



Digital Media Innovation For Istima' Teaching In Arabic Language Education: Literature Study

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Abstract

Listening (istima') is one of the four essential skills in Arabic language learning that plays a crucial role in understanding spoken messages. However, in Indonesia, the teaching of istima' is still largely conducted using conventional methods, which tend to be monotonous and less effective. Technological advancements have led to various digital media innovations that support more interactive, flexible, and contextual listening instruction. This study aims to identify forms of digital media innovation in istima' instruction, evaluate their effectiveness, and analyze the supporting and inhibiting factors in their implementation. The method used is a literature review with content analysis techniques. The findings show that media such as animated videos, podcasts, mobile applications, and online platforms can enhance student motivation, participation, and learning outcomes. These innovations also promote flexible, independent, and needs-based learning. However, the effectiveness of digital media depends on content quality, teacher competence, and infrastructure readiness. Therefore, the integration of digital media in istima' instruction must be pedagogically and strategically designed. This study provides theoretical and practical contributions to the development of modern and 21st-century-relevant Arabic language learning.

Keywords: Istima'; listening skills; digital media; learning innovation

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Introduction

Listening skills, or maharah istima', is one of the four fundamental skills in language learning, particularly in Arabic language teaching. This skill holds a very vital position as it serves as the main foundation in the process of acquiring a second or foreign language. In practice, listening is not just a passive activity, but an active process that involves the ability to capture, understand, and interpret the spoken messages delivered by the speaker.¹ Therefore, mastery of listening skills (maharah istima') serves as the initial key in developing effective and meaningful oral communication skills. In the context of Arabic language learning, listening skills play an important role in supporting the success of verbal communication.² Before someone can speak Arabic well, they must first be able to listen to and understand speech in the language.³ other words, listening is the initial process in language acquisition. Through listening, students can recognize the sounds of Arabic, understand intonation, identify sentence structures, and grasp the meaning of vocabulary used in specific contexts.⁴ All of these aspects contribute to the further development of speaking, reading, and writing skills.

However, developing listening (istima') skills is not an easy task, especially in Arabic learning, which is often considered a foreign language by students.⁵ There are several challenges that must be faced. One of the main challenges is the phonetic characteristics of Arabic, which differ from the students' mother tongue.⁶ Sounds such as 'ain, ghain, and qaf are examples of phonemes that do not exist in Indonesian, thus requiring intensive auditory adaptation. In addition, the speaking speed of native Arabic speakers often becomes an obstacle, particularly for beginners who are not yet accustomed to processing spoken information quickly.⁷

¹ Rappe Rappe, "Pembelajaran Fahmul Masmu' Bahasa Arab," *Shaut al Arabiyyah* 9, no. 1 (June 26, 2021): 88, <https://doi.org/10.24252/saa.v9i1.21492>.

² R. Sari and M. Muassomah, "Implementasi Media Audio-Visual Dalam Pembelajaran Istima '," 2020, <https://scholar.google.com/scholar?cluster=380722019129267005&hl=en&oi=scholar>.

³ Vivi Anggraini, "Stimulasi Keterampilan Menyimak Terhadap Perkembangan Anak Usia Dini," *Raudhatul Athfal: Jurnal Pendidikan Islam Anak Usia Dini* 3, no. 1 (June 25, 2019): 30–44, <https://doi.org/10.19109/ra.v3i1.3170>.

⁴ Muhamad Fathoni, "Pembelajaran Maharah Istima'," *Jurnal Ihtimam* 1, no. 1 (June 1, 2018), <https://doi.org/10.36668/jih.v1i1.162>.

⁵ Anwar Sidik et al., "Integration of Artificial Intelligence (AI) Technology in Arabic Language Learning: Opportunities and Challenges," in *International Conference on Islamic Education and Islamic Business (ICoBEI)*, vol. 1, 2024, 83–92, <https://journal.uir.ac.id/index.php/icobei/article/view/21299>.

⁶ Hikami Rafsanjani, Muh. Haris Zubaidillah, and M. Ahim Sulthan Nuruddaroini, "Problematika Mahasiswa Dalam Manajemen Skill Berbahasa Arab Pada Perguruan Tinggi Di Kalimantan," *Jurnal Basicedu* 6, no. 3 (May 1, 2022): 5166–80, <https://doi.org/10.31004/basicedu.v6i3.3072>.

⁷ Maimunsyah Maimunsyah, "Pendekatan Tematik Dalam Pembelajaran Bahasa Arab," *Serambi Konstruktivis* 3, no. 2 (June 30, 2021), <https://doi.org/10.32672/konstruktivis.v3i2.3215>.

In addition to phonetic challenges, listening also demands a high level of concentration. Learners are required to remain focused throughout the listening process in order to fully grasp the message.⁸ Even a slight distraction can result in the loss of important information being conveyed. This indicates that listening is not merely about language ability alone, but is also closely related to other cognitive skills such as short-term memory, attention, and perseverance.⁹

In practice, listening skills (istima') can be improved through various strategies. For instance, by using audio recordings, conversation videos, podcasts, and digital learning applications that present a variety of spoken Arabic. Teachers can also apply communicative and contextual approaches to help students understand the content naturally.¹⁰ Through consistent practice and the habit of listening to Arabic from diverse sources, students are expected to gradually improve their listening skills. Therefore, listening skills in Arabic language learning are not just basic skills, but rather a foundation that influences the mastery of other language skills. For this reason, the development of maharah istima' should be a main focus in the design of Arabic language curriculum and teaching methods.

In the teaching of Arabic in Indonesia, especially at the level of madrasahs and Islamic higher education institutions, the instruction of istima' (listening) is often still conducted in a conventional manner. The methods used tend to be monotonous, such as reading texts and translating them, or playing low-quality recordings that are not aligned with students' real-life contexts.¹¹ This leads to difficulties for students in deeply understanding the material, a lack of active engagement in the learning process, and limited opportunities to practice contextual listening.¹²

Along with the development of information and communication technology, the field of education has undergone a major transformation, including in the development of learning media. One form of this transformation is the emergence of various digital media innovations that enable learning processes to be more interactive, flexible, and enjoyable. Digital media can present instructional

⁸ Hayatul Azkiyah, "Exploring Pronouncing English Sounds: Book Review For Japanese Language Learners," *Modality Journal: International Journal of Linguistics and Literature* 3, no. 1 (June 30, 2023): 79, <https://doi.org/10.30983/mj.v3i1.6301>.

⁹ Ahyati Kurniamala Niswariyana and Nina Nina, "Analisis Kesalahan Berbahasa Pada Tugas Mata Kuliah Menyimak Mahasiswa PBSA Semester I Universitas Muhammadiyah Mataram Tahun 2017," *Jurnal Ulul Albab* 22, no. 2 (December 6, 2018), <https://doi.org/10.31764/jua.v22i1.578>.

¹⁰ Arono Arono, "Pengembangan Pembelajaran Keterampilan Menyimak Melalui Teknologi Informasi," *Jurnal Pendidikan Bahasa Dan Sastra* 13, no. 2 (October 3, 2013): 129, https://doi.org/10.17509/bs_jpbasp.v13i2.286.

¹¹ Muhamad Fathoni, "Pembelajaran Maharah Istima'," *Jurnal Ibtimam* 1, no. 1 (June 1, 2018), <https://doi.org/10.36668/jih.v1i1.162>.

¹² Nuril Mufidah and Moh Rifqi Falah Al Farabi, "Kurikulum 13 Dan Pengajaran Maharah Istima' Di Asrama Hasbullah Sa'id PP. Mambaul Ma'arif Denanyar Jombang," *Tadris Al-Arabiyyata: Jurnal Kajian Ilmu Pendidikan Bahasa Arab* 3, no. 2 (July 29, 2023): 202–13, <https://doi.org/10.30739/arabiyat.v3i2.2291>.

materials in the form of audio, video, animation, simulations, and interactive applications that students can access anytime and anywhere. In the context of istima' learning, digital media provides students with the convenience to listen, repeat, and understand content more deeply.¹³

One significant form of digital media innovation in istima' (listening) learning is the use of animated videos. This medium allows students not only to hear but also to see visuals that support the context of the conversation or narration being delivered.¹⁴ For example, when students listen to a dialogue about activities in a market, an animated video can display illustrations of the market, the vendors, and the interactions between buyers and sellers.¹⁵ This greatly helps in linking the sounds of the language with visual meanings, resulting in faster and deeper understanding. Moreover, the use of videos stimulates student interest in learning as they are more interactive and entertaining compared to conventional audio methods.

