



Implementing Barcode-Based Audio Media for *Maharah Istima'* Instruction: A Qualitative Study at MAN 1 Malang

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ARTICLE INFO	ABSTRACT
Article History: Received : 13/06/2026 Revised : 28/06/2026 Accepted : 30/06/2026 Published : 30/06/2026 *Corresponding Author: adamnadzirul2004@gmail.com	<i>Maharah Istima'</i> plays a crucial role in Arabic language learning as it supports the development of other language skills. However, listening instruction continues to face various challenges, including the limited availability of learning media that provide accessible and engaging audio materials for students. This study aims to describe the implementation of barcode-based audio media in <i>maharah istima'</i> learning and to identify its impacts, advantages, and challenges in the instructional process. The study employed a descriptive qualitative approach. Data were collected through observations, interviews, and documentation conducted in Grade XI Arabic language classes at MAN 1 Malang, Indonesia. The data were analyzed using the interactive model of data reduction, data display, and conclusion drawing. The findings reveal that barcode-based audio media were implemented through the integration of learning modules, QR Codes, smartphones, and digital audio materials in <i>maharah istima'</i> instruction. The use of these media positively influenced students' learning motivation, as reflected in increased attention, enthusiasm, and engagement during classroom activities. Furthermore, barcode-based audio media offered several advantages, including easy access to audio materials, flexibility in use, opportunities for repeated listening, and support for independent learning. Nevertheless, several challenges were identified, such as dependence on internet connectivity, differences in students' listening proficiency, difficulties in understanding unfamiliar vocabulary, and the potential for distraction associated with smartphone use. Overall, the findings suggest that barcode-based audio media have considerable potential as an effective instructional alternative for supporting <i>maharah istima'</i> learning in the digital era.
Keyword	Arabic language learning; barcode-based audio media; listening skill; maharah istima'; QR code

1. INTRODUCTION

Maharah Istima' (listening skill) is one of the fundamental language skills in Arabic language learning. It serves as the primary gateway through which students recognize linguistic sounds, acquire vocabulary, comprehend information, and construct meaning from spoken

messages (Hamidah & Marsiah, 2020). In the process of language acquisition, listening precedes other language skills because learners must first understand spoken language before they can produce it in oral or written forms. Therefore, *maharah istima'* is regarded as a crucial foundation for the comprehensive mastery of Arabic language skills (Fahraini et al., 2026; Tampubolon & Ilahi, 2024).

Despite its strategic role, the teaching and learning of *maharah istima'* continue to face various challenges in practice (Saputra, 2026). Students often encounter difficulties in understanding spoken Arabic due to limited vocabulary mastery, the speed of native speech, and insufficient exposure to authentic audio materials. Moreover, listening instruction is still predominantly characterized by teacher-centered approaches, which provide limited opportunities for students to actively engage with audio-based learning resources (Arta et al., 2025). As a result, *maharah istima'* is frequently perceived as one of the most difficult and least engaging skills in Arabic language learning (Syaiful, 2025).

The rapid advancement of digital technology has created new opportunities for the development of Arabic language learning, including the teaching of *maharah istima'* (Rani et al., 2023). The integration of technology into educational practices enables students to access a wider range of learning resources through various digital devices and platforms (Rahma & Ismail, 2025). Technological innovations not only transform the way learning materials are delivered but also foster more flexible, interactive, and learner-centered learning experiences that align with the characteristics of today's digital-native students. In the context of Arabic language education, technology-based media have emerged as a promising alternative for enhancing listening instruction by providing easily accessible audio materials that can be repeatedly accessed according to learners' needs (Auliya et al., 2025; Nafilah et al., 2024; Zuhirawati, 2025).

Previous studies have demonstrated that audio and audiovisual media contribute positively to the development of *maharah istima'*. Audiovisual media, in particular, help students understand learning materials more effectively through the integration of auditory and visual elements that enhance contextual understanding (Amin & Ilmiani, 2025; Taufik & Jannah, 2024). Likewise, the use of animated videos and audio-based learning media has been reported to increase student engagement and facilitate better comprehension of listening materials (Handayani & Syafi'i, 2022; Rajais et al., 2025). These findings indicate that both audio and audiovisual media can serve as effective instructional tools for supporting Arabic listening skills development.

