

Arabic Teachers' Strategies in Implementing Interactive Digital Media-Based Learning at MAN Kota Batu

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ABSTRACT

The transformation of Arabic language learning in the digital era requires teachers to optimally utilize digital media innovatively to enhance student engagement and comprehension. This study aims to explore teachers' strategies in implementing interactive digital media-based learning, identify the challenges encountered, and examine the solutions applied at MAN Kota Batu. A descriptive qualitative approach was employed, with data collected through classroom observations, in-depth teacher interviews, and document analysis. The findings indicate that teachers employ various interactive media applications—including digital quizzes, interactive visual media, and online learning platforms—to promote active student participation. The main challenges include limited infrastructure, unstable internet connectivity, and teachers' technical skills. The school addresses these issues by providing technology training, improving digital facilities, and optimizing available learning devices. This study confirms that interactive digital media-based learning can significantly enhance students' motivation and understanding, provided that teachers' strategies are implemented effectively and technical obstacles are addressed. The findings contribute to the development of digital technology-based teaching strategies for Arabic language learning in secondary schools and can serve as a reference for innovative instructional practices in the digital era.

Introduction

The advancement of digital technology has brought significant changes to teaching practices across various educational levels. The integration of technology in the learning process no longer merely serves as a tool for delivering content but also functions as a means to create more interactive, collaborative, and learner-centered experiences. The utilization of digital technology enables teachers to design more flexible and innovative learning activities, thereby enhancing student engagement in the learning process (Bond et al., 2020). In the context of language learning, digital media enables the integration of visual and audio interactions, along with online activities, which collectively enrich the learning experience and foster greater student participation in the language learning process (Reinders & Hubbard, 2013).

In Arabic language learning, the use of digital media can create opportunities for a more dynamic and participatory learning process. Through various digital learning tools, teachers can

present content in more diverse ways while promoting active student engagement in learning activities. Research indicates that the use of interactive digital media in learning can enhance both students' motivation and participation in the learning process at the secondary school level (Ariaty et al., 2024). Thus, Arabic language learning does not solely focus on content delivery but also emphasizes how students can actively participate in the learning process, enabling a more optimal development of their understanding of the material. The success of this learning process is closely linked to the teacher's role in designing effective instructional strategies. Teaching strategies refer to the various approaches and methods employed by teachers to deliver learning content, ensuring that learning objectives are achieved optimally (Sanjaya, 2016).

In the context of interactive learning, teaching strategies focus not only on content delivery but also on fostering active two-way communication between teachers and students. Participatory and collaborative interactions allow students to engage directly in the learning process, thereby enhancing their conceptual understanding of the subject matter (Majid, 2014). With the advancement of digital technology, instructional strategies have also undergone significant changes. Teachers are required to effectively utilize various digital media as part of teaching strategies that enhance classroom interactivity. By leveraging digital tools, teachers can design more engaging and contextual learning activities, such as the use of audiovisual media, interactive learning applications, and various online learning platforms that actively promote student participation (Ariaty et al., 2025)

Several previous studies have shown that the use of digital media in learning can positively impact students' motivation, participation, and the overall effectiveness of the learning process. Various studies have highlighted the use of digital learning applications as a means to enhance student engagement in learning activities. However, most of these studies have primarily focused on the effectiveness of digital applications or media in relation to students' learning outcomes. On the other hand, research specifically examining how teachers' pedagogical strategies utilize digital media in daily classroom practices remains relatively limited. The success of technology integration in learning depends not only on the availability of technological resources but also on teachers' ability to design, manage, and pedagogically integrate digital media into classroom activities. This situation highlights a gap between the availability of technological facilities and their actual use in the learning process.

In the context of technology integration in learning, teachers' ability to utilize digital media can be understood through the framework of Technological Pedagogical Content Knowledge (TPACK). This framework emphasizes that the successful use of technology in education depends not only on technological proficiency but also on teachers' capacity to integrate knowledge of technology, pedagogy, and content in a coherent manner (Mishra & Koehler, 2006). Through the integration of these three components, teachers can design learning activities that are more interactive, contextual, and student-centered.

Madrasah Aliyah Negeri Kota Batu was selected as the research site due to its established practices in utilizing digital technology for Arabic language learning. Based on initial observations and interviews with teachers, the use of technology is evident not only in the availability of digital facilities in classrooms but also in its application during learning activities, such as delivering content via smart TVs, conducting interactive quizzes, and engaging students in digital media-based presentations. Additionally, teachers have developed instructional materials equipped with QR codes to facilitate students' access to supplementary content online. This practice demonstrates that the use of digital technology has become an integral part of Arabic language learning in the classroom. Such conditions support Arabic language teachers in designing and implementing interactive teaching strategies that are integrated with the use of digital media in classroom activities.

