The Role of Technology in Arabic Education: Smartboard Features and Challenges

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Abstrak: Penelitian ini bertujuan untuk mengetahui peran teknologi smartboard dalam media pembelajaran bahasa Arab. Pendekatan dalam penelitian ini yaitu kualitatif deskriptif yang dilaksanakan di kelas SKS (Sistem Kredit Semester) MTsN 2 Kota Malang. Data dikumpulkan dengan teknik wawancara, observasi dan dokumentasi. Data kemudian dianalisis dengan 3 langkah model Miles dan Huberman yaitu, reduksi data, penyajian data dan penarikan kesimpulan. Hasil penelitian ini menunjukkan bahwa media smartboard berperan signifikan terhadap motivasi belajar siswa dalam pembelajaran bahasa Arab. Para siswa berpendapat bahwa penggunaan smartboard meningkatkan minat dan antusiasme mereka dalam belajar. Mereka juga merasa lebih terlibat dalam proses pembelajaran dengan dapat menikmati fitur-fitur interaktif smartboard, seperti menulis, menggambar, dan memanipulasi objek pada layar sentuh. Interaksi langsung dengan smartboard dalam pembelajaran bahasa Arab memberikan pengalaman visual dan kinestetik yang membantu siswa dalam pemahaman konsep dan mengembangkan keterampilan berbahasa. Di sisi lain, terdapat beberapa tantangan terkait penggunaan smartboard antara lain keterbatasan aksesibilitas, infrastruktur, serta kesiapan dan kompetensi guru dalam mengintegrasikan smartboard dalam pembelajaran.
Kata kunci: Teknologi Pembelajaran, Bahasa Arab, Smartboard

Abstract: This study aims to determine the role of smartboard technology in Arabic language learning media. The approach in this research is descriptive qualitative, which is carried out in the SKS (Semester Credit System) class of MTsN 2 Malang. Data were collected using interview, observation, and documentation techniques. The data were then analyzed with three steps of the Miles and Huberman model, namely, data reduction, data presentation, and conclusion drawing. The findings of this study indicate that the use of smartboard technology has a significant impact on student motivation in learning Arabic. The students report that the incorporation of smartboard technology into the learning environment has increased their interest and enthusiasm in the subject matter. They also perceive a greater sense of involvement in the learning process due to the

interactive features of the smartboard, such as writing, drawing, and manipulating objects on the touch screen. Direct interaction with the smartboard in Arabic language learning provides a visual and kinesthetic experience that helps students to understand concepts and develop language skills. However, there are some challenges related to the use of the smartboard, including limited accessibility, infrastructure, and teachers' readiness and competence in integrating the smartboard into learning.

Keywords: *Learning Technology, Arabic Language, Smartboard*

INTRODUCTION

In today's technological era, the development of science, information technology and digitalization has entered various lines of life, one of which is in the field of education [1][2]. The development of technology that is so sophisticated and fast has provided changes and innovations in various aspects of life including in the teaching process in education. The presence of various educational models and digital learning media is one sign of the entry of education in an increasingly modern era. For students, the media used can help the process of understanding the content of the subject matter presented by the educator more easily[3]. Learning media is a tool specifically designed to stimulate the thoughts, feelings, attention, and willingness of students so that the learning process occurs.

In line with Sudjana and Rivai learning media is defined as a means or intermediary to help deliver material from teachers to students during the learning process[4]. The use of media in learning can be in the form of stationary or living objects. There are several theories that define learning media, which in essence are used to help students understand material or information in learning well. Learning media has a very important and strategic position to help achieve learning objectives. In addition to clarifying the material, learning media can also increase desire, motivation and stimulation to students in learning activities[5]. But in practice, there are still many

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[1] Maria E Mondejar et al., "Digitalization to Achieve Sustainable Development Goals: Steps towards a Smart Green Planet," *Science of The Total Environment* 794 (2021): 148539.

[2] Muhammad Imawan, Adawiyah Pettalongi, and Nurdin Nurdin, "Pengaruh Teknologi Terhadap Pendidikan Karakter Peserta Didik Di Era Society 5.0," *Prosiding Kajian Islam Dan Integrasi Ilmu Di Era Society (KIIIES) 5.0* 2, no. 1 (2023): 323–28.

[3] M Ilyas Ismail, *Teknologi Pembelajaran Sebagai Media Pembelajaran* (Cendekia Publisher, 2020).