Along with the advancement of educational technology, the use of QR Codes and mobile learning has also gained increasing attention in Arabic language education (Khotijah & Arifin, 2021; Nadziro et al., 2023). Research has shown that QR Codes can function as bridges between printed learning materials and digital resources, enabling students to access learning content

independently and efficiently. Such innovations have been implemented in the development of QR Code-based Arabic textbooks, digital learning media, and mobile learning systems that promote learning flexibility (Dahlia et al., 2025; Ghazali et al., 2025; Hidayati, 2021; Misnawati et al., 2023). Furthermore, studies in foreign language education have revealed that QR Codes can provide direct access to audio materials and support the development of listening skills through students' personal digital devices (Anwar et al., 2025; Vigil, 2017). These findings suggest that integrating QR Codes with audio resources holds significant potential for enhancing listening instruction in the digital era.

Although extensive research has been conducted on audio media, audiovisual media, QR Codes, and mobile learning in language education, most studies have focused on media development, the integration of QR Codes into digital learning materials, or the improvement of language skills in general. Studies specifically examining the implementation of barcode-based audio media as a means of accessing listening materials in Arabic language learning at the senior high school level remain limited. Moreover, research investigating the implementation process, advantages, and challenges of such media in the context of *maharah istima'* instruction is still scarce. In fact, barcode-based audio media have the potential to serve as practical, accessible, and relevant learning tools that meet the demands of contemporary Arabic language education.

Addressing this research gap, the present study explores the implementation of barcode-based audio media in *maharah istima'* learning at the senior high school level. Unlike previous studies that primarily focused on audiovisual media, QR Code-based digital learning materials, or foreign language learning in general, this study specifically investigates the use of barcode technology as a medium for accessing audio resources in Arabic listening instruction. Therefore, the study aims to describe the implementation of barcode-based audio media in *maharah istima'* learning and to identify the advantages and challenges encountered during its implementation.

2. LITERATURE REVIEW

2.1. Maharah Istima'

Maharah Istima' is one of the receptive skills in Arabic language learning that serves as the foundation for the development of other language skills (Mustofa, 2017). This skill refers to students' ability to receive, comprehend, and interpret information conveyed through spoken language (Rosyidi & Ni'mah, 2011). In the process of language acquisition, listening is considered the initial skill that learners must develop because they need to understand spoken language before they can effectively use it in oral or written communication. Consequently, *maharah istima'* occupies a central position in Arabic language learning and serves as the basis for developing speaking (*kalam*), reading (*qira'ah*), and writing (*kitabah*) skills (Hamidah & Marsiah, 2020; Tampubolon & Ilahi, 2024).

The primary objective of *maharah istima'* instruction is to enable students to recognize linguistic sounds, understand vocabulary, extract information, and interpret meanings conveyed through spoken discourse. Listening is not merely a passive process of hearing sounds; rather, it involves complex cognitive processes through which learners construct meaning from auditory input (Bambang et al., 2023). Therefore, the development of listening skills requires continuous exposure to comprehensible language input that allows learners to become familiar with Arabic speech in various communicative contexts.

In the context of twenty-first-century education, the development of *maharah istima'* requires learning media capable of providing authentic and accessible language input. Fahraini et al. (2026) argues that the integration of digital technology into Arabic language learning expands opportunities for students to engage in more contextualized and interactive learning experiences. Consequently, the effectiveness of *maharah istima'* instruction is determined not only by teaching methods but also by the availability of learning media that can provide audio materials in an effective, sustainable, and learner-friendly manner.

2.2 Audio Media in Arabic Language Learning

Audio media refer to instructional media that utilize sound as the primary means of delivering information and learning content. In Arabic language learning, audio media play a crucial role because they provide learners with authentic examples of pronunciation, intonation, and language use in meaningful communicative contexts. Through audio exposure, students can directly engage with spoken Arabic, allowing listening instruction to move beyond theoretical explanations toward authentic listening experiences.