Based on this background, the present study aims to analyze the strategies employed by Arabic language teachers in implementing interactive learning based on digital media at MAN Kota Batu, as well as to identify the supporting and inhibiting factors in its implementation. This study is expected to provide theoretical contributions by enriching the literature on digital media integration in Arabic language learning, offering a methodological approach that can serve as a reference for similar studies, and providing practical insights for teachers to develop more innovative and adaptive teaching strategies through the utilization of digital technology.

Method

This study employed a descriptive qualitative approach with a case study design, conducted at Madrasah Aliyah Negeri Kota Batu during the 2025/2026 academic year. This approach was chosen to gain an in-depth understanding of Arabic language teachers' strategies in implementing interactive digital media-based learning, within the context of actual classroom settings. The case study design allows the research to comprehensively identify patterns, procedures, and dynamics of interactions among teachers, students, and digital media. The research subjects consisted of Arabic language teachers and students, while the researcher served as the primary instrument for data collection through observation, interviews, and documentation. Data analysis was conducted using the Miles, Huberman, and Saldana model, which includes data collection, data reduction, data display, and conclusion drawing. The validity of the findings was ensured through data triangulation, which involves verifying information from multiple sources to guarantee the accuracy and reliability of the results. This approach enables the study to systematically and thoroughly reveal teachers' strategies, while also providing a contextual understanding of interactive digital media-based learning practices in Arabic language instruction (Sugiono, 2018).

Result and Discussion

1. Teacher Strategies for Interactive Digital Media-Based Learning

Teacher strategies are systematic and structured action plans that optimally utilize available skills and resources to achieve learning objectives effectively, with teachers being responsible for designing, guiding, and evaluating the learning process. In this context, interactive learning based on digital media at MAN Kota Batu is implemented as a pedagogical strategy to enhance the quality, relevance, and adaptability of Arabic language instruction in the technological era. Technology integration is carried out in a planned and gradual manner, aligned with the availability of facilities and the need for more contextual and participatory learning. This aligns with research findings indicating that the use of digital learning media can enhance the effectiveness of Arabic language learning by improving students' understanding and engagement in the learning process (Ikhlas et al., 2024).

In practice, teachers utilize digital media to support the development of the four language skills—*istima'* (listening), *kalam* (speaking), *qira'ah* (reading), and *kitabah* (writing)—through a combination of images/animations, interactive audio, multimedia presentations, and digital applications such as interactive PowerPoint, Wordwall, Quizizz, Online Stopwatch, and Canva. This approach aligns with empirical evidence indicating that the use of interactive quizzes and multimedia-based digital media can significantly enhance students' comprehension, engagement, and learning motivation compared to conventional teaching methods (Syarifah, 2024).

Based on this integration of digital media, the researcher found that Arabic language teachers at MAN Kota Batu employ various applications with distinct pedagogical functions tailored to specific learning objectives. The use of these applications is not sporadic; rather,

it is intentionally designed to support active learning, enhance student engagement, and facilitate the integrated development of language skills. These findings are consistent with research indicating that the use of digital media in Arabic language learning can improve students' motivation, interaction, and the overall effectiveness of the learning process when applied in a planned and contextual manner (Razida & Abidin, 2024).

1). PowerPoint as Visual Scaffolding in Material Presentation

Teachers use interactive PowerPoint to present Arabic vocabulary, sentence structures, and dialogue examples in a visual and systematic manner. Features such as animations, integrated audio, and hyperlinks are employed to create dynamic presentations and enable flexible navigation of the material. Based on observational data, the use of interactive PowerPoint helps students comprehend the meaning of vocabulary through visual and auditory support, making abstract language concepts more concrete and easier to understand.

The use of PowerPoint demonstrates the role of digital media as a visual support, helping students gradually build their language comprehension. Presenting vocabulary with illustrative images and example sentences allows students to associate meaning with context, thereby reducing reliance on direct translation. These findings indicate that material visualization not only enhances information clarity but also strengthens vocabulary retention and understanding of language structures. This aligns with research showing that the use of PowerPoint in Arabic language learning can improve students' comprehension and learning outcomes through more visual and systematic presentation of content (Afifah & Ahkas, 2022).