[4] Nana Sudjana and Ahmad Rivai, "Media Pembelajaran: Buku Yang Akan Memudahkan Guru Dalam Memilih, Merancang, Dan Menggunakan Media Pembelajaran," *Jakarta: Sinar Baru Algensindo*, 2015.

[5] Muhammad Sholih Salimul Uqba, "العلاقة بين التعلم عبر الإنترنت ودافعية تعلم اللغة العربية لدى طلبة قسم تعليم اللغة العربية بجامعة مولانا مالك إبراهيم الإسلامية الحكومية مالانج" 2022.

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educators who do not use learning media in the process of transforming their knowledge.

On the other hand, the development of this sophisticated educational technology can produce several digitalization innovations in several conventional media[6], such as the existence of electronic dictionaries, the presence of artifficial intelligence (AI)[7], textbooks replaced by electronic books (ebooks), notebooks replaced by electronic devices such as tablets and iPads, and ordinary blackboards or whiteboards replaced by interactive whiteboards (smartboards). Of these various digital media, what is still less familiar in education is smartboard media. Smartboard is a digital innovation from ordinary whiteboards that use chalk or markers. Where smartboard is a large interactive display board connected to a computer or laptop and a projector[8]. With it, users can control the connected computer by using a pen, finger or stylus on the smartboard screen. The increasing utilization of smartboards in schools and classrooms is growing significantly and changing the way teachers project learning materials in the classroom. Many initiatives and creativity are done by teachers to develop new learning models based on smartboard utilization[9]. Although in reality, the use of smartboards in Indonesia is still limited to modern schools that have more resources or funds. The high cost of smartboard acquisition is an obstacle for schools that have limited resources or funds.

The utilization of smartboard media in Arabic language learning can also encourage students' independence and motivation to learn. With the visualization, sound and interaction offered by the smartboard, students can feel more involved and motivated to continue developing their Arabic language skills. It can also provide variety in teaching methods, thus meeting the diverse learning needs of students. Some students may be more responsive to learning through audio, while others prefer to learn through visuals[10]. By utilizing different types of learning media, teachers can

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[6] Mhd Arizki, "Pendidikan Agama Islam Era Revolusi 4.0," *ANSIRU PAI: Pengembangan Profesi Guru Pendidikan Agama Islam* 4, no. 2 (2020): 52–71.

[7] Nurlatipah Nurlatipah et al., "في تعلم مهارة الكلام في القرن الحادي والعشرين (Google Assistent) استفادة مساعد جوجل," *Mayada: Al-Multaqa al-Ilmy al-Alamy Lil-Dirasat al-Arabiyah* 1, no. 1 (2024): 603–14.

[8] Sinta Herawati and Hanna Sundari, "Teachers' Experiences and Perceptions in Using Interactive Whiteboards in EFL Classrooms" 05, no. 04 (2023).

[9] Lebyana Norma Belinda, Sofyan Iskandar, and Dede Trie Kurniawan, "Penggunaan Media Pembelajaran Papan Tulis Interaktif di Kelas Pada Abad 21," *Jurnal Lensa Pendas* 8, no. 1 (February 1, 2023): 23–31, doi:10.33222/jlp.v8i1.2555.

[10] Fuad Try Satrio Utomo, "INOVASI MEDIA PEMBELAJARAN INTERAKTIF UNTUK MENINGKATKAN EFEKTIVITAS PEMBELAJARAN ERA DIGITAL DI SEKOLAH DASAR," *Pendas : Jurnal Ilmiah Pendidikan Dasar* 8, no. 2 (October 3, 2023): 3635–45, doi:10.23969/jp.v8i2.10066.

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create a more holistic and adaptive learning experience, increasing students' interest and achievement in learning Arabic.

