

The Implementation of 3D Media and Interactive Video to Improve *Maharah Kalam* in Arabic Learning at Madrasah Tsanawiyah

Izzah Nur Aida¹⁾, Annisa Eriska Wulandari Wima²⁾, Adif Al Aly³⁾

UIN Kiai Haji Achmad Siddiq Jember Indonesia^{1,2,3}

Izzanuraida137@gmail.com, annisaeriska17@gmail.com, adifaly8@gmail.com

Abstract:

This study aims to examine the application of 3D media integration and interactive videos in improving speaking skills (*maharah kalam*) of Madrasah Tsanawiyah students. The background of this study is the low ability of students in speaking Arabic due to monotonous learning methods and minimal interaction. The method used is qualitative with data collection techniques through interviews, classroom observations, and questionnaires. The research subjects consisted of teachers and students of class VIII MTs Miftahul Ulum Rambipuji Jember who were actively involved in this technology-based learning. The results showed significant improvement in vocabulary (from 58% to 86%), sentence structure (52% to 81%), and contextual application (47% to 79%). 3D media was shown to strengthen visual comprehension and linguistic context, while interactive videos encouraged active participation and better pronunciation through immediate feedback. The findings indicate that an integrative approach between visual and interactive media can improve students' cognitive and affective aspects simultaneously. The study recommends wider implementation of digital media in the Arabic curriculum as well as continuous teacher training to maximize the potential of technology in improving students' productive skills.

Keywords: *3D Media, Interactive Video, Maharah Kalam, Educational Technology.*

Introduction

One of the main challenges in learning Arabic, especially at the Madrasah Tsanawiyah (MTs) level, is the low ability of students' *maharah kalam* (speaking skills). This problem is often caused by conventional learning methods that are monotonous and do not encourage active verbal interaction.¹ At the MTs level, many students still struggle to express themselves in Arabic fluently, due to a lack of exposure to contextualized and interactive language use in the classroom.² Recent developments in educational technology, such as 3D media and interactive videos, offer promising alternatives for more modern language teaching.³ Several previous studies have shown that digital

¹ Jurnal Pendidikan et al., "Analisis Faktor Yang Mempengaruhi Kesulitan Belajar Bahasa Arab Siswa Madrasah Aliyah Amalia Medan" 4, no. 1 (2025): 99–107.

² Maryam Nur Annisa, Muhammad Rifki, and R. Taufiqurrochman, "Teknologi Media Pembelajaran Berbasis Video Animasi Untuk Meningkatkan Kemampuan Berbicara Bahasa Arab Siswa Di Madrasah Ibtidaiyah Negeri 2 Kabupaten Gorontalo," *Jurnal Sustainable* 6, no. 2 (2023): 378–88.

³ Silvana StaviniBELIA et al., "Pengenalan Lapangan Persekolahan Pendidikan Guru Sekolah Implementasi Dasar Multimedia Interaktif Berbasis Augmented Reality Dan Assemblr Edu Dalam Pembelajaran Sains Untuk Siswa Sekolah Dasar," 2024, 47–53.

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media can significantly improve vocabulary acquisition, learning engagement, and concept understanding.⁴ In particular, the animated video and augmented reality application proved to provide measurable improvements in students' linguistic performance across a range of contexts.⁵ However, most of these studies only focus on the use of 3D media or interactive videos separately, and not many have examined the combination of the two media to support productive skills such as speaking.

This gap is particularly pronounced in the context of Arabic language learning, where the use of immersive digital technology is still relatively minimal. Although research by Lifya (2022) and Khadijah (2025) has shown the benefits of 3D media and animated videos in improving speaking skills or Arabic vocabulary acquisition, there is still little empirical evidence that examines how the combination of these media can strengthen *maharah kalam* in a practical classroom environment.⁶

Based on these research gaps, the urgency of transforming Arabic language learning through an integrative media approach becomes even more evident. A contextualized learning environment, combining immersive visualization and real-time interaction, is needed to make language use more meaningful, especially for students who face affective and cognitive barriers in learning Arabic. Therefore, this study aims to examine the effectiveness of combining 3D media and interactive videos in improving the speaking skills (*maharah kalam*) of MTs students. This research focuses on the implementation of the media in the learning process, the level of student engagement, and its impact on improving Arabic speaking skills.

