagement, as it provides a more interesting and visual learning experience.[4] In addition, mobile learning technology offers greater learning flexibility, allowing students to learn anytime and anywhere.[5]

Research also shows that audio-visual-based interactive learning media can improve students' understanding of complex subject matter, in a more enjoyable and easy-to-understand way.[6] On

[1] Sundari, S., & others. (2022). Pendampingan Nelayan Skip Pada Penerapan Metode Budidaya Kerang Hijau yang Tepat di Bumi Waras Bandar Lampung. Selaparang: Jurnal Pengabdian Masyarakat Berkemajuan, 6 (1), p. 410.
[2] Miftahulkhair, M. (2018). Pendampingan Sosial Terhadap Anak Jalanan di Rumah Perlindungan Sosial Anak (RPSA) Kota Makassar. Phinisi Integration Review, 1 (2), p. 223-234.
[3] Permana, Adi (2019). Revolusi Industri 4.0 dan Implikasinya terhadap Pendidikan di Indonesia. Jurnal Pendidikan, 3 (1), pp. 45-59.
[4] Kay, R. H. (2012). Using YouTube for Education: A Review of the Literature. Computers in Human Behavior, 28 (3), pp. 672-680.
[5] Ally, M. (2019). Mobile Learning: The Role of Mobile Technologies in Education. International Journal of Mobile Learning and Organisation, 13 (2), pp. 120-135.
[6] Zhang, L., & Wu, Y. (2021). The impact of digital technology on education: a study on interactive learning media. Journal of Educational Technology, 14 (2), pp. 101-112.

the other hand, the use of technology in education helps overcome challenges in the teaching and learning process, by providing tools that support students' diverse learning styles.[7] Therefore, this research aims to develop and test the application of audio-visual and mobile-based interactive learning media in Madrasah Ibtidaiyah in Indonesia, as an effort to improve student learning outcomes and teaching effectiveness in the digital era.

One of the biggest challenges in the face of these changes is how to effectively utilize technology in basic education. Some of the questions that arise include: how can audiovisual-based learning media improve the quality of learning in Indonesia? what are the impacts of using technology-based learning media on student learning outcomes?

This research aims to develop audiovisual and mobile-based interactive learning media that can improve student learning outcomes at the Madrasah Ibtidaiyah level in Indonesia. In addition, this research also aims to analyze the extent to which the use of such media can make learning more interesting and easily understood by students, so that they are more active and interested in following the lessons.

The results of this research are expected to provide benefits in the development of technology-based interactive learning models, which can be applied in various elementary schools, especially Madrasah Ibtidaiyah. In addition, this research is also expected to contribute to educators and policy makers in designing more effective educational strategies in the digital era. Thus, this research will help educators in developing learning that is more interesting and in accordance with the times, and encourage students to be more active in the teaching and learning process.

This research is relevant to the demands of the digital era that require education to adapt to technological developments. The use of audiovisual and mobile-based learning media is in line with the goal of creating more interactive, effective, and efficient education.[8] In addition, this research can also provide concrete examples of how technology can be utilized in improving the quality of education at the primary level.

METHOD

In this study, we used the Research and Development (R&D) method to develop audio-visual and mobile-based interactive learning media that aims to improve the quality of learning at the basic education level. The R&D method was chosen because of its approach that allows

[7] Lee, S. J., & Smith, B. (2020). The Impact of Technology on Education. Journal of Educational Technology, 35 (3), pp. 202-212.
[8] Wiryasaputra, I. (2021). Pengaruh Penggunaan Media Pembelajaran Berbasis Teknologi terhadap Hasil Belajar Siswa di Sekolah Dasar. Jurnal Pendidikan Teknologi dan Inovasi, 5 (2), pp. 78-90.

researchers to design, develop, test, and evaluate the effectiveness of the learning media produced. As explained by Borg and Gall (2003), research with the R&D method focuses on developing products that can overcome real problems faced in the field, in this case the utilization of technology to support more interesting and effective learning.[9] In the context of digital era education, where information and communication technology are developing very rapidly, audio-visual and mobile-based learning provides an opportunity to create a learning experience that is more enjoyable and easily understood by students.