As stated in previous research written by Fitria Indar Nurkhofifah[11] about "The Use of Smartboard Media in Improving Reading Comprehension Skills" shows an increase in reading comprehension skills in fourth grade students of SDN Buahngariung 1 Wado as evidenced by the processing of test results given to students. Thus, it can be concluded that the use of smartboard media can significantly improve students' reading comprehension skills. Harmonized research was also conducted by Dilla Mifa Fauziah, et al [12] entitled "The Use of Smartboard Media to Improve Student Learning Achievement on the Material of Rights and Obligations" showed that there was an increase in student learning achievement in the material of rights and obligations. Where the initial data from the daily test results is with an average score of 62 with the achievement of students who reach the KKM score of only 36%. Then 2 cycles were carried out to obtain an increase. From the initial conditions to cycle I obtained an increase with an average score of 66 or 48%. Then in the second cycle the average value of students obtained 86.36 or 88%. From these results students have reached the Minimum Completion Criteria or called the KKM which is 70. In addition, research with the title "The Efficiency of Using the Interactive Smartboard in Social Studies to Increase Students' Achievement and Tendency Toward the Subject Matter in the State of Qatar" written by Manal Hendawi and Mohammad Rajab Nosair[13] also found that this study provides evidence that the use of smartboards increases students' achievement levels and their tendency towards social studies. The students noticed a positive trend in their learning ability by using the smartboard. This research shows that learning using technology is an urgent need today, and this technology should be incorporated into teaching because of its effectiveness in improving achievement.

From previous studies investigating the use of smartboards in learning, researchers have identified a need to further investigate the role of smartboards in learning, particularly in the context of Arabic language learning. It is therefore evident that there is great potential for the use of smartboards to improve learning

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[11] Fitria Indar Nurkhofifah, "Penggunaan Media Smartboard dalam Meningkatkan Kemampuan Membaca Pemahaman," *Jurnal Basicedu* 6, no. 2 (February 23, 2022): 2701–9, doi:10.31004/basicedu.v6i2.2489.

[12] Dilla Mifa Fauziah, Nana Ganda, and Elan Elan, "Penggunaan Media Smartboard Untuk Meningkatkan Prestasi Belajar Siswa Pada Materi Hak Dan Kewajiban," *Innovative: Journal Of Social Science Research* 3, no. 3 (2023): 10658–63.

[13] Manal Hendawi and Mohammad Rajab Nosair, "The Efficiency of Using the Interactive Smartboard in Social Studies to Increase Students' Achievement and Tendency Toward the Subject Matter in the State of Qatar," *International Journal of Learning, Teaching and Educational Research*, March 30, 2020, 1–19, doi:10.26803/ijlter.19.3.1.

effectiveness and student achievement. The research could entail the collection of data on the utilisation of smartboards in the context of Arabic language learning, with a particular focus on the impact of such technology on students' motivation, the dynamics of interaction between teachers and students, and the enhancement of Arabic language proficiency. Furthermore, research could investigate the efficacy of utilizing the smartboard's interactive capabilities to enhance students' comprehension of grammar, vocabulary, and pronunciation in Arabic.

METHOD

This research uses a descriptive qualitative approach, which is a research method that aims to understand, describe, and explain phenomena or events that occur in a particular context[14]. This approach prioritizes a comprehensive examination of the underlying meanings, interpretations, and social contexts of the data collected. The data collection method utilized a combination of interview, observation, and documentation techniques through students and teachers in the SKS class of MTsN 2 Malang.

Through interviews, researchers can gain a comprehensive understanding of the perspectives, experiences, and thoughts of students and teachers regarding the utilization of smartboards in Arabic language learning. Observation and documentation of smartboards serve to reinforce the data obtained from interviews. Subsequently, the researchers employed the three-step approach proposed by Miles and Huberman[15], namely data reduction, data presentation, and conclusion drawing, in the data analysis phase..

RESULT AND DISCUSSION
Smartboard Learning Media

In order to accommodate the demands of the modern era, 21st century learning must be technology-based. This approach aims to equip students with the digital skills necessary for success in the 21st century [16]. One of the digital learning media innovations is the Smartboard, which is designed to be an interactive and enjoyable learning tool. It would be beneficial to consider the potential for developing an adaptation of the conventional blackboard to a more modern form. The Smartboard,

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[14] Heath Williams, "The Meaning of 'Phenomenology': Qualitative and Philosophical Phenomenological Research Methods," *The Qualitative Report* 26, no. 2 (2021): 366–85.

[15] Esubalew Aman Mezmir, "Qualitative Data Analysis: An Overview of Data Reduction, Data Display, and Interpretation," *Research on Humanities and Social Sciences* 10, no. 21 (2020): 15–27.