Methods

This study uses a qualitative approach with an intrinsic case study type, because the main focus is to deeply understand the application of 3D media and interactive videos in the context of Arabic language learning at MTs Miftahul Ulum Rambipuji Jember. An intrinsic case study was chosen because the researcher was interested in the case itself, not to generalize.⁷

⁴ Khadijah Kamaruddin Et Al., "Teaching And Learning Strategies For Arabic Language Among Diploma In Islamic Studies Students At Unishams : An Analysis Of Arab Bagi Pelajar Diploma Pengajian Islam Di Unishams : Analisis Pendekatan Interaktif Dan Teaching And Learning Strategies For Arabic Language Among Diploma In Islamic Studies Students At Unishams : An Analysis Of," no. June (2025), <https://doi.org/10.35631/Ijmoe.724082>.

⁵ Astrini Eka Putri, "Penggunaan Media Pembelajaran Berbasis Digital Dalam Pembelajaran Sejarah Untuk Meningkatkan Minat Belajar Peserta Didik," *JIM: Jurnal Ilmiah Mahasiswa Pendidikan Sejarah* 9, no. 2 (2024): 533–40, <https://doi.org/10.24815/jimps.v9i2.30523>.

⁶ Lifya Nidaul Hana, N Sunarko, and A Aulia Rahman, "Penggunaan Media Film Animasi Untuk Meningkatkan Penguasaan Kosakata Bahasa Arab," *Jurnal Al-Qalam* 23, no. 1 (2022): 8–14, <https://doi.org/https://doi.org/10.32699/al-qalam.v23i1.3329>.

⁷ John W. Creswell, Second Edition Qualitative Inquiry & Research Design Choosing Among Five Approaches, Sage Publications, Inc., vol. 77, 2007, <https://doi.org/10.1111/1467-9299.00177>.

The research subjects consisted of Arabic language teachers and eighth-grade students who actively used 3D media and interactive videos in the learning process. Participants were selected using purposive sampling, which involves selection based on specific criteria such as direct involvement in digital media-based learning and willingness to be interviewed. This study employs a qualitative approach with an intrinsic case study design, as the primary focus is to gain a deep understanding of the application of 3D media and interactive videos in the context of Arabic language learning at MTs Miftahul Ulum Rambipuji Jember. An intrinsic case study was chosen because the researcher was interested in the case itself, not for the purpose of generalization.⁸ One of the key informants was Mrs. Alya Hanifah, an Arabic teacher who was the main implementer of the media.

Data collection techniques include: In-depth interviews with teachers and students regarding their perceptions, experiences, and obstacles in using media. Direct observation during the learning process, using observation sheets to record student interactions and participation. As well as documentation in the form of learning evaluation results and media used. Data triangulation techniques are used to ensure data validity. The collected data is analyzed using thematic analysis techniques following six stages according to:⁹ (1) familiarization with data, (2) initial coding, (3) theme searching, (4) theme review, (5) theme definition and naming, and report writing.

This step allows researchers to identify patterns of meaning from informants' experiences with the use of digital learning media. The use of this method is in line with the research problem and objectives, namely to holistically explore the effectiveness of 3D media and interactive videos in improving students' vocabulary and speaking skills. The combination of interviews, observations, and thematic analysis enables in-depth data collection and critical reflection on classroom learning practices.¹⁰

Results and Discussion

1. Interview result

Data from interviews with Arabic language teachers confirmed that the use of 3D media and interactive videos created a more dynamic and interesting learning atmosphere. Teachers stated

⁸ Johnny Salda Matthew B. Miles, A. Michael Huberman, *Qualitative Data Analysis a Methods Sourcebook*, Sage Publications, Inc, vol. 11, 2019, <https://dx.doi.org/10.1016/j.regsciurbeco.2008.06.005%0Ahttps://www.researchgate.net/publication/305320484>.

⁹ S.K Ahmed, "Using Thematic Analysis in Qualitative Research," *Journal of Medicine, Surgery, and Public Health* 2, no. January (2025): 0–3, <https://doi.org/10.1016/j.glmedi.2025.100198>.

¹⁰ Mouwn Erland, Metodologi Penelitian Kualitatif. In Metodologi Penelitian Kualitatif, Rake Sarasin, 2022, https://www.researchgate.net/profile/AnitaMaharani/publication/359652702_Metodologi_Penelitian_Kualitatif/links/6246f08b21077329f2e8330b/Metodologi-Penelitian-Kualitatif.pdf.