In addition to videos, interactive applications also serve as highly useful tools in istima' learning. These applications are usually specifically designed to develop listening skills by providing various exercises such as matching sounds with images, answering questions based on played audio, and filling in blanks in conversations. A major advantage of these applications is the immediate feedback provided to students after they complete the exercises. This feedback is crucial in helping students self-correct errors and improve their comprehension. Popular examples like Duolingo, Rosetta Stone, or Memrise offer listening features that can be adjusted to the learner's proficiency level.¹⁶

Another innovation is the use of podcasts and audio recordings. These media provide wide access to various Arabic dialects and accents from different regions, such as Egyptian, Levantine, or Maghrebi dialects, in addition to Standard Arabic (Fusha).¹⁷ This is especially important as it introduces students to real-life spoken language variations as used by native speakers in everyday situations. For instance, students who are only familiar with Standard Arabic from textbooks may struggle to understand dialogues in films or news reports unless they are introduced to dialectal

¹³ Sri Handayani and Syafi'i, "Pemanfaatan Video Animasi Youtube Untuk Meningkatkan Pengembangan Maharah Istima' Bahasa Arab," *Tatsqifly: Jurnal Pendidikan Bahasa Arab* 3, no. 2 (July 30, 2022): 104–15, <https://doi.org/10.30997/tjpba.v3i2.6138>.

¹⁴ Restu Rahayu, Sofyan Iskandar, and Yunus Abidin, "Inovasi Pembelajaran Abad 21 Dan Penerapannya Di Indonesia," *Jurnal Basicedu* 6, no. 2 (February 11, 2022): 2099–2104, <https://doi.org/10.31004/basicedu.v6i2.2082>.

¹⁵ Sri Handayani and Syafi'i, "Pemanfaatan Video Animasi Youtube Untuk Meningkatkan Pengembangan Maharah Istima' Bahasa Arab," *Tatsqifly: Jurnal Pendidikan Bahasa Arab* 3, no. 2 (July 30, 2022): 104–15, <https://doi.org/10.30997/tjpba.v3i2.6138>.

¹⁶ Rini Rini and Renti Yasmar, "Peningkatan Kompetensi Istima' Wa Takallum Melalui Media Film," *Arabiyatuna : Jurnal Bahasa Arab* 4, no. 1 (May 8, 2020): 155, <https://doi.org/10.29240/jba.v4i1.1384>.

¹⁷ Dyan Indahsari, "Using Podcast for EFL Students in Language Learning," *JEES (Journal of English Educators Society)* 5, no. 2 (September 8, 2020): 103–8, <https://doi.org/10.21070/jees.v5i2.767>.

variations through media like podcasts or audio recordings.¹⁸ By regularly listening to audio content, students can enhance their sensitivity to intonation, stress, and speaking speed in Arabic.¹⁹

Besides expanding access to materials, digital media also enriches the variety of teaching methods used by educators. With the help of technology, teachers can design more varied, dynamic, and student-centered istima' learning. For instance, teachers can conduct audio-based quizzes via platforms such as Kahoot or Quizizz, assign students to write reports based on podcasts they listen to, or hold group discussions after watching specific videos. This approach encourages active student participation, increases motivation, and trains them to think critically and understand content contextually.²⁰

Nevertheless, the use of digital media in istima' learning still requires careful planning and teacher guidance. Teachers need to adapt digital materials to the students' proficiency levels, select credible and goal-aligned sources, and ensure that the media used supports the development of listening skills rather than serving merely as entertainment. In this regard, teachers' digital literacy becomes crucial to ensure that the use of technology is truly optimal and positively impacts students' learning outcomes.²¹ Overall, digital media innovation has proven to be an effective solution in addressing various challenges in istima' learning. It not only facilitates access to materials but also creates a more engaging, interactive, and relevant learning experience for today's learners. Therefore, Arabic language teachers must continue to develop their skills and creativity in utilizing digital media so that istima' learning becomes more adaptive and of higher quality in this digital era. Previous studies have shown that the use of digital media in language teaching holds great potential for improving student motivation, engagement, and learning outcomes.

In Arabic language learning, the use of media such as animated videos, podcasts, mobile applications, and online learning platforms has been proven to provide a more lively and meaningful learning experience. However, this innovation is also faced with various challenges such as infrastructure readiness, teacher skills, and the quality and relevance of the content used. Furthermore, literature studies also reveal variations in the application of digital media in teaching

¹⁸ Stephanie J. Tobin and Rosanna E. Guadagno, "Why People Listen: Motivations and Outcomes of Podcast Listening," ed. Sara Rubinelli, *PLOS ONE* 17, no. 4 (April 6, 2022): e0265806, <https://doi.org/10.1371/journal.pone.0265806>.

¹⁹ Erlina, "Analisis Penggunaan Telegram Sebagai Media Pembelajaran Bahasa Arab Di Era Industri 4.0," *Shant al Arabiyyah* 10, no. 1 (June 13, 2022): 8–22, <https://doi.org/10.24252/saa.v10i1.26920>.

²⁰ Nana Meily Nurdiansyah et al., "Education Reconstruction: A Collaboration of Quiz Team and Kahoot Methods in Learning Arabic," *Komposisi: Jurnal Pendidikan Bahasa, Sastra, Dan Seni* 22, no. 2 (December 4, 2021): 93, <https://doi.org/10.24036/komposisi.v22i2.111436>.

²¹ Nuril Mufidah et al., "ICT For Arabic Learning: A Blended Learning in Istima' II," *لساننا (LISANUNA): Jurnal Ilmu Bahasa Arab Dan Pembelajarannya* 8, no. 2 (March 20, 2019): 174, <https://doi.org/10.22373/ls.v8i2.4561>.

istima'. Some studies show significant success in improving students' listening skills, while others highlight implementation challenges, especially in environments with limited access to technology.²² Therefore, there is a need for a comprehensive mapping of the types of digital media innovations, the implementation approaches used, and their impact on the process and outcomes of istima' learning.

In addition, istima' skills are not only academically important, but also socially and culturally relevant, especially for Arabic learners who study the language as a means to understand religious texts or for cross-cultural communication. Thus, delivering meaningful istima' materials through digital media is an important strategy to improve the overall quality of language teaching.

Based on this background, this literature review aims to: 1) Identify various forms of digital media innovation that have been applied in learning istima' Arabic, 2) Evaluate the effectiveness of these digital media in improving students' listening skills, 3) Analyze the supporting and inhibiting factors for the implementation of digital media in teaching istima', 4) Provide strategic recommendations for the development and utilization of digital media in the context of Arabic language education in Indonesia.

In the global context, non-Arab countries such as Malaysia, Brunei Darussalam, and South Africa have demonstrated innovative approaches in integrating digital media into Arabic language education. Malaysia, for instance, through its Ministry of Education and institutions such as the University of Malaya and the International Islamic University Malaysia (IIUM), has developed various digital platforms and interactive learning applications based on AI and gamification to support students' language competencies. Brunei Darussalam also emphasizes an ICT-based approach in its Arabic language curriculum, where the use of learning management systems (LMS) such as Moodle and applications like Kahoot and Google Classroom is widely practiced in Islamic schools and madrasahs. Meanwhile, in South Africa, Arabic education often focuses on Muslim minority communities, which utilize digital media to overcome limited access to qualified instructors, for example through online classes, podcasts, and Arabic-language YouTube videos. The contextual factors affecting the implementation of digital media in Arabic language learning in Indonesia include unequal technological infrastructure, limited digital literacy among teachers and students, and a national curriculum that has not yet explicitly integrated digital technology into second language learning. Moreover, the diverse characteristics of Islamic educational institutions

²² Ignasia Yuyun and Fitri Yanti Simamora, "Use of Youtube To Support Efl Students' Listening Skills," *ELLTER Journal* 2, no. 2 (October 29, 2021): 1–12, <https://doi.org/10.22236/ellter.v2i2.7512>.

in Indonesia from traditional pesantren to modern madrasahs result in uneven adoption of technology. Often, the integration of technology depends on local initiatives and institutional support rather than national policies.