RESULTS AND DISCUSSION

Results of Product Development Research

This research was conducted at Madrasah Ibtidaiyah in East Java, Indonesia, precisely Lumajang district. This research produces learning media products in the form of interactive videos made from existing applications on digital platforms. Interactive Video on basic learning materials greatly facilitates students in understanding the material. Before this media is tested, the product is first reviewed by material expert validators and design expert validators. It is intended that the Interactive Video media developed is recognized as suitable for use. This research uses the R&D (Research and Development) method with the ADDIE development model proposed by Dick and Carry in 1996. The steps in the ADDIE model development research with the Analysis Stage (Analysis), Design Stage (Design), Development Stage (Development), Implementation Stage (Implementation), and Evaluation Stage (Evaluation). Based on the research and development conducted, the following research results were obtained:

1. Analysis Stage

   The first stage in this research is Analysis. Sourced from the results of researchers in Madrasah Ibtidaiyah in Lumajang, East Java, Indonesia. The results of the analysis that has been carried out are used as guidelines and considerations for the development of Interactive learning media. At this stage what is done is to conduct a needs analysis, learner analysis, analysis of learning devices and curriculum and material analysis

   a. Results of Learner Needs Analysis

      At the learner needs analysis stage, researchers conducted observations, interviews and overall observations and learning activities at Madrasah Ibtidaiyah in Lumajang. This analysis stage is needed to determine the problems faced by students in the classroom. Based on the results of observations that have been carried out by the author can find

[9] Borg, W. R., & Gall, M. D. (2003). Educational Research: An Introduction (7th ed.). Pearson Education.

problems related to the lack of learning media used in the classroom. So that students seem to feel bored and bored and less interesting during learning. Therefore, the development of learning media needs to be carried out in this school, so that a digital madrasa is formed, one of which is by holding TV-Smart because it can be a solution for students and teachers, because the learning media produced can be used online or offline (downloaded).

b. Results of Curriculum and Learning Tools Analysis

At this stage the author analyzes the curriculum and learning tools, as for the curriculum applied in Madrasah Ibtidaiyah in Lumajang is diverse. In Indonesia, there is a national curriculum called the 2013 curriculum and the latest curriculum is the independent curriculum according to the policy of the previous Minister of Education. Therefore, educational institutions in Indonesia are also still adapting to the latest curriculum, namely the independent curriculum. So, this is also very important and needs to be considered in the future.

c. Results of Basic Competency (KD) and Indicator Analysis

At this stage the author analyzes KI (Indonesian Competencies) and KD (These competencies relate to subject matter in class as well as CP and TP for the independent curriculum.

d. Student Analysis Results

At the student analysis stage, researchers use it to find out the characteristics of students so that researchers can develop media that are in accordance with student development. Based on the results of the analysis of Madrasah Ibtidaiyah students in Lumajang, East Java, Indonesia.

2. Design Stage

The design stage aims to prepare interactive video learning media and the first step to be taken by the author is to formulate the content of the material based on KI, KD, Indicators in consultation with Dr. Suwari, M.Pd. as chairman of the East Java PAI MGMP. In this design stage, the author designs learning media in the form of interactive videos in accordance with the steps above and then arranged according to the previously designed learning sequence, providing supporting materials and fun quizzes. In addition, at this stage the author compiles a script which is the initial stage before entering the production stage. The final step is for the researcher to make an interactive video which is then presented to students with as attractive a design as possible.

3. Development Stage

In this development stage, the author produces learning media that has been developed and validates the media with 2 validators, namely Dr. Suwari, M.Pd. chairman of the East Java PAI MGMP as a media validator and Mr. H. Hasanudin, M.Pd.I. as Penma Kemenag Kab. Lumajang as a material validator conducted online by validating 3 times.

4. Production Stage of Interactive Video Learning Media

At this stage, production begins to be carried out based on the learning media script that has been completed. Making starts with making learning media, in the form of ppt or learning videos about the material being taught. Making this video using the Capcut application then inserting a ppt file and several 3d displays from the application that display a replica of the original.

5. Validation Stage

After producing a product in the form of learning media, before entering the implementation stage, first test the experts. If at the time of testing there are deficiencies in the media, the media must be revised, then tested again by the expert until the media is feasible and there are no more revisions. The product that has been tested to material and media experts aims to let the author know whether this media is suitable for use and what errors are found in the material and Interactive Video learning media. It is intended that when the media is applied in accordance with the lesson plan or teaching module and also the material in the media.

a. Results of Material and Media Validation Stage

Development products given to material and media experts are in the form of learning media in the form of Interactive Videos. Validation of the material expert was conducted on May 7, 2024 by Dr. Suwari, M.Pd. chairman of the East Java PAI MGMP as a media expert validation and material validation of Mr. H. Hasanudin, M.Pd.I. as Penma Kemenag Kab. Lumajang. Descriptive presentation of the results of the validation of material and media experts will be shown through the questionnaire method with a questionnaire instrument by obtaining the following scores.