Furthermore, the inclusion of questions in presentation slides encourages two-way interaction between teachers and students during the learning process. Teachers not only deliver content expository but also actively engage students through activities such as answering questions, interpreting images, and constructing sentences based on the vocabulary displayed on the slides. This practice illustrates a shift in the function of presentations from merely conveying information to serving as a dialogic tool that facilitates student participation in learning. The interactions fostered through the use of presentation media enable students to engage more actively in understanding Arabic language content while simultaneously developing their thinking and communication skills.

Thus, the use of digital media in learning functions not only as a visual aid but also as a pedagogical tool that supports the creation of more communicative and student-centered learning. These findings align with research indicating that the utilization of interactive digital media in Arabic language learning can enhance student engagement and foster a more participatory and responsive learning environment (Razida & Abidin, 2024).

2) Wordwall as an Interactive Practice Tool

Teachers use the Wordwall application as an interactive practice tool to reinforce students' mastery of Arabic vocabulary and sentence structures. Through game-based features such as matching vocabulary, multiple-choice quizzes, and arranging words in random order, teachers can provide exercises tailored to students' proficiency levels. Observational data indicate that the use of Wordwall increases active student participation in practice activities, as the game-based format creates an engaging learning environment without causing stress.

The use of Wordwall illustrates the role of digital media as a gamified learning tool that simultaneously promotes students' cognitive and emotional engagement. Activities such as matching words with their meanings or constructing sentences interactively help

students build language understanding through exploration and immediate feedback. These findings indicate that game-based exercises not only enhance learning motivation but also strengthen vocabulary retention and accuracy in using language structures.

This is consistent with research indicating that gamification in language learning can enhance students' motivation and engagement through elements of challenge, immediate feedback, and symbolic rewards. Such an approach creates a more engaging learning environment, thereby encouraging active student participation. Moreover, gamification also supports the development of 21st-century skills, including creativity, collaboration, and problem-solving (Kharismawati et al., 2025).

Furthermore, the use of Wordwall facilitates multidirectional interaction in learning. Students not only interact with the media but also engage in discussions with their peers to determine correct answers. Teachers act as facilitators, providing guidance and clarification for errors that arise during activities. This practice reflects a shift from conventional individual exercises to collaborative practices that support social learning. This pattern aligns with constructivist approaches, which emphasize that language knowledge is constructed through interaction, experience, and negotiation of meaning within an active learning environment (Halid, 2024).

3) Quizizz as a Game-Based Formative Assessment

Teachers use Quizizz as a game-based formative assessment tool, allowing students to complete exercises in real time using their own devices. Quizizz is employed to measure students' understanding of vocabulary, sentence structures, and the content of Arabic texts at the end of lessons. Observational data indicate that the use of Quizizz creates a more relaxed yet structured assessment environment, enabling students to demonstrate their abilities without the excessive pressure typically associated with conventional written tests.

The use of Quizizz illustrates the role of digital media as an interactive assessment tool that simultaneously integrates evaluation and learning. Features such as instant feedback, automated grading, and leaderboards allow students to immediately recognize their performance and understand mistakes made. These findings indicate that game-based assessments not only measure learning outcomes but also serve as reflective tools that reinforce conceptual understanding of the language. This aligns with research showing that digital game-based evaluations can enhance student engagement and strengthen content retention through immediate feedback and enjoyable learning experiences (Kharismawati et al., 2025).

Furthermore, the competitive element presented through class leaderboards positively motivates students to learn. Students strive to achieve the highest scores while maintaining a healthy and collaborative competitive environment. Interviews revealed that students feel more enthusiastic about participating in assessments via Quizizz because the process is interactive and provides a learning experience distinct from traditional evaluations. This practice reflects a paradigm shift in assessment from a purely outcome-oriented approach to authentic assessment, which positions the learning process as an integral part of evaluation. This approach aligns with the concept of assessment for learning, which emphasizes that evaluations should be designed to support the learning process while enhancing student engagement in learning activities (Nurlitasari & Hamami, 2023).

4) Online Stopwatch as a Learning Time Management Tool

Teachers use Online Stopwatch as a digital tool to manage the duration of learning activities, particularly during group discussions, vocabulary exercises, language games, and game-based assessments. The timer is displayed visually via a projector screen,

allowing all students to monitor the time available. Observational data indicate that the use of Online Stopwatch helps establish a more structured learning rhythm and encourages students to complete tasks within the allocated time.