The implications of cultural-linguistic factors also pose specific challenges. For example, the Arabic dialects used in digital media are not always aligned with the needs of Indonesian learners, who primarily focus on *Fusha* (Classical Arabic) to understand religious texts. On the other hand, much of the digital content is embedded in Arab cultural contexts, which may be less relevant to the lived experiences of local learners, thereby reducing the effectiveness of instruction. This linguistic and cultural gap necessitates the adaptation of content to be more contextual and communicative, in line with the Indonesian learning culture.

Based on these findings and analyses, the following are strategic recommendations for the development and utilization of digital media in Arabic language education in Indonesia: 1) Develop local digital content based on *Fusha* using a contextualized Indonesian approach, in the form of applications, interactive videos, or e-modules. 2) Provide intensive digital literacy training for Arabic language teachers to enhance their pedagogical digital competence and adaptability to technological tools. 3) Foster cross-national collaboration with non-Arab countries such as Malaysia or Brunei in developing curricula and digital learning resources suitable for the Southeast Asian context. 4) Systematically integrate technology into the Arabic language curriculum at the madrasah and higher education levels through government policy and support from Islamic higher education institutions. 5) Conduct technology-based classroom action research to evaluate the effectiveness of various types of digital media in enhancing the skills of *istima'* (listening), *kalam* (speaking), *qirā'ah* (reading), and *kitābah* (writing).

Through these strategies, Indonesia can seize the opportunities of digital transformation to enhance Arabic language learning that is contextual, relevant, and globally competitive.

With these objectives, this study is expected to provide theoretical and practical contributions in the development of Arabic language learning strategies that are more innovative and responsive to the needs of the times.

The development of listening skills (*maharat al-istimā'*) in Arabic as a second language demands a holistic, theory-based approach. Over the past two decades, the integration of Second Language Acquisition (SLA) theory, Technology-Enhanced Language Learning (TELL) framework, and interaction-based approaches such as *al-nazariyyah al-tafā'uliyah* (Interactive Theory) has

provided a robust foundation for designing effective instructional strategies in Arabic language education.

1. Listening Comprehension in Contemporary SLA Theory

In modern SLA theory, listening is not viewed as a passive process of receiving language input, but rather as an integral part of a complex language acquisition system. One of the most relevant models is Stephen Krashen's *Comprehensible Input Hypothesis*, which emphasizes the importance of exposing learners to input that is slightly beyond their current proficiency level ($i+1$) to promote acquisition.

Additionally, *Processability Theory* by Pienemann suggests that learners acquire language structures in a predictable sequence, based on cognitive processing constraints. Thus, audio materials used in listening instruction should be developmentally appropriate, beginning with basic sounds and prosody, and progressing toward higher-level understanding of meaning and discourse.

Recent research in SLA also highlights the role of working memory, bottom-up, and top-down processing in listening comprehension. *Bottom-up* processing involves decoding sounds and syntactic structures linearly, while *top-down* processing relies on prior knowledge, context, and cultural schemas to understand intended meaning. In Arabic learning, top-down strategies are particularly critical, as many materials are rich in idioms, religious expressions, and culturally specific nuances.

2. TELL: A Theoretical Framework for Optimizing Istimā'

Technology-Enhanced Language Learning (TELL) provides a modern framework for integrating digital technologies into language education. TELL involves using interactive platforms such as podcasts, mobile apps, videos, learning management systems (LMS), and AI-powered tools to support and enhance listening instruction in meaningful and contextual ways.

TELL is aligned with *Multimodal Learning Theory*, which states that combining visual, auditory, and interactive inputs enhances retention and engagement. In the context of Arabic listening, tools such as YouTube, Spotify, Quranic Arabic apps, and LingQ offer access to authentic and diverse Arabic audio input.

Key TELL principles in *istimā'* instruction include: 1) **Authenticity**: Accessing native Arabic speech through khutbahs, news, interviews, and daily conversations. 2) **Interactivity**: Using apps like Edpuzzle or Quizlet to turn listening tasks into engaging activities with questions and real-time responses. 3) **Personalization**: Allowing learners to choose materials based on interest and language

level. 4) Immediate Feedback: Providing learners with instant performance feedback via AI or digital platforms.

In Islamic schools and universities, TELL can be implemented through systems like Google Classroom, Moodle, or localized Android applications featuring listening content drawn from both classical and contemporary Islamic texts.

3. Al-Nazariyyah al-Tafā'uliyah (Interactive Theory) in Arabic Language Education

The *Interactive Theory (al-nazariyyah al-tafā'uliyah)* in second language acquisition emphasizes the role of social interaction in language learning. This theory, influenced by Vygotsky's concept of the *Zone of Proximal Development (ZPD)*, sees language as a tool for social negotiation and meaning-making. In listening instruction, it suggests that comprehension is not simply hearing, but requires responsive behaviors such as clarification, negotiation of meaning, and backchanneling.

In Arabic language education, interaction plays a critical role because meaning and structure are often highly dependent on context, tone, and pragmatic intent. For example, understanding Qur'anic recitation or prophetic traditions in spoken form requires not only passive listening but also active engagement through questioning, paraphrasing, or applying what is heard in real-life discussion.

Interactive strategies in Arabic listening instruction can include: 1) Shadowing: Students repeat after native speech, mimicking intonation and rhythm. 2) Dictogloss: Learners listen to a text and work collaboratively to reconstruct its meaning. 4) Task-Based Listening: Learners complete meaningful tasks answering questions, summarizing, or making decisions based on what they hear.

Historically, spoken interaction has been central to Arabic scholarship. Therefore, the interactive approach restores Arabic instruction to its traditional communicative roots.

4. Implications and Practical Recommendations

Integrating SLA, TELL, and interactive theory leads to several important implications for Arabic listening instruction design:

a. Task and Interaction-Based Curriculum Design

Curriculum design should encourage student involvement in interactive listening tasks. A *task-based language learning (TBLL)* approach can be blended with digital activities.

b. Use of Contextual Digital Media

Audio materials should reflect relevant cultural and religious contexts, such as santri dialogues, local khutbahs, and interactive lectures in Modern Standard Arabic (*Fushha*).

c. Teacher Training in SLA and TELL

Arabic language instructors need targeted training in SLA theories and digital technology integration. Familiarity with comprehensible input, interactivity, and cognitive listening strategies will greatly enhance instructional quality.

d. Cross-Cultural and Inter-Institutional Collaboratio

Listening instruction can benefit from partnerships with native speakers or institutions in Arab countries to offer authentic interaction and exposure to real-world Arabic usage.

e. Authentic, Performance-Based Assessmen

Listening assessments should go beyond multiple-choice questions to include tasks where learners demonstrate comprehension through spoken or written responses, summaries, and practical applications.

Integrating contemporary SLA theory, the TELL framework, and interactive theory (al-naẓariyyah al-tafāʿuliyah) offers a comprehensive and applicable approach to developing Arabic listening skills. This strategy recognizes listening as an active, strategic, and socially embedded process that can be effectively supported by modern technology. By combining theoretical depth with practical tools, Arabic language education in Indonesia and other non-Arabic contexts can become more contextualized, communicative, and aligned with the needs of 21st-century learners.

The study employs a Systematic Review using the PRISMA method. The steps are as follows:

First, Identification (Identifying Literature Sources). The first step is to identify as many relevant articles and academic documents as possible from several reputable databases. The databases used include: Scopus, Web of Science (WoS), ERIC (Education Resources Information Center), ProQuest Dissertations & Theses Global and *Additional source*: Google Scholar for grey literature (used selectively). Search limitations: Publication years: 2010–2025, Languages: English and Arabic, Document types: journal articles, academic proceedings, dissertations, and research reports and Peer-reviewed and relevant to the teaching of Arabic as a second language (L2).