[16] Azizatul Khairi et al., *Teknologi Pembelajaran: Konsep Dan Pengembangannya Di Era Society 5.0* (Penerbit NEM, 2022).

also known as an interactive board, is a technological device that combines the functions of a traditional blackboard with those of a computer or laptop device[17]. It allows for the use of interactive capabilities that are connected to the aforementioned device. The smartboard can be utilized in a practical manner, as images or objects can be displayed, replaced, and deleted at any time. Furthermore, the smartboard can be utilized to display numerical data, colors, audio, and educational videos pertaining to any subject matter being taught. This device enables teachers and students to engage in collaborative and active learning through the use of a stylus pen or finger touch, writing, drawing, and sound.

The technology known as Smartboard or IWB (Interactive Whiteboard) is based on the integration of three key elements: a digital board, a computer or laptop, and a projector[18]. Consequently, the media utilized on a smartboard differs from that of a conventional whiteboard. The display board is capable of accepting input from a computer, as well as from a stylus pen or direct hand touch. Consequently, the utilization of this smartboard device can facilitate the creation of a more dynamic and engaging learning experience for students. In light of the aforementioned description, the definition of a smartboard or interactive whiteboard can be delineated as a whiteboard that has been created with computer-based multimedia and is utilized in the context of learning[19]. This allows users to engage in all teaching activities in an interactive manner, without any restrictions on use. This ensures that the material that has been presented can be conveyed properly and can be reviewed in full and complete.

Figure 1. The use of smartboard in Arabic learning in the classroom

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[17] Purwanto Purwanto, "PENGGUNAAN PAPAN TULIS INTERAKTIF DI KELAS THE USE OF INTERACTIVE WHITEBOARD IN CLASSROOM," *Jurnal Teknodik*, June 13, 2019, 104–16, doi:10.32550/teknodik.v17i3.565.
[18] Suzanne Walshe, "Exploring How Special Education Teachers Use Interactive Whiteboard Technology in Self-Contained Classrooms," 2022.
[19] Candice Mariz, "Interactive Whiteboards in Education," 2022.

Figure 2. The use of smartboard in learning Arabic vocabulary (*mufradat*)

The results of observations conducted at MTsN 2 Malang City indicate that the facilities and infrastructure are sufficient to support the learning process. One such example is the availability of Smartboard learning media. However, the Smartboard is not available in all school classes; it is only available in SKS (Semester Credit System) classes, which total four classes. The Smartboard can be utilized in the acquisition of various Arabic language skills, including reading (*maharah qiraah*), writing (*maharah kitabah*), listening (*maharah istima'*), and speaking (*maharah kalam*).

Smartboard Utilization Model in Arabic Language Learning

The utilization of smartboard in learning has brought significant changes in teaching and learning methods[20]. In the context of Arabic language learning, the use of smartboards provides several meaningful benefits. First, smartboard allows teachers to present Arabic learning materials in a more interesting and interactive way. With features such as images, videos and animations, teachers can create presentations that attract students' attention. This helps students to be more involved in the learning process and motivates them to learn Arabic with more enthusiasm. In accordance with the results of interviews from Arabic language teachers at MTsN 2 Malang who use smartboards in teaching and learning:

> "*For the SKS class, I always use a smartboard in learning Arabic. Usually, I use it to display learning materials using power point or learning videos. Then also to optimize this sophisticated smartboard media and to make students more active, I use simple games with power points and sometimes also use interactive learning websites that can be adapted to this smartboard media.*"

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[20] Husam Abdulhameed Hussein et al., "The Effect of Using Smart Board Technology on the Educational Process in the Colleges of Education in Terms of Features and Challenges," vol. 2394 (AIP Conference Proceedings, AIP Publishing, 2022).

Furthermore, the smartboard facilitates collaborative learning. Students can work together in groups or individually to complete tasks displayed on the smartboard, for example by writing the meaning of an Arabic vocabulary word or vice versa. They can use stylus pens or direct finger touch on the screen to answer questions, write answers, or complete exercises. This can certainly encourage students' active participation and improve their abilities in various Arabic language skills[21]. Then, the smartboard allows easier access to diverse Arabic learning resources. By connecting the smartboard to the internet, teachers can directly access various Arabic learning materials, such as online dictionaries, educational websites, and Arabic learning videos related to the material being taught. This provides a new variety in the learning process and allows students collectively to learn from different sources which can certainly improve their deeper understanding of the Arabic language.