In addition to serving as a time management tool, the use of Online Stopwatch in group formation reflects teachers' efforts to promote more objective and inclusive collaborative learning. Random assignment of group members reduces the tendency toward exclusive friendships and creates opportunities for more diverse student interactions. These findings suggest that even simple technologies can contribute to building social dynamics that support language learning, as students engage in communication with peers who have varying personalities and proficiency levels.

The use of a random assignment mechanism also accelerates the transition to core learning activities. The resulting time efficiency allows for more optimal allocation, enabling collaborative activities to take place without compromising the depth of the material. This indicates that technology-based time management not only enhances efficiency but also supports the quality of learning interactions. These findings are consistent with research showing that the formation of learning groups within the context of cooperative learning can improve group productivity and enrich students' social learning experiences through collaboration and shared responsibility in completing learning tasks (Azizah, 2022)

Furthermore, the real-time display of elapsed time helps students develop time awareness and enhances their focus during activities. Interviews revealed that visually visible time limits encourage students to be more disciplined and reduce procrastination. This practice reflects the implementation of technology-based classroom management strategies that support active and collaborative learning. Previous studies on Arabic learning in Madrasah Aliyah also indicate that the integration of digital media contributes to increased student motivation, engagement, and participation in learning activities (Razida & Abidin, 2025)

5) Canva as a Material Design and Student Project Tool

The use of Canva in Arabic language learning reflects teachers' efforts to provide more contextual and engaging visual media. Observational data indicate that Canva is used to present vocabulary and simple expressions in the form of digital posters, combining Arabic text with illustrative images. This visual presentation helps students associate word meanings with contextual images, reducing reliance on direct translation. These findings align with previous research showing that vocabulary learning using Canva enhances students' motivation and concentration, making the vocabulary learning process more effective and communicative (Ubaidillah et al., 2023).

The use of Canva also provides opportunities for active student engagement through group-based activities in creating simple posters. These activities encourage students to select appropriate vocabulary, construct short sentences, and align their messages with the designed visual layout. This process demonstrates that digital design media can function as a tool for language production, not merely as a medium for content presentation. This study confirms that the use of digital learning media enhances student engagement while promoting critical thinking and creativity (Hasani et al., 2025).

Furthermore, collaborative activities in design creation strengthen student interaction through discussion and meaning negotiation. The use of Canva allows students to produce multimodal texts, combining text, images, and other visual elements, which not only support vocabulary comprehension but also develop communication and teamwork skills in Arabic language learning. These findings are consistent with research indicating that collaborative learning based on multimodal texts and digital media can

enhance students' communication and collaboration skills through discussion, cooperation, and more intensive social interaction (Nurvitarini, 2024).

2. Impact of Teacher Strategies on Interactive Digital Media-Based Learning

The implementation of interactive learning based on digital media at MAN Kota Batu has shown a significant impact on the development of students' Arabic language skills. Based on observational and interview data, the use of digital media not only enhances learning engagement but also facilitates the integrated development of the four language skills: *istima'* (listening), *kalam* (speaking), *qira'ah* (reading), and *kitabah* (writing).

a. Vocabulary Acquisition (Mufradat)

The use of visual media and digital quizzes helps students comprehend and retain new vocabulary more effectively. Visualization through images, digital posters, and interactive slides enables students to associate word meanings with context, thereby reducing reliance on direct translation. Additionally, repeated practice through digital quizzes reinforces students' long-term memory. These findings are consistent with research indicating that visual media and technology-based interactive exercises can enhance vocabulary retention in foreign language learning (Syarifah, 2024).

b. Enhancing Speaking Confidence (Maharah Kalam)

Interactive digital media, such as real-time quizzes and dialogic presentations, encourage students to actively participate in learning. Students become more confident in pronouncing vocabulary and constructing simple sentences due to a more relaxed and low-pressure learning environment. The interactive digital environment also reduces fear of making mistakes, thereby enhancing students' confidence in speaking practice. Previous research indicates that the use of interactive media in Arabic language learning can increase students' motivation and engagement, leading them to participate more actively and confidently in the learning process (Hasanuddin, 2024).

c. Enhancing Listening Skills (Istima')

The use of audio and video learning materials helps students recognize the pronunciation of Arabic vocabulary and sentence intonation more accurately. Exposure to authentic language models allows students to understand linguistic sounds in context. Moreover, the combination of audio with visual elements reinforces meaning comprehension through multimodal associations. These findings are consistent with previous research indicating that audiovisual media are effective in enhancing listening skills and oral language comprehension, as the combination of audio and visual input helps students recognize vocabulary pronunciation, sentence intonation, and linguistic context more accurately (Prasetya et al., 2024).