Second, Screening (Initial Screening and Duplicate Removal). All search results from various databases are consolidated into a reference management platform such as Zotero or Mendeley. Duplicates across databases (e.g., articles appearing in both Scopus and WoS) are removed automatically and manually. Article titles and abstracts are reviewed for relevance to: Arabic language learning for non-native learners, A focus on istima' (listening) skills and the use of digital media. Articles that do not meet these criteria are excluded from the process.

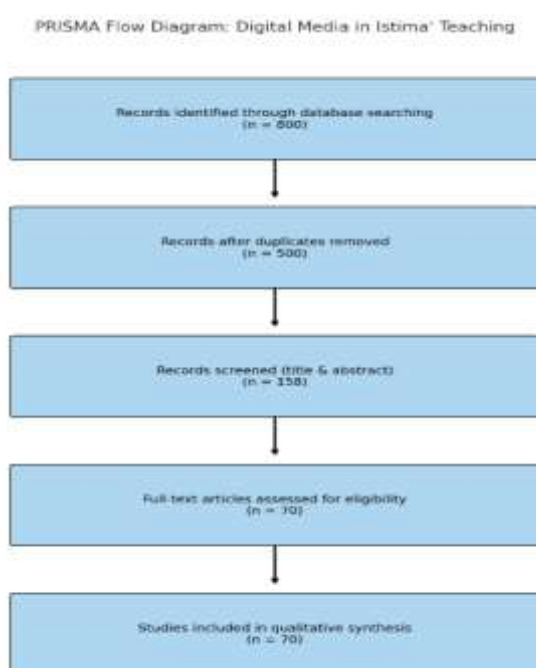
Third, Eligibility (Full-Text Assessment)

Articles that pass the screening stage are read in full. At this stage, it is determined whether the content of the article: Explicitly discusses digital media or technology in teaching Arabic listening

skills, has a strong methodological foundation (e.g., data, experiments, classroom studies, or observations), Is not limited to passive technologies (such as PDFs or non-interactive PowerPoints). Articles are excluded if they: Only discuss reading or writing skills, Focus solely on teaching native speakers in Arab countries and Do not involve a TELL (Technology-Enhanced Language Learning) approach.

Fourth, Inclusion (Articles Included in the Synthesis)

Only high-quality, relevant, and contextually appropriate articles are included in the final synthesis. Example of final results: Total articles initially identified: 800, After removing duplicates: 500, Screened based on title & abstract: 158, After full-text review: 70 and finally included in the systematic synthesis: 70 arti



In PRISMA-based systematic research, a search string is a structured combination of keywords linked by Boolean operators to maximize the retrieval of relevant scholarly literature from academic databases. The main Boolean operators used are AND, OR, and NOT.

An example of a search string for this topic is:

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("Arabic language" OR "Arabic listening" OR "Arabic as a second language")  
AND ("digital media" OR "educational technology" OR "multimedia learning")  
AND ("listening skills" OR "istima'" OR "listening comprehension")  
NOT ("native speakers" OR "mother tongue" OR "Arabic dialects")
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Explanation:

OR is used to combine synonyms or related terms to broaden the search scope.

AND is used to connect core concepts, ensuring that each result includes all critical elements (e.g., Arabic language *and* digital media *and* listening skills).

NOT is used to exclude irrelevant articles, such as those focusing solely on native speakers.

This string is adapted based on each database's syntax and can be refined with filters for publication year, document type, and language. This strategy is essential for obtaining comprehensive and relevant results in a systematic literature review.

Result and Discussion

Digital Media Innovation in Istimah Teaching

Various digital media have been implemented in istimah learning, including: animated videos, interactive multimedia, audio media, and online-based platforms. Each type of media has its own characteristics, advantages, and disadvantages in supporting listening skills learning. The following is a summary of the types of digital media commonly used in istimah learning and their functions:

No	Types of Digital Media	Applications/Platforms	Functions in Istimah Learning
1.	Animation Video	YouTube, Powtoon	Visualizing the communication context, improving students' comprehension of learning materials by combining audio and visual elements.
2.	Podcast	ArabicPod101, Spotify	Practice listening to various dialects and speaking speeds in Arabic, helping students practice their listening skills through diverse audio.
3.	Mobile Application	Duolingo, Memrise	Interactive listening exercises that can be tailored to student abilities, allowing students to learn independently with immediate feedback.
4.	LMS Platform	Google Classroom, Moodle	The integration of tasks and feedback in a structured format,

allows students to practice listening skills in a continuous and controlled manner.

First, Animated Video

The use of animated videos in *istima'* learning greatly helps students understand the contents of the conversation through attractive visual aids. Research shows that animated videos can improve the ability to capture and retain information because students not only hear but also see the communication situation being demonstrated.²³ Thus, understanding the context becomes easier. Animated videos can also depict facial expressions, body language, and social situations that are difficult to explain with words alone. In a study conducted by Abdullah S. Aldera & Mohammed Ali Mohsen (2023), students who learned using animated videos showed a 35% increase in listening scores compared to the control group who learned using conventional methods.²⁴ This shows that this media is not only visually appealing but also has a significant impact on understanding spoken content.

Listening comprehension (*istima'*) in Arabic poses unique challenges, particularly for non-native speakers. As technology advances, various digital media tools have been utilized to enhance listening skills. However, their effectiveness cannot be assessed solely based on changes in scores without a systematic framework and clear methodology. Therefore, this study adopts an evaluation framework based on Technology-Enhanced Language Learning (TELL), integrated with Second Language Acquisition (SLA) theory and principles from the *Interactive Theory* of language learning. This framework incorporates four core evaluation components:

- a. Input (Technology Design): Type of digital media used (e.g., interactive videos, podcasts, AI-based applications), Key features (subtitles, adjustable playback speed, adaptivity), Duration and frequency of use and Integration into the curriculum and the role of the teacher as facilitator.
- b. Process (Learning Activities): Types of listening activities conducted: watching videos, answering audio-based questions, transcription tasks, etc, Degree of interactivity (e.g., clickable dialogues, speech recognition) and Student motivation and engagement with the digital sessions.

²³ Chen-Yu Liu, "Suitability of TED-Ed Animations for Academic Listening," *English for Specific Purposes* 72 (October 2023): 4–15, <https://doi.org/10.1016/j.esp.2023.06.001>.

²⁴ Abdullah S. Aldera and Mohammed Ali Mohsen, "Annotations in Captioned Animation: Effects on Vocabulary Learning and Listening Skills," *Computers & Education* 68 (October 2023): 60–75, <https://doi.org/10.1016/j.compedu.2013.04.018>.

c. Output (Short-Term Learning Outcomes): Score improvement from pre-test to post-test (quantitative), Performance according to CEFR descriptors: identifying main ideas, recognizing specific details, inferring meaning and Questionnaire results on learners' perceptions regarding audio clarity, accessibility, and satisfaction with the digital media.

d. Outcome (Long-Term Learning Impact): Retention of listening comprehension after 2–3 weeks (via delayed post-test), Ability to apply listening comprehension in follow-up tasks (e.g., oral or written response) and Ethnographic data: interviews or focus groups to explore students' experiences.

Assessment Methodology: a. Research Design; Pre-experimental or quasi-experimental design, Single group or two groups (experimental vs control) and Duration of intervention: 4–6 weeks. b. Instruments; Pre-test and post-test on listening: multiple choice and cloze items based on standard audio recordings. CEFR/AJLC-based rubrics to assess: Understanding the gist, Recognizing detailed information and Inferring implicit meaning. Closed and open-ended questionnaires to capture affective variables and Semi-structured interviews: to gather in-depth student perceptions and challenges with digital media.

Indicator	Measurement Tool	Target
Listening score improvement	Pre vs Post Test	Minimum 20% increase
Comprehension of main idea	CEFR Rubric	80% of students at B1 or above
Student satisfaction	Likert-scale Questionnaire	≥ 4 out of 5
Meaning retention	Delayed Post-Test	Decline < 15% from post-test
Student engagement	Activity Observation	≥ 75% actively engaged

This framework provides a robust and transparent basis for evaluation, allowing any claim of effectiveness (such as “35% increase in scores”) to be empirically verified and replicated. It ensures that the success of digital media is not only measured through final outcomes but also through the learning process and its impact on student motivation and engagement.