In addition, smartboard can also be used as an effective evaluation tool. Teachers can use the interactive features of the smartboard to test students' understanding, provide exercises and assess their progress in learning Arabic. For example, teachers can create interactive quizzes on the smartboard that allow students to answer questions by pressing answer options or by writing Arabic answers directly on the screen. Finally, the use of smartboards in Arabic learning can help develop students' technological skills. In today's digital era, technological skills and proficiency are becoming increasingly important to keep up with the times[22]. By using smartboards, students can learn how to use interactive technological devices and improve their understanding of related applications and software. Indirectly, this can prepare them to face the reality of future life that is increasingly connected with increasingly sophisticated technologies.

For Arabic teachers, the use of smartboards in the classroom allows teachers to invite students to be more active in their learning process, create a more lively and passionate class, and save time for writing on the blackboard because the material can be prepared in advance and done more easily and quickly. The use of smartboards also allows teachers to try new ways of interacting with students to create a more interactive and lively classroom. This learning model can be developed by utilizing

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[21] Mahmut Elma, Sevda Küçük, and Osman Samancı, "The Effect of Using Web 2.0 Tools on Smart Boards on Primary School Students' Mathematics Lesson Achievement, Anxiety, and Attitudes towards Smart Boards," *Instructional Technology and Lifelong Learning* 5, no. 1 (2024): 86–115.

[22] Alprianti Pare and Hotmaulina Sihotang, "Pendidikan Holistik Untuk Mengembangkan Keterampilan Abad 21 Dalam Menghadapi Tantangan Era Digital," *Jurnal Pendidikan Tambusai* 7, no. 3 (2023): 27778–87.

smartboard in learning. From the results of research in Turkey[23], it is known that the utilization of smartboards is still dominant for presentations compared to being used for problem solving, surfing the internet and writing.

Therefore, the suggested strategy to develop the use of smartboards in the classroom is through gradual diffusion of innovations. It starts with piloting a learning model in one class in a school, preceded by training teachers selected to be beginners, after which all classes are gradually equipped with smartboards. At the pilot stage, it is also necessary to select the smartboard and its software that best suits the ability level of the teachers using it. At that stage, creative teachers are invited to develop innovative learning models as well as develop a combination model for its use with other information and communication technology hardware or software.

Smartboard Features and Advantages in Arabic Language Learning

Based on the results of interviews with students and teachers, it is found that the advantages of smartboards in learning Arabic are as follows:

1. Interactive:
    a. Enabling students to be actively involved through stylus pen or finger touch on the smartboard screen.
    b. Encourages students' skills in Arabic such as writing skills (*maharah kitabah*), reading skills, (*maharah qiroah*), listening skills (*maharah istima'*) and speaking skills (*maharah kalam*).
2. Visualization:
    a. Smartboard can display Arabic learning materials visually with good quality, such as text, images, videos, and audio.
    b. Enrich students' understanding through in-depth visualization, such as Arabic texts or videos related to Arabic materials.
3. Participation:
    a. Facilitate collaboration between students or with the teacher in group projects or Arabic discussions.
    b. Encourages the exchange of ideas and student engagement through collaborative features.
4. Accessibility:
    a. Smartboards can provide direct access to digital resources, such as Arabic learning websites, apps and videos.

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[23] O Eynel and M Koc, "Turkish Classroom and Branch Teachers' Opinions about Smart Board Use in Their Lessons," *ON HUMANITIES, EDUCATION, AND SOCIAL SCIENCES*, 2023, 74–85.

    b. Enrich learning with relevant learning content by connecting the teacher's computer or laptop to the internet.

5. Feedback:
    a. Teachers can provide immediate feedback to students on their progress in Arabic.
    b. Teachers can correct writing mistakes, give praise, or provide additional explanations instantly.

The utilization of a smartboard affords students a multitude of advantageous learning outcomes. These include enhanced focus, reduced boredom, and enhanced ease in the acquisition of the Arabic language. In addition, other smartboard advantages are as follows:

1. The latest smartboard product is equipped with a clearer 4K screen quality, 8 point speakers, 4K quality camera, palm rejection, pressure-sensitive writing and equipped with larger RAM and ROM.
2. Smartboard can be directly connected to a computer or laptop without the need to use a projector.
3. The latest Smartboard also features quality improvements such as products that are more durable and less prone to damage, low screen reflection so that users can stare longer, and is equipped with the latest software that makes it easy to manage, share and import content.
4. In addition, there are also smartboards equipped with several USB ports that allow them to be connected to multimedia projectors or cameras, and can also be connected wirelessly to computers.