Table 1. Results of Material and Media Expert Assessment

No.	Validator	S	N	S P(s) = N x 100	Criteria	Category
1.	Dr. Suwari, M.Pd.	106	130	81%	Good	Decent
2.	H. Hasanudin, M.Pd.I.	71	90	78%	Good	Decent

Based on table 1, it can be concluded that the results of the assessment of material and media experts from the media expert validation score 106 out of a maximum score of 130 with a percentage of 81% based on the qualitative data conversion guidelines used, the score is included in the "Good" criteria and the category is feasible with revisions according to the media expert validator's note that the media should emphasize more on animations that are suitable for elementary level children.

In the material validation by Mr. H. Hasanudin, M.Pd.I. obtained a score of 71 out of a maximum score of 90 with a percentage of 78% including the criteria "Good" and the category "Feasible" with revisions according to the notes from the material expert, namely the need for material and suitability for students with their age and daily life.

6. Implementation Stage

At the implementation stage or implementation, it aims to determine the effectiveness of the application of learning media by testing the Interactive Video learning media that has been made to students.

7. Evaluation Stage

At the evaluation stage aims to see the feasibility of each product assessment process produced. From this evaluation based on the validation test, the researcher will further develop the interactive video according to what is suggested and look for developer applications to support learning even better. The results of the analysis of each of the stages and the final product are as follows:

a. Product Assessment

Based on table 1 above, it can be concluded that the results of material expert validation on Interactive Learning media through mobile have increased from the level of understanding of students.

b. Final Product

At this final product stage in research is to produce Interactive Learning media through mobile. This media can be used by teachers and students during the learning process in classes both grades 1-6 in accordance with the material needed.

Discussion

Based on the results listed in table 1, the audiovisual learning methods that have been evaluated show good quality and are considered feasible by the validators, although this evaluation was only conducted once. However, to ensure the sustainability and improvement of learning

quality, the plan is to conduct a more in-depth re-evaluation in order to create new innovations that are more in line with students' needs and interests.

From direct observation, it was seen that students are often easily bored and tend to look for things that attract their attention during the learning process. Initially, they may appear calm and obedient to the teacher's instructions, but over time, their interest may fade and they may seek other ways to entertain themselves, including distracting classmates. Therefore, a deep understanding of students' psychological dynamics is crucial in designing a learning environment that can facilitate effective engagement and learning.

This study adopts a Research and Development (R&D) approach to develop a learning method that is not only effective but also fun. The main focus is on how audiovisual-based learning media can improve the quality of learning as well as the impact of using technology-based learning media on learning outcomes of primary level students.

This step is expected to increase student engagement through the use of media that they enjoy, as well as broaden their understanding of the subject matter. The implications of using this new media will be explored in depth in the context of Madrasah Ibtidaiyah students in Lumajang district, with the main objective of substantially improving their learning outcomes and making a positive contribution to their learning experience.

Implementation of Mobile Interactive Learning

The implementation of interactive videos has proven to be effective for students and teachers in Madrasah Ibtidaiyah in Lumajang district, especially in improving student engagement during the learning process. Students show a higher level of engagement when the material is taught through interactive videos. An example based on the researcher's observation in one of the schools is: when the teacher used a video from YouTube to explain the chapter of Surah Al-Fiil in the Qur'an Hadith lesson, the students were more engaged and understood the concept better. They experienced a change in their understanding of the material, as the visualization and narration provided through the video made the information clearer and easier to digest.

The implementation also had a positive impact on teachers by increasing the effectiveness of their explanations. Teachers were able to adapt the way they delivered the material better, based on the positive response from students to the use of interactive videos. Through discussions and Q&A after watching the videos, teachers can evaluate students' understanding directly and provide additional explanations as needed. This not only improves the quality of learning in the classroom, but also helps teachers to better recognize each student's learning style and adjust their learning approach accordingly. Thus, the application of interactive videos not only increases students'

motivation and engagement, but also enriches teachers' learning experience in Madrasah Ibtidaiyah Lumajang district.

Another example of the application of interactive videos in one of the Madrasah Ibtidaiyah in Lumajang is in the learning of body organs for grade 5 students. Through interactive videos and the help of Assemblr Edu application, students can more easily visualize and understand the process of human digestion. This not only enriches their learning experience, but also helps improve the understanding of complex concepts in a more concrete and visual way. As a result, students show a greater tendency to enjoy audiovisual learning and experience significant improvements in material comprehension as well as information retention.