The use of animated videos in *istima'* (listening) learning has become one of the innovative approaches that has been proven to increase the effectiveness of the Arabic language learning process. This media combines visual and audio elements harmoniously, thus creating a more enjoyable, interactive, and meaningful learning experience for students. In the context of listening

learning, animated videos not only present sound as language input, but also provide a concrete visual context to help students understand the content of the conversation.²⁵

One of the main advantages of animated videos is their ability to convey the context of communication visually. Students not only listen to dialogue or narration, but can also see the setting, body language, facial expressions, and interactions between characters shown in the animation. These elements are very helpful in understanding the implicit meaning and social nuances of the language used, something that is difficult to achieve through text or audio alone. For example, the facial expression of a character who is angry or sad will clarify the meaning of the sentence spoken, so that students can capture the emotions and intentions of the speaker more accurately.²⁶

In addition to improving understanding, animated videos have also been shown to strengthen information retention. When students can see and hear material simultaneously, the information received will be more easily stored in long-term memory. The combination of visual and auditory input strengthens the cognitive pathways that function in the learning process, so students tend to more easily remember the content of the conversations they learn through animated videos. In the long term, this greatly supports the development of listening skills and other language skills such as speaking and reading.²⁷

Another advantage is that animated videos can be adapted to various levels of students' language abilities. Teachers can choose or create animations that are appropriate to the level of vocabulary and sentence structure being studied, so that learning becomes more focused and effective. With the help of increasingly affordable technology, teachers can also produce simple animated videos that are relevant to students' local contexts, making learning closer to their lives. Thus, animated videos are not just entertainment media, but powerful educational tools to develop istima' skills comprehensively. This innovation needs to continue to be encouraged and developed as part of an Arabic language teaching strategy that is adaptive to technological developments and the learning needs of today's digital generation.

²⁵ May Saroh Jati Rahayu and Endang Mastuti Rahayu, "The Using of English Animation Movie to Improve Students' Listening Achievement in the New Normal Era," *SELTICS* 6, no. 1 (June 25, 2023): 48–59, <https://doi.org/10.46918/seltics.v6i1.1744>.

²⁶ Cut Dara Ilfa Rahila, Muhammad Hasyimsyah Batubara, and Marlina Marlina, "The Influence of YouTube on Listening Skills," *Journal of Linguistics, Literature, and Language Teaching (JLLLT)* 3, no. 1 (October 17, 2023): 1–7, <https://doi.org/10.37249/jllt.v3i1.507>.

²⁷ Putri Yunita et al., "The Use of English Short Animation Movies to Improve Students' Listening Skill: A Study at The First Grade of SMPN 1 Lingsar Academic Year 2022/2023," *Jurnal Ilmiah Profesi Pendidikan* 8, no. 3 (July 24, 2023): 1282–86, <https://doi.org/10.29303/jipp.v8i3.1483>.

Second, Interactive Multimedia

Learning applications equipped with audio, text, images, and interactive practice questions and quizzes can create a fun learning experience. One of the advantages of interactive multimedia is its flexibility in providing direct feedback to students, so that the learning process becomes more effective and focused. For example, applications such as Duolingo and Memrise provide listening practice modules that are tailored to the student's ability level, provide instant assessments, and allow for repetition of material as needed. This interactivity allows students to learn independently while increasing their motivation to learn because they feel directly involved in the learning process.²⁸

Third, Audio Media

This medium allows students to focus on the phonetic and phonological aspects of Arabic. Podcasts and audio recordings help students train their listening skills to different dialects, intonations, and speaking speeds in Arabic. Audio is also more accessible to students with limited internet bandwidth than video. In practice, teachers can assign certain podcast listening assignments related to the lesson theme, followed by discussions or quizzes to evaluate students' understanding. In addition, the use of audio encourages students to imagine the context of the conversation, which in the long run can improve their inferential and predictive skills in understanding spoken discourse.²⁹

In learning istima' or Arabic listening skills, audio media such as podcasts and audio recordings are very useful tools, especially in honing the phonetic and phonological aspects of the language. Unlike visual media that combine images and sounds, audio specifically encourages students to really focus on the sound: how words are pronounced, the tone of voice, the speed of speech, and the variety of dialects used. This makes podcasts and audio recordings an ideal means to strengthen students' listening skills in spoken Arabic.³⁰

One of the main strengths of audio media is its ability to train students' sensitivity to variations in language sounds. Arabic has a unique phonological system, with a number of phonemes that are not found in Indonesian, such as the letter / ʕ / ('ain) or / ħ / (thick ha). Listening to audio intensively allows students to distinguish and identify these sounds in various contexts. In addition,

²⁸ Muhammad Istiqlal, "Pengembangan Multimedia Interaktif Dalam Pembelajaran Bahasa Arab," *JIPBA* 2, no. 1 (July 21, 2017), <https://doi.org/10.26877/jipmba.v2i1.1480>.

²⁹ Ayu Fitria, "Penggunaan Media Audio Visual Dalam Pembelajaran Anak Usia Dini," *Cakrawala Dini: Jurnal Pendidikan Anak Usia Dini* 5, no. 2 (March 20, 2018), <https://doi.org/10.17509/cd.v5i2.10498>.

³⁰ Iñaki Celaya et al., "Usos Del Podcast Para Fines Educativos. Mapeo Sistemático de La Literatura En WoS y Scopus (2014-2019)," *Revista Latina*, no. 77 (July 30, 2020): 179–201, <https://doi.org/10.4185/RLCS-2020-1454>.

through podcasts or recordings from native speakers, students are also exposed to various Arabic dialects such as Egyptian, Levantine (Syam), or Maghribi dialects which have their own phonological characteristics. This exposure is very important to form a more flexible and broad understanding of spoken language variations in real practice.³¹

Audio media also has the advantage of accessibility. Unlike videos that require a stable internet connection and large quota, audio files are lighter and easier to download, so they can be accessed by students with limited internet networks. This allows the learning process to continue running well, especially in areas with inadequate infrastructure. Teachers can also send audio files via WhatsApp groups or simple online learning platforms.

In its application, teachers can design various strategies for effective audio utilization. One of them is by giving assignments to listen to podcasts or certain recordings, according to the theme of the lesson or the language topic being studied. After listening, students can be asked to answer questions, summarize the contents of the audio, discuss in small groups, or take quizzes as a form of evaluation.³² This kind of activity not only trains active listening skills, but also encourages students to develop speaking and critical thinking skills.

Furthermore, listening to audio without visuals encourages students to imagine the context of the conversation independently. In the long run, this trains inferential and predictive skills, namely the ability to guess the meaning of words based on context and understand the direction of the conversation without seeing the person directly. This ability is very important in real oral communication, where the conversation situation is often incomplete or unclear.³³

Thus, podcasts and audio recordings are not only a complement to istima' learning, but are core components that strengthen students' listening competence in more depth. Teachers need to utilize the potential of this media carefully and creatively, so that students are truly trained to listen to Arabic actively, accurately, and adaptively in various communication situations.

Fourth, Online-Based Platform

Digital platforms such as Moodle, Google Classroom, and various Arabic language learning websites provide material istima' in a structured and easy format accessed by students. These three

³¹ Hamzah et al., "Lahjah Arabiyah: Sebuah Studi Dialektologis," *International Journal Conference* 1, no. 1 (February 2, 2023): 213–22, <https://doi.org/10.46870/iceil.v1i1.483>.

³² K. Perayani and I.W. Rasna, "Pembelajaran Keterampilan Menyimak Dengan Menggunakan Media Podcast Berbasis Model Pembelajaran Project Based Learning (PjBL)," *Jurnal Pendidikan Dan Pembelajaran Bahasa Indonesia* 11, no. 1 (June 22, 2022): 108–17, https://doi.org/10.23887/jurnal_bahasa.v11i1.741.