The use of audio media offers several advantages in Arabic language instruction. Audio materials enable students to listen repeatedly to learning content, thereby facilitating vocabulary acquisition, comprehension of linguistic structures, and understanding of message content. Furthermore, audio-based learning encourages students to maintain attention and actively participate in listening activities. These characteristics make audio media particularly suitable for supporting the development of *maharah istima'*.

Several studies have demonstrated the effectiveness of audio and audiovisual media in enhancing listening skills. Handayani & Syafi'i (2022) found that animated videos contribute positively to the development of *maharah istima'* by presenting learning materials in a more engaging and comprehensible manner. Similar findings were reported by Taufik & Jannah (2024), Rajais (2025), and Amin & Ilmiani (2025), who concluded that audio and audiovisual media improve the quality of listening instruction by providing more interactive and contextualized learning experiences. With the advancement of digital technology, audio media are no longer limited to conventional formats but are increasingly integrated into digital platforms that enable more flexible and practical access to learning resources.

2.3 Barcode (QR Code) as a Digital Learning Medium

Advancements in educational technology have led to the emergence of innovative learning media that connect conventional learning resources with digital content. One of the technologies increasingly adopted in educational settings is the two-dimensional barcode, commonly known as the Quick Response (QR) Code. A QR Code can be scanned using a smartphone to access various forms of digital information, including documents, videos, websites, and audio materials. In educational contexts, QR Codes facilitate rapid access to learning resources without requiring learners to manually enter web addresses or links.

In Arabic language learning, QR Codes have been utilized as a tool for integrating printed instructional materials with digital content. Studies conducted by Dahlia et al. (2025), Ghozali et al. (2025), and Nadziro et al. (2023) revealed that the incorporation of QR Codes into Arabic learning materials enhances accessibility and promotes learner autonomy. Moreover, Khotijah & Arifin (2021) emphasized that the use of mobile devices in Arabic language learning supports more flexible learning opportunities, allowing students to access learning resources according to their individual needs and schedules.

The use of QR Codes is also closely associated with the concept of Mobile Assisted Language Learning (MALL), which refers to language learning facilitated through mobile devices (Al-Hashimi & Bauer, 2025). Within this framework, QR Codes function as a bridge connecting printed materials with digital resources that can be accessed through smartphones. Hidayati (2021), Misnawati et al. (2023), and Vigil (2017) demonstrated that QR Codes can provide direct access to audio materials and effectively support the development of listening skills. Based on these characteristics, barcode-based audio media (QR Codes) have considerable potential as an innovative instructional medium for *maharah istima'* by providing practical, flexible, and easily accessible audio resources that support students' listening development.

3. METHOD

This study employed a descriptive qualitative approach to explore the implementation of barcode-based audio media and its impact on students' learning motivation in *maharah istima'* instruction. A qualitative approach was considered appropriate because it allows researchers to gain an in-depth understanding of educational phenomena within their natural context (Creswell & Creswell, 2017). The study was conducted at MAN 1 Malang, Indonesia, involving an Arabic language teacher and Grade XI-A students who participated in *maharah istima'* learning activities using barcode-based audio media. Data were collected through observations, interviews, and documentation. Observations were conducted to examine the implementation of *maharah istima'* instruction, the use of barcode-based audio media, and students' learning activities and responses during the learning process. Interviews were carried out with the Arabic language teacher and

several students to obtain detailed information regarding the use of the learning media and its influence on students' learning motivation. Documentation was used to support and enrich the research data, including learning modules, student worksheets (*Lembar Kerja Peserta Didik/LKPD*), photographs of classroom activities, and the barcode-based audio media utilized in the instructional process.

The data were analyzed using the interactive model proposed by Miles et al., (2014), which consists of data reduction, data display, and conclusion drawing. Data reduction involved selecting, organizing, and focusing on information relevant to the objectives of the study. The reduced data were then presented in a descriptive and narrative form to facilitate interpretation and analysis. Finally, conclusions were drawn based on the findings obtained from observations, interviews, and documentation. To ensure the trustworthiness of the data, source triangulation and technique triangulation were employed. Source triangulation was conducted by comparing information obtained from the teacher and students, while technique triangulation involved cross-checking data gathered through observations, interviews, and documentation. These procedures were implemented to enhance the credibility and reliability of the research findings.