The implication of mobile interactive learning in learning is the increased involvement of various parties involved, such as teachers, students, and parents. Teachers are not only facilitators in delivering materials through interactive videos, but also need to be able to utilize this technology effectively to improve the quality of teaching. They need to develop new skills in designing content that is engaging and relevant to students, so as to strengthen their understanding of the subject matter. On the other hand, parental involvement is key in supporting their children's learning with technology. Parents need to be actively involved in supervising and accompanying their children when using various mobile devices such as mobile phones, laptops, tablets and the like for educational purposes.

This not only helps ensure appropriate and safe use of technology, but also reinforces the social support that students need in their learning process. With strong collaboration between teachers, students and parents, the implementation of mobile interactive learning can result in a more interactive, dynamic and effective learning experience for all parties involved.

Student Engagement

The use of videos from YouTube can significantly increase students' motivation in learning. They offer a highly engaging visual and auditory combination, allowing students to be more engaged and motivated compared to traditional learning methods that tend to be more static and monotonous. With the help of videos, complex concepts can be explained more clearly and interestingly through concrete visual depictions, thus helping students understand material that is difficult to grasp through text or oral explanations alone.

YouTube also has great potential for expanding collaboration among students. For example, students can interact directly with the video content they watch, have group discussions on how to apply the learning material in real life, or even collaborate on creative projects that utilize video as the main medium. Students can work together to create their own learning videos, which can then

be uploaded to YouTube as part of a class assignment. This not only enriches their learning experience by providing opportunities for critical and creative thinking, but also develops collaborative skills that are crucial in today's digital age.

In addition, the use of YouTube in learning can help students develop technological skills that are relevant to the modern world. By getting used to using this technology, students will be better prepared to face the challenges and opportunities in a future that is increasingly dependent on technology. The use of interactive videos can also make learning more dynamic and fun, reducing the boredom and saturation that often occurs in conventional learning methods. This in turn can increase students' engagement and active participation in the teaching and learning process, resulting in better and deeper learning outcomes.

Teacher Professional Development

Teachers need to be trained to use digital media effectively in learning so that they can utilize the full potential of these technologies in supporting student learning. This training is important as it covers several key aspects, including how to search for and select content that fits the curriculum and classroom learning needs. Teachers need to be able to identify relevant, accurate and high-quality videos that can illustrate difficult-to-understand concepts or present different perspectives for students.

The training should also focus on how to integrate videos into existing lesson plans so that they are not just an add-on but an integral part of the ongoing learning process. Teachers need to understand how to time the video, interact with students during and after viewing, and evaluate its impact on student understanding. Interactive features such as quizzes, polls and online discussions should be used effectively to increase student engagement and support formative evaluation in learning. By improving competency in the use of these educational technologies, teachers can become more adaptive to new developments and trends in education, enabling them to continuously develop themselves and provide more dynamic and relevant learning experiences for students.

Schools need to ensure that the technological infrastructure required for the use of interactive videos is available and ready to go for a smooth and effective implementation of this technology. This includes ensuring that stable and fast internet access is available throughout the school, so that students and teachers can access YouTube content optimally and seamlessly. In addition, the other mobile devices selected should have adequate interactive features and ensure good image quality, and be available in every classroom planned to use this technology.

Not only is hardware procurement important, schools should also provide additional support systems such as projectors and sound systems to enhance the learning experience with clear and dynamic audio and visuals. The availability of regular maintenance services and adequate technical support is also a crucial factor. This includes regular maintenance to keep the devices in optimal condition, prompt handling of technical issues that may arise, and additional training for technical staff and teachers in using and maintaining these devices effectively.

By paying attention to infrastructure details and adequate technical support, schools can ensure that the implementation of learning media through various mobile as well as interactive learning developments, not only runs smoothly, but also provides maximum benefits to the teaching and learning process. This is in keeping with efforts to increase student engagement and improve teaching effectiveness through the utilization of modern technology.

Impact of Mobile Interactive Learning

Mobile includes several kinds such as cellphones, laptops, tablets, and others that are different in designation but still one group. Interactive learning using mobile and audio-visual media can have a significant positive impact on students, especially in the context of primary education. Here are some of the main impacts for students using this kind of learning method:

1. Increased Motivation and Interest in Learning

   Mobile and audio-visual learning can attract students' attention more than traditional learning methods. By using interactive apps and videos, students feel more directly involved in the learning process, which in turn increases their motivation to learn. Content presented in visual and multimedia form is more enjoyable and makes learning material easier to digest.