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that the visualization of 3D objects (such as houses, markets, and mosques) contributed significantly to the strengthening of sentence structures. This is in line with Piaget's theory of constructivism which suggests that concrete visual experiences enhance abstract understanding. Sentence structures, which were previously abstract to students, become more connected to real contexts. This deepens the understanding of *maharah kalam*-not simply memorizing but internalizing language patterns. Teachers also reported that the interactive videos with quizzes and native speaker pronunciation transcripts increased student engagement. One teacher stated that the immediate feedback feature strengthened students' confidence when speaking. This finding supports the results of Rosyada et al. (2025) who showed similar media improved post-test speaking from 60% to 88%.¹¹ As such, these interviews are not merely descriptive verbal, but prove the psychological and affective mechanisms behind students' speaking improvement. One of the Arabic language teachers at MTs Miftahul Ulum Rambipuji Jember Mrs. Atika Hibbatul Azizah, S.Pd.I. she said:¹²

"Since using 3D media, students understand the structure of Arabic grammar faster, especially when they see 3D models of houses, mosques, and markets in the context of everyday life."

The next interview with a student of class VIII MTs Miftahul Ulum Rambipuji Jember, Siti Aulia conveyed:¹³

"The interactive video makes me more enthusiastic about learning because I can directly answer the questions in the middle of the video and get feedback right away."

2. Questionnaire Results and Quantitative Analysis

Questionnaires were given to 30 students to assess comprehension before and after the intervention. The results: vocabulary increased from 58% to 86%, sentence structure from 52% to 81%, and contextual application from 47% to 79%. The table below visually shows the increase:

Comprehension Aspect	Before 3D Media	After 3D Media
Vocabulary	58%	86%
Sentence Structure	52%	81%
Contextual Application	47%	79%

¹¹ Maula Rosyada, Kristina Imron, and Tasya Putri, "Efektivitas Media Pembelajaran *Maharah Kalam* Melalui Video Interaktif Berbasis Kontekstual" 8 (2025), <https://doi.org/https://doi.org/10.54371/jiip.v8i6.7983>.

¹² Wawancara dengan Ibu Atika Hibbatul Azizah, S.Pd.I. Guru Bahasa Arab MTs Miftahul Ulum Rambipuji Jember, di Kantor Sekolah, 20 Mei 2025

¹³ Wawancara dengan Siti Aulia, Siswa Kelas VIII MTs Miftahul Ulum Rambipuji Jember, di Ruang Kelas VIII, 20 Mei 2025

This statistically significant increase suggests that the media affected not only lexical aspects, but also language structure and usage. The graphs corroborate the interview quotes with numerical evidence; for example, the soaring vocabulary supports the teacher's claim that visualization expands students' lexical memory, consistent with Adelita et al.'s study. (2024) that showed AR improved vocabulary comprehension.

Interpretive analysis shows the synergy between visual and interactive learning creates a double effect on productive ability. Not only do students remember words and patterns, but they are also able to respond orally more precisely. This suggests that 3D media and interactive videos support metacognitive activities: students become aware of their own learning and more confident in producing Arabic expressions.

3. Critical Review and Literature Comparison

This finding extends previous studies such as Rosyada et al. (2025) and Mamonto (2022), which focus on interactive videos or articulate storylines in teaching *maharah al-kalam*.¹⁴ Our study shows that the combination of both 3D media and interactive videos resulted in a more holistic improvement covering Arabic vocabulary, structure, and usage. This also strengthens the argumentation of Mayer's theory on the effectiveness of mul-timedia with real-time interaction features.¹⁵

Critically, this study proves Paivio's Dual Coding theory that processing through simultaneous visual and auditory channels creates multiple representations that reinforce learning. This also complements the gap of Safitri & Sa'dudin (2021) which emphasizes the expansion of visual media types in learning *maharah kalam*.¹⁶

4. Contributions and Implications

Practically, this study provides empirical evidence that integrative media can be used as an effective *maharah kalam* learning model in MTs. Not only does it enrich the variety of methods, but it also facilitates the process of language internalization through cognitive and affective pathways. This opens up opportunities for technology-based curriculum development that is more complete and multisensorial. Academically, this study adds to theory and methodology by showing that the effectiveness of learning to speak Arabic increases when digital media are designed to be complementary: 3D media support visual meaning and sentence structure; interactive videos foster oral

¹⁴ Mohamad Nurkholis Mamonto, "Desain Pengembangan Media Pembelajaran Dengan Articulate Storyline Untuk Pembelajaran *Maharah Kalam* Dalam Hiwar Kelas 9 MTs" 2, no. 1 (2022): 18–33, <https://doi.org/https://doi.org/10.32923/al-muarrib.v2i1.2432>.