³³ Iis Dewi Lestari, Halimatusha'diah Halimatusha'diah, and Fibria Anggraini Puji Lestari, "Penggunaan Media Audio, Visual, Audiovisual, Dalam Meningkatkan Pembelajaran Kepada Guru-Guru," *Jurnal PkM Pengabdian Kepada Masyarakat* 1, no. 01 (March 16, 2018): 55, <https://doi.org/10.30998/jurnalpkm.v1i01.2361>.

platforms offer Features important like online quizzes, discussion forums, and recordings sound, which is effective support development skills listen to in a way sustainable.

As For example, Moodle, as a Learning Management System (LMS) based platform, allows teachers to upload various form audio material in MP3 format, attaching questions understanding, and utilise feature tracking progress to monitor the progress of each student.³⁴ Meanwhile, Google Classroom makes it easier for teachers to share listening materials in real-time and hold online discussions that actively involve students, both through comments and assignment submissions.³⁵

For understanding assessment, teachers can also use Google Form as a quiz medium, by inserting audio recordings that students must listen to before answering multiple-choice questions, short answers, or short essays. Discussion forums available on Moodle and Google Classroom encourage interaction between students and between students and teachers, thus creating a collaborative and reflective learning community. With these features, online platforms not only function as a means of distributing materials, but also as an integrated interactive learning and monitoring medium.³⁶

More from just means distribution materials, online platforms such as Moodle and Google Classroom also provide room interactions and collaborations that strengthen aspect social in learning. Discussion forums provided by these two platforms allow student For interact direct with Friend classmate and teachers. In this forum, students can ask about parts difficult material understood, shared opinion, or even discuss about more topics deep using Arabic. Activities This push student For more active involved in the learning process, strengthening skills talking, and of course increase ability they in listen and understand conversation in more context wide.

However, as as it is all digital innovation, utilization technology in Arabic language learning also has challenges. One of them is limitations devices and adequate internet connection. Some students, especially in the areas isolated, maybe face difficulty in access material or participate in online discussions. In addition, the use of platforms such as Moodle and Google Classroom requires sufficient digital skills tall from students and teachers. Therefore that, digital training for teachers and provision more infrastructure good at school become key For overcome challenge This.

³⁴ Vitaly Pichugin, Alexey Panfilov, and Elena Volkova, "The Effectiveness of Online Learning Platforms in Foreign Language Teaching," *World Journal on Educational Technology: Current Issues* 14, no. 5 (September 30, 2022): 1357–72, <https://doi.org/10.18844/wjet.v14i5.7861>.

³⁵ Abeer Hameed Albashtawi and Khaleel Bader Al Bataineh, "The Effectiveness of Google Classroom Among EFL Students in Jordan: An Innovative Teaching and Learning Online Platform," *International Journal of Emerging Technologies in Learning (IJET)* 15, no. 11 (June 12, 2020): 78, <https://doi.org/10.3991/ijet.v15i11.12865>.

³⁶ Yangheng Zheng, "Innovation and Practice of Public Relations Teaching Models in the Digital Media Era," *Applied Mathematics and Nonlinear Sciences* 9, no. 1 (January 1, 2024): 20241820, <https://doi.org/10.2478/amns-2024-1820>.

With design proper learning, support adequate technology, as well role active teacher as facilitator, digital platform capable give experience learn more flexible, adaptive, and meaningful. In this digital era, the application of digital media in learning istima' not only increase understanding students, but also prepare they For communicate in a way more effective in an increasingly connected global worldFor understanding assessment, teachers can also use Google Form as a quiz medium, by inserting audio recordings that students must listen to before answering multiple-choice questions, short answers, or short essays. Discussion forums available on Moodle and Google Classroom encourage interaction between students and between students and teachers, thus creating a collaborative and reflective learning community. With these features, online platforms not only function as a means of distributing materials, but also as an integrated interactive learning and monitoring medium.

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Effectiveness of Using Digital Media

The effectiveness of digital media in istima' learning can be seen from several interrelated aspects. *First*, in terms of learning motivation, digital media has been proven to be able to foster student interest more optimally than conventional approaches. Materials in the form of audio-visual, animation, or educational games make listening learning more enjoyable and not monotonous. Thus, the learning atmosphere becomes more lively and students are more motivated to continue learning even without direct supervision from the teacher.³⁷

Second, the effectiveness of digital media is also seen in the flexibility and personalization of the learning process.³⁸ Digital media allows students to learn according to their own pace and learning style. In certain applications, students can repeat parts of the audio that are not yet understood, slow down the speed of speech, or choose the appropriate level of difficulty. This supports the concept of independent and individual-based learning, which ultimately increases students' absorption and understanding of the material.³⁹

Third, digital media encourages active student involvement.⁴⁰ Many applications or platforms provide interactive features such as quizzes, simulated dialogues, or instant responses to student answers. These features encourage students to think, respond, and experiment with Arabic in the context of listening. These interactive activities make students not only recipients of information, but also active participants in the learning process.⁴¹

The results of the literature review show a significant increase in student learning outcomes using digital media. For example, in a study by Al-Harbi (2021), the use of audio-video-based learning applications increased students' istima' scores by 30% in one semester. This is reinforced by other studies showing that students who learn through digital media show better understanding in recognizing sounds, sentence structures, and the context of oral communication.

³⁷ Rahma M. Naser, "Meningkatkan Pembelajaran Bahasa Arab Siswa Melalui Media Audio Visual Dalam Manajemen Pendidikan Islam Tinjauan (Studi Di Madrasah Aliyah Negeri 2 Kota Palu): Improving Students' Arabic Learning Through Audio Visual Media in Islamic Education Management Overview (Study in Madrasah Aliyah Negeri 2 Palu City)," *Jurnal Kolaboratif Sains* 5, no. 8 (August 15, 2022): 466–80, <https://doi.org/10.56338/jks.v5i8.2695>.

³⁸ Feliks Rejeki Sotani Zebua, "Analisis Tantangan Dan Peluang Guru Di Era Digital," *Jurnal Informatika Dan Teknologi Pendidikan* 3, no. 1 (June 27, 2023): 21–28, <https://doi.org/10.25008/jitp.v3i1.55>.

³⁹ Lei Xiao and Lili Yan, "Multimedia Delivery and Teaching Innovation of Civic Value in Art Education in the Digital Media Era," *Applied Mathematics and Nonlinear Sciences* 9, no. 1 (January 1, 2024): 20242995, <https://doi.org/10.2478/amns-2024-2995>.

⁴⁰ Ali Muchasan, Nur Syam, and Anis Humaidi, "Pemanfaatan Teknologi Di Pesantren (Dampak Dan Solusi Dalam Konteks Pendidikan)," *INOVATIF: Jurnal Penelitian Pendidikan, Agama, Dan Kebudayaan* 10, no. 1 (February 7, 2024): 16–33, <https://doi.org/10.55148/inovatif.v10i1.849>.

⁴¹ Yumei Liu, "Innovation of Teaching Method of Digital Media Art Based on Convolutional Neural Network," ed. Qiangyi Li, *Advances in Multimedia* 2022 (May 2, 2022): 1–11, <https://doi.org/10.1155/2022/6288890>.

In addition to improving learning outcomes, the effectiveness of digital media is also seen from the improvement of other cognitive skills. ⁴²For example, students become more accustomed to thinking critically, making predictions, and inferring meaning from the context of speech. In conventional learning, these skills are often less honed because the approach is more one-way and limited to memorization or translation. However, the effectiveness of digital media is greatly influenced by several factors, such as content quality, infrastructure readiness, and teacher competence in utilizing technology. Content that is irrelevant or not in accordance with students' ability levels can actually reduce motivation and learning effectiveness. Therefore, the selection and design of digital media must consider the learning context, student characteristics, and the objectives of the istima' learning itself.⁴³

Overall, digital media has proven to be effective in supporting the learning of Arabic istima'. In addition to increasing motivation and learning outcomes, this media also strengthens students' cognitive and affective aspects. With the right approach, digital media can be a powerful tool for developing listening skills holistically and sustainably in the context of modern Arabic education.