2. Deeper Understanding of Material

   Interactive learning using mobile media allows students to learn in a more flexible way and at their own pace. Through interactive features such as quizzes, practice questions, and visually explained videos, students can better understand difficult concepts, as they not only hear, but also see and interact with the learning material. This can help overcome the challenges students face in understanding lessons that are abstract or complex.

3. Flexibility in Learning

   One of the main advantages of mobile-based learning is the flexibility of time and place. Students can access learning materials anytime and anywhere, provided they have a mobile device. This gives them the opportunity to study outside of school hours and revisit material without having to wait for the next study session. This flexibility also supports independent learning, where students can manage their own time for learning.

4. Digital Skills Development

   With the use of mobile media, students not only learn subject matter, but also indirectly develop their digital skills. They learn how to use technology in an educational context, which is crucial in a world that is increasingly dependent on digital devices. This helps them become more familiar with the use of learning apps and other technological devices, which is very useful for their future.

5. More Personalized and Tailored Learning

   Mobile learning allows students to customize their learning experience according to their personal needs. For example, they can choose the material they want to learn further, repeating the parts that have been explained by the teacher.

6. Interactive learning using mobile applications allows students to actively participate in the learning process, not just as recipients of information. For example, they can take quizzes or give feedback on the material taught. This creates a more dynamic learning environment and motivates students to be more involved and responsible for their learning.

7. Ease of Access and Independence in Learning

   With the use of mobile media, students are not limited by time and space, allowing them to learn independently outside of school hours. They can seek additional information through available apps or educational videos, which gives them the freedom to develop a deeper understanding of certain topics. This supports continuous learning, where students can continue learning even outside of formal classes.

8. Improved Learning Outcomes

   Based on research results, the use of mobile-based interactive learning media tends to improve student learning outcomes. More interactive and fun learning can reduce boredom that often occurs in traditional learning methods, thus making students more focused and able to digest the material better.

   Overall, the implementation of mobile interactive learning can have a significant impact on students, both in terms of motivation, material understanding, skill development, and learning outcomes. This kind of learning is more relevant to the needs of students in the digital era and supports the creation of a more interesting and efficient learning experience.

CONCLUSION

The results of this study answer the challenges and measure the ideas of aspirations for learning quality in the midst of rapid technological developments in the digital era, especially in

learning for Alpha generation students. In addition, this research contributes as a reference for teachers in making policies in developing learning in Madrasah Ibtidaiyah that is relevant in accordance with the times. A way to deal with technological disruption is by utilizing technology, especially in the education sector and using mobile tools that are often used by people in their daily lives.

The need to adapt from the traditional model to technological disruption also does not require a little time, but a lot of facilities and infrastructure that need to be prepared. Moreover, the impact of using mobile media in the learning model is very positive, as for utilizing mobile media is considered that interactive media/video can help students understand learning.

REFERENCE

Ajizah, Ratna Utami Nur, Khalis Zamrani Putra, and Miftahudin. 2022. "Using the Problem Based Learning Model with Youtube Media to Improve Student's Learning Interest". *Tarbawi Ngabar: Jurnal of Education* 3(1):77–98. doi: https://doi.org/10.55380/tarbawi.v3i1.170.

Ally, M. (2019). Mobile Learning: The Role of Mobile Technologies in Education. International Journal of Mobile Learning and Organisation, 13 (2), 120-135.

Bisnis, Departemen Manajemen, Universitas Negara Bebas, Departemen Manajemen Pemasaran, Ilmu Pengetahuan, Universitas Pretoria, and Jurnal Instruksi Internasional. 2020. "Jurnal Instruksi Internasional April 2020". 13 (2):1–18.

Borg, W. R., & Gall, M. D. (2003). Educational Research: An Introduction (7th ed.). Pearson Education.

Dasar, Pendidikan, and Magister Fakultas. n.d. "Transformasi Penggunaan Media Pembelajaran (Youtube) untuk Memperkuat Sikap Empati".

Ftik, Iconie, U. I. N. K. H. Abdurrahman, and Wahid Pekalongan. n.d. "Smart TV Sebagai Media Pembelajaran Inovatif Berbasis Sistem Gamifikasi Multiperspektif: An Penyelenggaraan Pendidikan Yang Berkualitas". Amalia Fauziah Azhari1, Akhmad Dalil Rohman2, Ririn Novita Sari3". 1–8.