4. RESULT AND DISCUSSION

4.1. Implementation of Barcode-Based Audio Media in *Maharah Istima'* Learning

The implementation of barcode-based audio media in *maharah istima'* learning at MAN 1 Malang was carried out through the integration of digital media with Arabic language learning modules used by Grade XI-A students in the topic of Hajj and Umrah. The instructional media consisted of learning modules equipped with barcodes (QR Codes), digital audio materials, classroom speakers, MP3 sound devices, and students' smartphones. Through this system, students were able to access audio materials directly by scanning the QR Codes embedded in the learning modules. The use of barcode-based audio media was considered appropriate for *maharah istima'* instruction because it emphasizes listening activities as the primary means of understanding information. Furthermore, the media were perceived as capable of attracting students' attention, facilitating comprehension, and improving instructional efficiency since the audio materials could be accessed and replayed according to learners' needs.

Based on classroom observations, the implementation of barcode-based audio media followed three instructional stages: the preliminary stage, the core learning activities, and the closing stage. During the preliminary stage, the teacher began the lesson with greetings, collective prayer, attendance checking, and motivational activities. The teacher also reminded students about classroom agreements, including the use of smartphones solely for educational purposes. Subsequently, students were provided with introductory questions related to Hajj and Umrah to activate their prior knowledge and prepare them for the listening activities. These practices

indicate that the integration of digital media did not diminish the teacher's role; rather, it functioned as part of a structured instructional strategy under the teacher's guidance and supervision.

During the core learning activities, students were instructed to open their worksheets (LKPD) and scan the QR Codes provided in the learning module. The codes directed them to audio materials containing Arabic texts related to Hajj and Umrah. After successfully accessing the materials, students listened to the audio through their smartphones, supported by classroom speakers to ensure clarity. The audio recordings were replayed several times to facilitate comprehension of the listening texts. Following the listening activities, the teacher provided additional explanations and demonstrations to reinforce students' understanding. Students were then asked to identify new vocabulary items, determine their meanings, and complete the worksheet tasks based on the information obtained from the audio materials. In the closing stage, the teacher conducted a reflective discussion and provided reinforcement regarding the lesson content.

Interview findings revealed that the teacher selected barcode-based audio media because of its suitability for listening instruction. The teacher explained:

"I chose barcode-based audio media because it is highly suitable for listening activities. Students can directly listen to the materials and understand Arabic pronunciation more clearly than if they only read the texts in the textbook."

The teacher further emphasized the accessibility provided by the media:

"Students can access the audio materials easily through their smartphones. As a result, learning becomes more practical, and classroom time can be used more efficiently."

These statements suggest that barcode-based audio media function not only as a medium for delivering instructional content but also as a tool that promotes flexibility and learner autonomy.

The findings indicate that the implementation of barcode-based audio media represents a form of digital technology integration in Arabic language learning. By serving as a bridge between printed learning materials and digital audio resources, QR Codes enable students to access learning content more quickly and flexibly. This finding is consistent with Fahraini et al. (2026), who argue that Arabic language learning in the digital era requires technological integration to create contextualized learning experiences that meet the needs of twenty-first-century learners. Furthermore, the implementation of barcode-based audio media reflects the characteristics of mobile learning as described by Khotijah & Arifin (2021), namely the utilization of mobile devices to expand learning opportunities both inside and outside the classroom.

Moreover, the implementation of barcode-based audio media in *maharah istima'* learning demonstrates a shift from teacher-centered instruction toward a more learner-centered

approach. Rather than acting as passive recipients of information, students actively engaged in accessing, listening to, interpreting, and processing information from the audio materials. Therefore, barcode-based audio media function not merely as instructional aids but also as tools that facilitate more active, flexible, and technology-enhanced Arabic language learning experiences aligned with contemporary educational developments.

4.2. The Impact of Barcode-Based Audio Media on Students' Learning Motivation

The findings of the classroom observations indicate that the use of barcode-based audio media had a positive impact on students' learning motivation in *maharah istima'* instruction. This impact was reflected in increased attention, enthusiasm, and participation throughout the learning process. When students were instructed to scan the QR Codes and access the audio materials through their smartphones, most of them responded actively and promptly followed the teacher's instructions. During the listening activities, students appeared focused on the audio materials, took notes on new vocabulary items, and actively completed the worksheet tasks based on the content they had heard. These observations suggest that barcode-based audio media created a more engaging learning environment compared to conventional instruction that relies primarily on teacher explanations.