Challenges in Digital Media Implementation

Although digital media offers various benefits in istima' learning, its implementation is not free from complex and multidimensional challenges. These challenges arise from various aspects, both technical, pedagogical, and cultural, which are interrelated and affect the effectiveness of technology integration in the learning process.⁴⁴ In this study, the researcher identified and synthesized 70 articles related to the use of digital media in teaching Arabic listening skills (*istima'*). Although the PRISMA-based systematic review method was carefully applied, one significant limitation is the absence of well-established technological integration frameworks such as TPACK (Technological Pedagogical Content Knowledge) and SAMR (Substitution, Augmentation, Modification, Redefinition) in the analysis of the findings. This absence directly impacts the analytical depth, the clarity of the findings' position, and the direction of the recommendations that can be drawn from the review.

The TPACK model is highly relevant to this study as it offers a comprehensive understanding of how content knowledge (CK), pedagogical knowledge (PK), and technological knowledge (TK)

⁴² Kadek Rusma Dewi and Ferry Lourens S. Korompis, "Utilization of Digital Media in the Learning Process in Class X of SMK Negeri 1 Busungbiu," *Journal of Learning and Technology* 2, no. 1 (June 30, 2023): 26–32, <https://doi.org/10.33830/jlt.v2i1.5842>.

⁴³ Hui Liu, Qing Li, and Hua Han, "Innovation and Practice of The Teaching Monitoring Method For The Digital Media Technology Programme," *International Journal of Continuing Engineering Education and Life-Long Learning* 22, no. 3/4 (2012): 226, <https://doi.org/10.1504/IJCEELL.2012.050067>.

⁴⁴ Thomas Knaus, "Educational Impulses for Redesigning (Online) Teaching in the Post-Pandemic World: A Discussion and Evaluation of Lessons Learned," text/html,application/pdf, *Weizenbaum Journal of the Digital Society* 4, no. 4 (2024), <https://doi.org/10.34669/WI.WJDS/4.4.2>.

must be integrated simultaneously in the instructional process. In the context of Arabic language teaching, particularly *istima'* skills, teachers are not only required to select appropriate technologies (TK), but also to ensure that these technologies support pedagogical goals (PK) and are relevant to Arabic content and cultural context (CK). For example, using podcasts for listening instruction can be effective only if the audio materials match the learners' proficiency level, are paired with meaningful tasks, and the teacher understands how to guide students in processing auditory information.⁴⁵

Unfortunately, from the synthesis of the 70 reviewed articles, very few explicitly address the integration of these three components. Many studies focus mainly on the technical aspects of digital media use (such as applications, videos, or interactive audio), while overlooking pedagogical and content-related dimensions. This reveals an *integration gap* that could have been addressed through the application of the TPACK framework in the literature analysis.⁴⁶

Additionally, the SAMR model is also essential in evaluating the extent to which digital media transform the learning process. SAMR enables both researchers and practitioners to distinguish whether the digital media used serve merely as *substitutes* for conventional tools (e.g., audio recordings replacing teacher narration), or whether they achieve levels of *modification* and *redefinition* (e.g., AI-based apps for personalized listening experiences or intercultural collaboration through online platforms). In the reviewed studies, most digital media applications remain at the early stages (substitution and augmentation), with few demonstrating transformative efforts in designing *istima'* instruction.⁴⁷

Thus, the absence of TPACK and SAMR frameworks in this study leads to a discussion of technological integration challenges technical, pedagogical, and cultural that tends to be descriptive and fragmented. In reality, these challenges are interrelated and require a holistic understanding so that the proposed solutions can be systematic and applicable. Therefore, for future research development, it is strongly recommended that literature analyses be framed using conceptual models such as TPACK and SAMR in order to uncover the dynamics of technology integration in

⁴⁵ Rifda Haniefa and Mohamad Samsudin, "Penerapan Technological Pedagogical and Content Knowledge (TPACK) Dalam Pengajaran Keterampilan Berbahasa Arab," *Ta'limi | Journal of Arabic Education and Arabic Studies* 2, no. 1 (May 24, 2023): 61–72, <https://doi.org/10.53038/tmi.v2i1.62>.

⁴⁶ Ghina Ramdhanianty and Salwa Zolkafil, "The Application Of Technological Pedagogical Content Knowledge In Arabic Language Learning Among Universities," *Jurnal Islam Dan Masyarakat Kontemporer* 25, no. 2 (August 30, 2024): 45–52, <https://doi.org/10.37231/jimk.2024.25.2.883>.

⁴⁷ Betelhem Tesfaye W and Hailom Banteyerga A, "Students' Digital Technology Access and Utilization for Learning Listening Skills," *Journal of Languages and Language Teaching* 13, no. 2 (April 19, 2025): 936, <https://doi.org/10.33394/jollt.v13i2.10415>.

a more in-depth and contextualized manner, especially in the teaching of Arabic as a second language.⁴⁸

One of the main challenges most often found in literature studies is the limited technological infrastructure, especially in remote or underdeveloped areas. Access to a stable internet network, hardware such as computers, tablets, or smartphones, and adequate electricity facilities are still crucial problems. Without adequate infrastructure support, the use of digital media becomes difficult to optimize. This makes the digital divide even more apparent between schools in urban and rural areas, thus directly affecting the quality of Arabic language learning, especially istima' skills which are highly dependent on audio and video media.⁴⁹

In addition, teacher competence in operating and utilizing digital media is also an equally important challenge. Many Arabic teachers, especially those who have long taught using conventional methods, find it difficult to adapt to new technologies. Low digital literacy among educators means that the use of digital media has not been fully maximized.⁵⁰ Not infrequently, the available media is only used passively, such as playing videos or recordings without meaningful pedagogical interaction. Therefore, continuous training and intensive technical assistance are needed to improve teachers' abilities in designing, selecting, and implementing digital media effectively in istima' learning.

Another challenge relates to the quality and relevance of the available digital content. Many digital learning media circulating on the internet do not go through a rigorous pedagogical curation process. Some of them are too complex, not appropriate to the students' ability level, or even inappropriate to the cultural and religious context of the learners.⁵¹ For example, audio recordings with certain accents or dialects can be difficult for beginner students to understand, or video content that is delivered too quickly causes students to fail to grasp the meaning of the speech. This shows that the selection, adaptation, and even production of appropriate learning content is

⁴⁸ Afif Ikhwanul Muslimin, Nur Mukminatien, and Francisca Maria Ivone, "TPACK-SAMR Digital Literacy Competence, Technostress, and Teaching Performance: Correlational Study Among EFL Lecturers," *Contemporary Educational Technology* 15, no. 2 (April 1, 2023): ep409, <https://doi.org/10.30935/cedtech/12921>.

⁴⁹ Qian Li, "Reform and Innovation of Dance Teaching and Aesthetic Education in Colleges and Universities in the Digital Media Era," *Applied Mathematics and Nonlinear Sciences* 9, no. 1 (January 1, 2024): 20240356, <https://doi.org/10.2478/amns-2024-0356>.

⁵⁰ Helty Helty, Alvie Rahmadani, and Muhammad Syayidi, "Pengembangan Literasi Digital Dalam Pembelajaran Bahasa Arab," *Indonesian Research Journal on Education* 4, no. 2 (June 15, 2024): 345–47, <https://doi.org/10.31004/irje.v4i2.532>.

⁵¹ Ahmad Mohammad Alzubi, "The Role of Digital Media Technology in Arabic and English Classes in the Kingdom of Jordan," *Alsuna: Journal of Arabic and English Language* 6, no. 1 (May 25, 2023): 55–72, <https://doi.org/10.31538/alsuna.v6i1.3419>.

very important so that digital media truly supports the learning process, rather than confusing or demotivating students.