Haqiqi, Halifah. 2019. *Revolusi Industri 4.0*. edited by anak hebat Indonesia. Surakarta.

Inggris, Pendidikan Bahasa, and Universitas Sanata Dharma. 2022. "Peran Youtube Sebagai Efektivitas Komunikasi, Motivasi, Evaluasi, Pembelajaran Bahasa Inggris dalam Kesehatan Masyarakat". Khaerunisa Putri Lorenzo1 and Suciana Wijirahayu2".

Johnson, D., & Adams, S. (2020). The Influence of Digital Technology on Learning and Education. Journal of Educational Research, 55 (4), 75-84.

Kay, R. H. (2012). Using YouTube for Education: A Review of the Literature. Computers in Human Behavior, 28 (3), 672-680.

Lee, S. J., & Smith, B. (2020). The Impact of Technology on Education. Journal of Educational Technology, 35 (3), 202-212.

Maziriri, Eugine Tafadzwa, Parson Gapa, and Tinashe Chuchu. 2020. "C, 2020-Apr". *International Journal of Instruction* 13 (2):119–38.

Miftahulkhair, M. (2018). Pendampingan Sosial Terhadap Anak Jalanan di Rumah Perlindungan Sosial Anak (RPSA) Kota Makassar. Phinisi Integration Review, 1 (2), 223-234.

Ode, Wa, Nur Aidah, Pendidikan Guru, Sekolah Dasar, and Universitas Muhammadiyah Buton. 2024. "Peran Platform Youtube Dalam Meningkatkan Literasi Digital Siswa Di Sekolah Dasar." *Journal Of Social Science Research* 4: 3081–90.

Permana, Adi (2019). Revolusi Industri 4.0 dan Implikasinya terhadap Pendidikan di Indonesia. Jurnal Pendidikan, 3 (1), 45-59.

Permatasari, Dian, Amirudin Amirudin, and Achmad Junaedi Sittika. 2021. "Pemanfaatan Aplikasi Youtube Dalam Pembelajaran Daring Pendidikan Agama Islam Pada Siswa Sekolah Dasar." *Jurnal Pendidikan Glasser* 6 (1):10. doi: https://doi.org/10.32529/glasser.v6i1.1164.

Siregar, Yanti Rahmadhani, and Rosmaini. 2021. "Pengembangan Media Pembelajaran Powerpoint Interaktif Pada Materi Teks Fabel Siswa Kelas VII SMP." *KODE: Jurnal Bahasa* 11 (3):44–55.

Sundari, S., & others. (2022). Pendampingan Nelayan Skip Pada Penerapan Metode Budidaya Kerang Hijau yang Tepat di Bumi Waras Bandar Lampung. Selaparang: Jurnal Pengabdian Masyarakat Berkemajuan, 6 (1), 410.

Suradika, Agus, Andi Ahmad Gunadi, and Sastra Aditya Jaya. 2020. "Penggunaan Youtube Sebagai Media Pembelajaran Jarak Jauh Pada Kelas III Sekolah Dasar Islam an–Nizomiyah." *Prosiding SEMNASLIT LPPM UMJ*. 1–10.

Vemmi, R. Roro, Kesuma Dewi, Ade Muslimat, Kharisma Danang Yuangga, Denok Sunarsi, Ahmad Khoiri, Soleh Suryadi, Makmur Solahudin, and Udi Iswadi. 2021. "E-Learning Sebagai Inovasi Media Pendidikan Di Era Revolusi Industri Dan Pendidikan 4.0". 27 (1): 2868–81.

Wiryasaputra, I. (2021). Pengaruh Penggunaan Media Pembelajaran Berbasis Teknologi terhadap Hasil Belajar Siswa di Sekolah Dasar. Jurnal Pendidikan Teknologi dan Inovasi, 5 (2), 78-90.

Yousef, Ahmed Mohamed Fahmy, Chatti, Mohamed Amine, and Ulrik Schroeder. 2014. "Keadaan Pembelajaran Berbasis Video: Tinjuan Dan Perspekif Masa Depan". *Jurnal Internasional Tentang Kemajuan Ilmu Hayati* 6 (3–4): 122–35.

Zhang, L., & Wu, Y. (2021). The impact of digital technology on education: a study on interactive learning media. Journal of Educational Technology, 14 (2), 101-112.