This finding was further supported by interview data from the teacher, who reported that the use of digital media positively influenced students' engagement during classroom activities. The teacher stated:

"During the lesson, the students appeared more active and enthusiastic. They were more focused when listening to the audio materials than when they were only listening to the teacher's explanations."

According to the teacher, barcode-based audio media attracted students' attention because it provided a learning experience that differed from conventional classroom instruction. In addition, direct access to audio materials encouraged students to become more actively involved in learning activities, resulting in a more interactive instructional process.

Similar perceptions were expressed by the students. Most participants reported that the use of barcode-based audio media made Arabic language learning more interesting and enjoyable. Student 1 explained:

"I think the lesson became more interesting because we could directly listen to the audio materials through the QR Code provided in the module."

Student 2 added:

"The audio materials helped me understand the lesson better because I could replay them whenever I did not understand something."

These statements indicate that students' learning motivation was influenced not only by the integration of digital technology itself but also by the accessibility of learning materials, which enabled students to learn according to their individual needs and levels of understanding.

From a pedagogical perspective, the increase in students' learning motivation can be interpreted as a result of the creation of a more active and learner-centered learning environment. In conventional instruction, students often assume a relatively passive role as recipients of information. In contrast, the use of barcode-based audio media requires students to actively access, listen to, and process learning materials. Such involvement encourages curiosity, attention, and participation, all of which are important indicators of learning motivation.

The findings of this study are consistent with those reported by Handayani and Syafi'i (2022), who found that audio-visual digital media enhanced students' interest in Arabic language learning. Similar conclusions were reached by Amin and Ilmiani (2025), Rajais et al. (2025), and Taufik & Jannah (2024), who argued that audio and audiovisual media contribute to the creation of more interactive learning environments and promote student engagement in listening activities. In the present study, barcode-based audio media functioned not only as a medium for delivering instructional content but also as a stimulus that encouraged students to participate more actively in *maharah istima'* learning.

Based on these findings, it can be concluded that the primary impact of barcode-based audio media on students' learning motivation lies in its ability to create a more engaging, interactive, and flexible learning experience. Easy access to audio materials, opportunities for repeated listening, and students' direct involvement in learning activities contributed to higher levels of attention, enthusiasm, and participation throughout the *maharah istima'* learning process.

4.3. Advantages of Barcode-Based Audio Media in *Maharah Istima'* Learning

The findings of this study indicate that barcode-based audio media offer several advantages that support the teaching and learning of *maharah istima'* at MAN 1 Malang. These advantages include easy access to learning materials, flexibility in media utilization, the ability to replay audio content according to individual learning needs, and the creation of a more interactive learning environment. Through the QR Codes embedded in the learning modules, students were able to access audio materials directly using their smartphones without the need to manually search for or download files. This feature made the learning process more practical and efficient for both teachers and students.

One of the most significant advantages of barcode-based audio media is the ease of access to learning resources. Teachers no longer need to distribute audio files separately because all learning materials are integrated into the instructional modules through QR Codes that can be scanned instantly by students. The teacher acknowledged this benefit, stating:

"Students can access the audio materials easily through their smartphones. As a result, learning becomes more practical, and classroom time can be used more efficiently."

This statement suggests that the use of QR Codes simplifies the distribution of instructional materials, enabling teachers to devote more attention to instructional activities and student support rather than managing technical aspects of material delivery.

Another important advantage is the flexibility provided by the media. Unlike conventional audio resources that are typically accessible only during classroom sessions, barcode-based audio media allow students to revisit learning materials anytime and anywhere, provided they have access to a smartphone and an internet connection. Such flexibility supports independent learning by enabling students to review instructional content according to their individual needs and learning pace. Interview data revealed that this feature was particularly helpful for students who needed additional time to understand the lesson materials. Student 3 explained:

"The audio materials helped me understand the lesson better because I could replay them whenever I did not understand something."

The possibility of replaying audio content constitutes a significant advantage in *maharah istima'* learning because it allows students to revisit sections they find difficult without having to rely solely on additional explanations from the teacher.