Smartboard Challenges and Disadvantages in Arabic Language Learning

Based on the results of interviews with students and teachers, it is found that the challenges of smartboards in learning Arabic are as follows:

1. The price is relatively expensive, in Indonesia alone the price of a smartboard is in the range of Rp15,000,000.00 to Rp100,000,000.00 depending on the screen dimensions, quality and features provided.
2. Technical operation of smartboards, where teachers and students may need time to learn and master the use of smartboards so that they can be used optimally in learning.
3. Maintenance and repair require special skills and the possibility of hardware and software glitches make smartboards cost extra.
4. Health, the risk of using smartboards in learning for too long is to cause eye pain in students due to continuous staring at the screen.

5. The sound of smartboard speakers is small, so teachers must bring their own speakers so that the sound of the learning material displayed can be heard clearly to all students in the class.
6. The reflection of the smartboard screen sometimes also disturbs students' vision so that the material is not clearly visible.

In addition, other shortcomings of smartboards are as follows:

1. Stylus pens that are often lost.
2. Smartboard and computer cannot be connected even though a cable has been installed.
3. Slow or delayed handwriting when writing on the smartboard.
4. Slow booting of the smartboard system.
5. Virus issues that can lock programs and files.
6. There are some programs and files that are not compatible with the smartboard.

Recommendations for the Use of Smartboard in Arabic Language Learning

In the light of these findings, innovations in smartboard learning media technology promise great potential to improve students' Arabic learning effectiveness and motivation in the digital era. Smartboard offers a more engaging, immersive and active participation learning experience for students. On the other hand, there are some implications that must be considered in integrating smartboard media in Arabic language learning.

The use of smartboard in Arabic language learning requires certain preparations and steps. First, teachers need to acquire basic skills in information and communication technology (ICT). They should master the use of computers and understand the basic functions required to operate the smartboard[24]. This will help them utilize the full potential of this learning tool. Secondly, the installation of smartboards in teachers' rooms is important. This will encourage cooperation among school staff, including Arabic teachers. By having a smartboard in the teachers' room, they can share ideas, resources and experiences in using this technology in Arabic language learning. This will create a supportive environment for their professional development.

Furthermore, teachers need to prepare themselves for the use of technology, particularly smartboard media and ICT in general, in the classroom. They need to attend training and develop their knowledge and skills in using computers. With good preparation, they will be more confident and effective in integrating smartboard into

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[24] Kesh Rana and Karna Rana, "ICT Integration in Teaching and Learning Activities in Higher Education: A Case Study of Nepal's Teacher Education.," *Malaysian Online Journal of Educational Technology* 8, no. 1 (2020): 36–47.

the Arabic learning process. Finally, Arabic teachers should be aware of the different needs and learning styles of their students. They should accommodate these differences in the use of smartboards in the classroom. This can be done by creating diverse learning materials, using the interactive features of the smartboard to actively engage students, and providing individualized support to students who need it.

In order to effectively implement the use of smartboards, schools must also provide strong support, both pedagogically and technically. Teachers need to be trained on smartboards and receive adequate technical support. In addition, it is important to ensure that access to online resources, such as wifi with optimal signal, is available. This will enable teachers and students to access relevant educational websites to support Arabic language learning.

CONCLUSION

Based on the literature review and discussion, it can be concluded as follows, the development of interactive whiteboards has achieved amazing progress thanks to various innovations that allow interactive whiteboards to become learning technology products that greatly help the interactive learning process in the classroom. Various innovations that make interactive whiteboards more interactive and support the learning process include; the availability of multi-touch facilities either with hand gestures, stylus, or other tools such as wiimote; the possibility of accessing learning resources via the internet; the availability of facilities for students to work on test questions interactively, and many other innovations.

The use of interactive whiteboards requires teacher preparedness. The interactive whiteboard is a tool that offers a variety of things, its use requires skills and expertise. The use of interactive whiteboards by teachers requires the support of various things, namely; first, teachers are able to create and or utilize the best content (whether text, graphics, visuals, animations, or films), and this content can be obtained from various sources (internet), second, teachers are able to develop various models of effective and fun classroom interactions by paying attention to various aspects such as learning styles, multiple intelligences, student interests and attention, third, teachers are able to master the technical skills of how to operate interactive whiteboard equipment and can optimally utilize all the advantages of interactive whiteboards.