d. Enhancing Reading and Writing Skills (Qira'ah and Kitabah)

The use of visual text-based digital media, such as posters and infographics, helps students understand simple sentence structures and Arabic writing patterns. Students' involvement in creating digital media encourages them to write vocabulary and sentences contextually. This process reinforces understanding of language structures while simultaneously developing integrated reading and writing skills. Previous research indicates that text production activities using visual-based digital media, such as posters, infographics, and interactive multimedia, can enhance language literacy and structural comprehension through students' engagement in multimodal text representation, thereby improving integrated reading and writing skills (Syarifah, 2024).

e. **Enhancing Learning Engagement and Motivation**

Learning that incorporates digital media creates a more engaging and diverse learning environment compared to conventional methods. Visual elements, interactivity, and immediate feedback from digital quizzes enhance students' enthusiasm in participating in learning activities. This active engagement contributes to an increase in students' intrinsic motivation to learn Arabic. These findings are consistent with research indicating that technology integration in language learning significantly enhances students' motivation and engagement (Kharismawati et al., 2025).

3. Challenges and Solutions of Interactive Digital Media-Based Learning

The implementation of interactive learning based on digital media at MAN Kota Batu faces several challenges related to technical aspects and user readiness. Observational data indicate that internet disruptions, limited devices, and minor technical issues such as projectors or cable connectivity affect the smoothness of the learning process. These findings align with previous research showing that the implementation of digital learning still encounters significant barriers related to the availability of technological infrastructure, uneven internet access, and users' readiness to utilize technology effectively, thereby impacting the smooth delivery of interactive digital media-based learning (Subroto et al., 2023).

Nevertheless, teachers demonstrate adaptive competence by implementing various practical solutions to ensure that learning remains effective. They prepare alternative offline media, provide initial guidance on using applications, and organize group work to assist students facing technical difficulties. Additionally, setting up devices before lessons serves as a strategy to save time and maintain the smooth flow of core activities. These efforts reflect teachers' pedagogical competence in managing technology-based learning in a flexible and contextual manner, which aligns with findings that the use of interactive technology can enhance students' motivation and engagement in the learning process (Syarifah, 2024).

Table 3.1 presents an overview of the main challenges, their impact on the learning process, the solutions implemented by teachers, and the resulting pedagogical implications. This summary highlights how adaptive strategies and effective technology management contribute to a more flexible, efficient, and student-centered learning environment.

Table 3.1. Challenges, Impacts, Solutions, and Pedagogical Implications in Digital Media Based Learning

No	Challenge	Impact	Solution	Pedagogical Implication
1	Unstable internet connection	Digital applications cannot function optimally during the learning process	Preparing offline learning materials such as PowerPoint slides and pre-downloaded videos	Learning activities can continue without full dependence on internet connectivity
2	Limited devices or technical malfunctions	Learning time may be disrupted due to technical difficulties	Preparing backup devices and conducting technical checks before the lesson begins	Supports time efficiency and ensures the smooth implementation of core learning activities
3	Technical preparation requires additional time	Reduces the duration available for core learning activities	Preparing digital devices and instructional media before the class starts	Contributes to more effective classroom time management
4	Dependence on technology	Risk of learning interruptions when technical problems occur	Combining digital media with conventional teaching methods	Learning becomes more flexible, adaptive, and resilient to technical disruptions

Note: Adapted from observations and interviews conducted at MAN Kota Batu

Overall, the adaptive strategies implemented by teachers effectively address the challenges of using digital media, ensuring that learning activities run smoothly while maintaining student engagement and pedagogical quality.

Conclusion

The implementation of interactive digital media-based learning at MAN Kota Batu has demonstrated a positive impact on students' Arabic language proficiency through the integration of applications such as PowerPoint, Wordwall, Quizizz, Online Stopwatch, and Canva to support the development of listening, speaking, reading, and writing skills. These tools enhance vocabulary retention, increase students' confidence in speaking, and improve overall comprehension and engagement in the learning process. Despite challenges such as unstable internet connections and limited devices, teachers employ adaptive strategies—including the preparation of offline materials, pre-class technical preparation, collaborative group work, and the integration of digital and conventional teaching methods—to ensure that

learning remains effective and student-centered. Overall, this study indicates that the successful integration of technology in language education depends not only on the availability of digital tools but also on teachers' pedagogical competence and careful instructional planning. These findings provide valuable insights for improving foreign language instruction through the effective use of interactive digital media in classroom learning.

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