¹⁵ Sayyidah Labib, Erta Mahyudin, And Siti Uriana Rahmawati, "Pengembangan Video Berseri Untuk Pembelajaran Keterampilan Berbicara Bahasa Arab Development Of Video Series For Learning," 2025, 3235–46, <https://doi.org/https://jicnusantara.com/index.php/jiic>.

¹⁶ Eka Safitri and Ihsan Sa, "The Use of Visual Media in *Maharatah Al-Kalam* Learning " Learning Media Is Everything That Is Presented by Concrete Media in Order to Understand" 11, no. 1 (2019): 72–89, <https://doi.org/10.24042/albayan.v11i1.3784>.

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response skills. This contribution fills the gap between the use of visual media and the improvement of productive skills, providing insight for language researchers and educators in complementing traditional teaching methods.

The results of this study demonstrate the positive impact of combining 3D media and interactive videos on Arabic language learning, particularly in enhancing *maharah kalam* (speaking skills). This section will discuss the findings in three parts: qualitative insights from teacher and student interviews, quantitative data from questionnaires, and a critical review comparing this study with existing literature. Each section reveals how the integration of visual and interactive digital tools not only improves comprehension but also supports deeper cognitive and affective engagement in the language learning process.

The interview data revealed a strong correlation between the use of 3D media and improved sentence structure comprehension among students. Arabic teachers noted that 3D visualizations of everyday contexts (such as homes, markets, and mosques) helped transform abstract grammatical concepts into meaningful real-life scenarios. This aligns with Piaget's constructivist theory, emphasizing how concrete visual stimuli can scaffold abstract understanding. The feedback from interactive videos also enhanced student engagement and motivation, as reflected in one student's excitement about immediate feedback during the video sessions. These qualitative findings support the work of Rosyada et al. (2025), who documented a significant increase in speaking test scores through similar media, reinforcing the cognitive and affective mechanisms behind students' performance improvements.

Quantitative data from student questionnaires corroborated the interview findings. Vocabulary comprehension increased from 58% to 86%, sentence structure from 52% to 81%, and contextual application from 47% to 79% after the intervention. These statistically significant gains confirm that the integration of 3D media and interactive videos does not only benefit lexical development but also enhances syntactic mastery and real-life language use. The interpretive analysis further indicates that the synergy between visual and interactive content boosts productive skills by enabling students to process, recall, and articulate language more accurately. This supports Paivio's Dual Coding Theory and Mayer's Multimedia Learning Theory, both of which highlight the power of multisensory input in enhancing language acquisition. Thus, the study offers both empirical and theoretical contributions by showing that combining visual structure and interactive feedback significantly improves Arabic speaking proficiency.

Conclusion

This study shows that the application of 3D media and interactive videos effectively improves speaking skills (maharah kalam), vocabulary mastery, and understanding of sentence structure of MT's students. The results of interviews and observations showed an increase in enthusiasm and active participation of students, while questionnaire data showed significant improvements in aspects of vocabulary (58% to 86%), sentence structure (52% to 81%), and contextual application (47% to 79%). This proves that visual and interactive media can strengthen Arabic language competence functionally and contextually.

The conceptual contribution of this study is the proof that the integrative approach between 3D media and interactive videos is able to bridge experiential learning and active student engagement, especially in productive skills such as maharah kalam. Methodologically, the intrinsic case study approach with data triangulation (interviews, observations, and questionnaires) provides interpretative power that is intact and relevant to the learning context in madrasah. Thus, this research enriches the development of digital learning media in line with the needs of the 21st century.

The limitations of this study lie in the narrow scope (one school) and relatively short duration of implementation. In the future, further research needs to involve a wider sample, longer duration, and exploration of affective and social-emotional aspects of students. In addition, intensive training for teachers and policy support in technology integration are needed. Overall, this study confirms that the combination of 3D media and interactive videos is an innovative strategy worth developing to improve the overall quality of Arabic language learning.

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