On the other hand, institutional support and education policies are also still a challenge. Many educational institutions do not yet have clear policies or strategies to support the integration of digital media as a whole. Istima' learning based on digital media is often carried out incidentally, not as part of a planned curriculum. The lack of a special budget for the procurement of devices and training, as well as the absence of official guidelines for the use of digital media in Arabic language learning, makes its implementation inconsistent and dependent on the initiative of individual teachers or schools.⁵²

Furthermore, psychosocial challenges also arise from students, especially in terms of independent learning discipline. Learning through flexible digital media demands high levels of independence and responsibility from students. However, many students do not yet have good independent learning skills. As a result, even though learning media is available, not all students utilize it optimally. They tend to get bored quickly, get distracted by other features of digital devices such as social media or games, and have difficulty managing study time.⁵³

Facing these challenges, a comprehensive and systemic approach is needed. The government and educational institutions need to invest in the development of equitable digital infrastructure, provide ongoing technical training for teachers, and encourage collaboration between content developers, Arabic language experts, and education practitioners to create quality and contextual digital media. In addition, it is necessary to instill awareness in students about the importance of digital literacy and discipline in technology-based learning. With support from various parties, these challenges can be overcome so that the use of digital media in istima' learning can run optimally and sustainably.⁵⁴

Development and Implementation Recommendations

To optimize the use of digital media in teaching istima' Arabic, strategic and collaborative steps are needed from various parties. Based on the findings in this study, several important

⁵² Meryem Güngöç and Musa Yıldız, "Challenges in Listening and Speaking Skills for Arabic Language Pre-Service Teachers: A Correlational Study," *Novitas-Royal* 18, no. 2 (2024), <https://doi.org/10.5281/zenodo.13860910>.

⁵³ Lulu Ma and Awni Alfaouri, "Sites Arabic Language Teaching in Consideration of Language Skills the Chinese Experience and its Comparison Formal Education," *Dirasat: Human and Social Sciences* 49, no. 5 (December 29, 2022): 361–69, <https://doi.org/10.35516/hum.v49i5.3482>.

⁵⁴ Zainul Arifin et al., "Arabic Learning In The Digital Era: Approach In Online System," *Lughawiyah: Journal of Arabic Education and Linguistics* 3, no. 1 (June 30, 2021): 73, <https://doi.org/10.31958/lughawiyah.v3i1.2752>.

recommendations can be put forward to support the development and implementation of digital media more effectively and sustainably.⁵⁵

First, it is necessary to develop digital media that is relevant to the needs of students. The media developed must pay attention to the level of language ability, cultural background, and learning style of students. Media content should be contextual, communicative, and touch on real-life aspects, so that students can understand and relate the material to everyday experiences. In addition, variations in media forms such as learning videos, podcasts, interactive applications, and dialogue simulations need to be adjusted to the learning objectives of istima' skills gradually and systematically. Thus, students not only gain exposure to spoken language, but also get used to interacting actively with digital content.⁵⁶

Second, improving teacher competency is a primary prerequisite for the success of technology integration in learning. Teachers need to receive ongoing training in digital literacy and technology-based learning design. This training not only covers how to use digital media, but also how to select, adapt, and create their own learning media that suits the characteristics of students. Teachers who have innovative capacity will be better prepared to make digital media an integral part of the learning process, not just an additional tool. Thus, teachers become not only facilitators, but also creators of learning media that are adaptive to changing times.⁵⁷

Third, support from the government and educational institutions is needed, especially in terms of providing infrastructure and access to technology. There is still a digital divide between regions, especially between urban and rural areas. Therefore, the development of technology-based education infrastructure must be carried out evenly and fairly. Schools or madrasahs in remote areas need to be given technical assistance such as internet networks, multimedia devices, and technology operator training so that they can access and utilize digital media optimally.⁵⁸

Fourth, it is important to conduct periodic evaluations of the effectiveness of digital media used in istima' teaching. This evaluation can be done through user satisfaction surveys, analysis of student learning outcomes, and discussion forums between teachers and students. The feedback collected

⁵⁵ Nazir Ahmed Jomezai, Diana Koroleva, and Fozia Ahmed Baloch, "Teachers' Digital Competence in the Post COVID-19 Era: The Effects of Digital Nativeness, and Digital Leadership Capital," *Contemporary Educational Technology* 15, no. 4 (October 1, 2023): ep466, <https://doi.org/10.30935/cedtech/13620>.

⁵⁶ OECD, *OECD Digital Education Outlook 2023: Towards an Effective Digital Education Ecosystem*, OECD Digital Education Outlook (OECD, 2023), <https://doi.org/10.1787/c74f03de-en>.

⁵⁷ Laila El-Hamamsy et al., "An Adapted Cascade Model to Scale Primary School Digital Education Curricular Reforms and Teacher Professional Development Programs," *Education and Information Technologies* 29, no. 9 (June 2024): 10391–436, <https://doi.org/10.1007/s10639-023-12043-6>.

⁵⁸ Alexandre Bermous, "Digital Infrastructure For Teacher Training In Research Masters," *Child in a Digital World* 1, no. 1 (2023): 17–17, <https://doi.org/10.61365/forum.2023.003>.

should be the basis for further media development to be more targeted and contextual. Evaluation also serves to ensure that the media used truly has a positive impact on the learning process and outcomes.⁵⁹

Finally, it is important to emphasize that mobile applications and other digital media are not a substitute for teachers, but rather partners in an effective learning process. Integration of digital media must be carried out systematically and in a planned manner, by placing students as the center of learning and teachers as directors of meaningful learning processes.⁶⁰

By considering these recommendations, digital media innovation in teaching *istima'* can be a strategic solution to improve the quality of Arabic language education in general. This innovation is also in line with the spirit of the Merdeka Curriculum which encourages individual needs-based learning and mastery of 21st century skills. Therefore, the synergy between technological innovation, teacher capacity, and supportive education policies will be the key to the success of developing *istima'* skills in this digital era.

Conclusion

This study shows that digital media innovations have significantly contributed to improving the quality of Arabic *istima'* learning. Various forms of digital media—such as animated videos, podcasts, mobile applications, and online learning platforms—have successfully created a more interactive and contextual learning atmosphere suited to the needs of today's learners. The literature review found that digital media effectively increases student motivation, enhances comprehension of materials, and fosters active participation. Furthermore, these tools allow for personalized and flexible learning that supports diverse learning styles. The integration of quality audio-visual resources also enriches the listening experience.

However, despite these findings, there are several limitations that must be acknowledged. First, this study did not adopt a formal framework such as inter-rater reliability testing during the content analysis phase, which may impact the consistency of article selection and interpretation. Although a structured PRISMA approach was applied, the absence of dual-review or coder agreement procedures presents a risk of subjective bias in data extraction and synthesis.

⁵⁹ Thomas Knaus, "Educational Impulses for Redesigning (Online) Teaching in the Post-Pandemic World: A Discussion and Evaluation of Lessons Learned," text/html,application/pdf, *Weizenbaum Journal of the Digital Society* 4, no. 4 (2024), <https://doi.org/10.34669/WI.WJDS/4.4.2>.

⁶⁰ Thomas Knaus, "Educational Impulses for Redesigning (Online) Teaching in the Post-Pandemic World: A Discussion and Evaluation of Lessons Learned," text/html,application/pdf, *Weizenbaum Journal of the Digital Society* 4, no. 4 (2024), <https://doi.org/10.34669/WI.WJDS/4.4.2>.

Second, there is a potential selection bias in the inclusion of literature, particularly due to language and accessibility filters. Articles written in non-English/Arabic languages or those published in lesser-known databases may have been overlooked, thus limiting the scope of global representation. In addition, grey literature was only included selectively (via Google Scholar), which might have excluded relevant but unpublished studies or reports that could add depth and diversity to the review.

Third, the study did not discuss in detail strategies to ensure the trustworthiness and credibility of the findings, such as triangulation, audit trails, or member checking. As a literature review that synthesizes diverse sources, incorporating such methods would have strengthened the validity of interpretations and minimized researcher subjectivity.

Another limitation lies in the lack of established analytical frameworks, such as TPACK or SAMR, which could have helped categorize the depth of technology integration and pedagogical alignment more rigorously. Without these models, the discussion remains largely descriptive rather than analytical in evaluating the quality and impact of digital media interventions.

Therefore, while the study highlights promising trends and affirms the value of digital media in enhancing Arabic listening skills, it is essential to interpret these findings within the context of these methodological limitations. For future research, it is recommended to adopt robust coding reliability measures, expand the database and language scope, and apply theoretical frameworks to ensure a more systematic and reliable synthesis. Moreover, collaborative review processes involving multiple coders and independent validation of findings will be crucial to improving the study's credibility and usefulness for policy and practice.

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