REFERENCES

Arizki, Mhd. "Pendidikan Agama Islam Era Revolusi 4.0." *ANSIRU PAI: Pengembangan Profesi Guru Pendidikan Agama Islam* 4, no. 2 (2020): 52–71. http://dx.doi.org/10.30821/ansiru.v4i2.8125

Elma, Mahmut, Sevda Küçük, and Osman Samancı. "The Effect of Using Web 2.0 Tools on Smart Boards on Primary School Students' Mathematics Lesson Achievement, Anxiety, and Attitudes towards Smart Boards." *Instructional Technology and Lifelong Learning* 5, no. 1 (2024): 86–115. ttps://doi.org/10.52911/itall.1409203

Eynel, O, and M Koc. "Turkish Classroom and Branch Teachers' Opinions about Smart Board Use in Their Lessons." *ON HUMANITIES, EDUCATION, AND SOCIAL SCIENCES*, 2023, 74–85.

Fauziah, Dilla Mifa, Nana Ganda, and Elan Elan. "Penggunaan Media Smartboard Untuk Meningkatkan Prestasi Belajar Siswa Pada Materi Hak Dan Kewajiban." *Innovative: Journal Of Social Science Research* 3, no. 3 (2023): 10658–63. https://doi.org/10.31004/innovative.v3i3.3410

Hadi, Moh. Solikul, M. Sayyidul Abrori, and Dwi Noviatul Zahra, 'Pengembangan Multimedia Interaktif Macromedia Flash Profesional 8 Pada Pembelajaran Al-Qur'an Hadis Kelas X Semester Genap Di Man 1 Yogyakarta', *At-Tajdid : Jurnal Pendidikan Dan Pemikiran Islam*, 3.2 (2020), 148 <https://doi.org/10.24127/att.v3i2.1123>

Hendawi, Manal, and Mohammad Rajab Nosair. "The Efficiency of Using the Interactive Smartboard in Social Studies to Increase Students' Achievement and Tendency Toward the Subject Matter in the State of Qatar." *International Journal of Learning, Teaching and Educational Research*, March 30, 2020, 1–19. http://10.26803/ijlter.19.3.1.

Herawati, Sinta, and Hanna Sundari. "Teachers' Experiences and Perceptions in Using Interactive Whiteboards in EFL Classrooms" 05, no. 04 (2023). https://jonedu.org/index.php/joe/article/view/2109

Hussein, Husam Abdulhameed, Abdul Munem Hasan Ahmed, Shihab A Shawkat, and Raed Ashraf Kamil. "The Effect of Using Smart Board Technology on the Educational Process in the Colleges of Education in Terms of Features and Challenges," Vol. 2394. AIP Publishing, 2022. https://doi.org/10.1063/5.0122282

Imawan, Muhammad, Adawiyah Pettalongi, and Nurdin Nurdin. "Pengaruh Teknologi Terhadap Pendidikan Karakter Peserta Didik Di Era Society 5.0." *Prosiding Kajian Islam Dan Integrasi Ilmu Di Era Society (KIIIES) 5.0* 2, no. 1 (2023): 323–28. https://www.researchgate.net/profile/Nurdin-Nurdin/publication/372128814_PENGARUH_TEKNOLOGI_TERHADAP_PENDIDIKAN_KARAKTER_PESERTA_DIDIK_DI_ERA_SOCIETY_50/links/64a56f65b9ed6874a5fc5d72/PENGARUH-TEKNOLOGI-TERHADAP-PENDIDIKAN-KARAKTER-PESERTA-DIDIK-DI-ERA-SOCIETY-50.pdf

Ismail, M Ilyas. *Teknologi Pembelajaran Sebagai Media Pembelajaran*. Cendekia Publisher, 2020.

Khairi, Azizatul, S Kohar, Haryanto Kanthi Widodo, M Ali Ghufron, Iqbal Kamalludin, Dimas Prasetya, Dimas Setiaji Prabowo, Singgih Setiawan, Akhmad Aufa Syukron, and Dewi Anggraeni. *Teknologi Pembelajaran: Konsep Dan Pengembangannya Di Era Society 5.0*. Penerbit NEM, 2022.

Lebyana Norma Belinda, Sofyan Iskandar, and Dede Trie Kurniawan. "Penggunaan Media Pembelajaran Papan Tulis Interaktif di Kelas Pada Abad 21." *Jurnal Lensa Pendas* 8, no. 1 (February 1, 2023): 23–31. http://10.33222/jlp.v8i1.2555.

Mariz, Candice. "Interactive Whiteboards in Education," 2022. https://figshare.mq.edu.au/articles/thesis/Interactive_whiteboards_in_education/19442483/1

Mezmir, Esubalew Aman. "Qualitative Data Analysis: An Overview of Data Reduction, Data Display, and Interpretation." *Research on Humanities and Social Sciences* 10, no. 21 (2020): 15–27. https://core.ac.uk/download/pdf/356684456.pdf

Moh. Solikul Hadi, Muhammad Nuril Anam, M. Sayyidul Abrori, 'Reconstruction Of Martin Heiddeger's Thinking Existentialism Model on Education InThe Industrial Era 4.0', *Journal of Research in Islamic Education*, 03.02 (2021), 47–58 https://doi.org/10.25217/jrie.v3i2.2029

Mondejar, Maria E, Ram Avtar, Heyker Lellani Baños Diaz, Rama Kant Dubey, Jesús Esteban, Abigail Gómez-Morales, Brett Hallam, Nsilulu Tresor Mbungu, Chukwuebuka Christopher Okolo, and Kumar Arun Prasad. "Digitalization to Achieve Sustainable Development Goals: Steps towards a Smart Green Planet." *Science of The Total Environment* 794 (2021): 148539. https://www.sciencedirect.com/science/article/pii/S0048969721036111

Nurkhofifah, Fitria Indar. "Penggunaan Media Smartboard dalam Meningkatkan Kemampuan Membaca Pemahaman." *Jurnal Basicedu* 6, no. 2 (February 23, 2022): 2701–9. http://10.31004/basicedu.v6i2.2489.

Nurlatipah, Nurlatipah, Nafiatur Rasyidah, M Salih Solimul Uqba, and M Firdaus Nuzula. "استفادة مساعد جوجل (Google Assistent) في تعلم مهارة الكلام في القرن الحادي والعشرين." *Mayada: Al-Multaqa al-Ilmy al-Alamy Lil-Dirasat al-Arabiyah* 1, no. 1 (2024): 603–14.

Pare, Alprianti, and Hotmaulina Sihotang. "Pendidikan Holistik Untuk Mengembangkan Keterampilan Abad 21 Dalam Menghadapi Tantangan Era Digital." *Jurnal Pendidikan Tambusai* 7, no. 3 (2023): 27778–87.

Purwanto, Purwanto. "PENGGUNAAN PAPAN TULIS INTERAKTIF DI KELAS THE USE OF INTERACTIVE WHITEBOARD IN CLASSROOM." *Jurnal Teknodik*, June 13, 2019, 104–16. http://10.32550/teknodik.v17i3.565.

Rana, Kesh, and Karna Rana. "ICT Integration in Teaching and Learning Activities in Higher Education: A Case Study of Nepal's Teacher Education." *Malaysian Online Journal of Educational Technology* 8, no. 1 (2020): 36–47.

Sudjana, Nana, and Ahmad Rivai. "Media Pembelajaran: Buku Yang Akan Memudahkan Guru Dalam Memilih, Merancang, Dan Menggunakan Media Pembelajaran." *Jakarta: Sinar Baru Algensindo*, 2015.

Uqba, Muhammad Sholih Salimul. "العلاقة بين التعلم عبر الإنترنت ودافعية تعلم اللغة العربية لدى طلبة قسم تعليم اللغة العربية بجامعة مولانا مالك إبراهيم الإسلامية الحكومية مالانج," 2022.

Utomo, Fuad Try Satrio. "INOVASI MEDIA PEMBELAJARAN INTERAKTIF UNTUK MENINGKATKAN EFEKTIVITAS PEMBELAJARAN ERA DIGITAL DI SEKOLAH DASAR." *Pendas : Jurnal Ilmiah Pendidikan Dasar* 8, no. 2 (October 3, 2023): 3635–45. http://10.23969/jp.v8i2.10066.

Walshe, Suzanne. "Exploring How Special Education Teachers Use Interactive Whiteboard Technology in Self-Contained Classrooms," 2022.

Williams, Heath. "The Meaning of 'Phenomenology': Qualitative and Philosophical Phenomenological Research Methods." *The Qualitative Report* 26, no. 2 (2021): 366–85.