In addition to promoting independent learning, barcode-based audio media contribute to the creation of a more interactive learning environment that aligns with the characteristics of contemporary learners. The use of smartphones as learning tools enables students to engage with educational content through technologies that are already integrated into their daily lives. The combination of printed modules, QR Codes, and digital audio resources creates a learning experience that extends beyond traditional textbook-based instruction by incorporating technology as a means of accessing information and knowledge. Consequently, learning activities become more engaging and encourage greater student participation.

The findings of this study are consistent with those reported by Vigil (2017), who demonstrated that QR Codes can be used to provide audio resources in foreign language learning, thereby facilitating students' access to learning materials. Similar conclusions were presented by Misnawati et al. (2023), who argued that the integration of QR Codes into instructional materials promotes greater learner autonomy and flexibility. In the context of Arabic language education, Dahlia et al. (2025) and Ghazali et al. (2025) also found that QR Code integration enhances the accessibility of learning resources and supports the effective utilization of digital technology in instructional settings.

Based on these findings, the primary advantage of barcode-based audio media lies not merely in the technology itself but in its capacity to connect printed instructional materials with digital learning resources in a practical and accessible manner. Easy access to learning materials, flexibility in learning, opportunities for repeated listening, and support for independent learning

make barcode-based audio media a relevant and effective alternative for *maharah istima'* instruction in the digital era.

4.4. Challenges in the Implementation of Barcode-Based Audio Media

Although barcode-based audio media offer various benefits for *maharah istima'* instruction, their implementation is not without challenges. The findings from observations and interviews revealed several obstacles, including dependence on internet connectivity, differences in students' listening abilities, difficulties in understanding unfamiliar vocabulary, and the potential for distraction resulting from smartphone use during classroom activities. These challenges suggest that the successful implementation of digital learning media is influenced not only by the quality of the media itself but also by the availability of technological infrastructure and the characteristics of the learners involved in the instructional process.

The first challenge concerns the dependence of barcode-based audio media on internet access and students' digital devices. Since students are required to access audio materials through their smartphones, the effectiveness of the learning process is closely related to the quality and stability of the available internet connection. In some situations, unstable connectivity may slow down access to audio resources and disrupt the flow of classroom activities. The teacher explained:

"The main challenges usually involve internet connectivity and differences in students' abilities. Some students can understand the audio materials quickly, while others need to listen several times before they fully understand the content."

This statement highlights the fact that technical issues remain a significant concern in the implementation of technology-based learning media, particularly when internet access serves as the primary gateway to instructional materials.

Another challenge is the variation in students' listening proficiency. Classroom observations indicated that not all students demonstrated the same level of comprehension when listening to the audio materials. While some learners were able to understand the content quickly, others required repeated exposure to the audio recordings as well as additional explanations from the teacher. These differences suggest that the effectiveness of *maharah istima'* instruction depends not only on the instructional media employed but also on learners' prior linguistic competence. In this context, barcode-based audio media function as supportive learning tools, whereas the teacher continues to play a crucial role in providing guidance, clarification, and reinforcement for students who encounter difficulties.

In addition to differences in listening proficiency, some students reported difficulties when encountering unfamiliar Arabic vocabulary. Student 2 stated:

"Sometimes I still find it difficult when I hear new vocabulary that I have never encountered before, but after listening to the audio several times, it usually becomes easier to understand."

This statement indicates that while digital audio resources facilitate comprehension, additional instructional strategies remain necessary. These strategies may include providing vocabulary lists, contextual explanations, and repeated listening opportunities to help students develop a more comprehensive understanding of the listening materials.

Another challenge concerns the potential distractions associated with smartphone use during learning activities. Although smartphones serve as the primary tools for accessing audio resources, they may also divert students' attention to non-academic activities. To address this issue, the teacher established clear classroom regulations regarding smartphone use and actively monitored students throughout the learning process. This finding suggests that the successful integration of digital technology into language learning requires effective classroom management to ensure that technology functions as a learning tool rather than a source of distraction.

The findings of this study indicate that the challenges associated with the implementation of barcode-based audio media are primarily technical and pedagogical rather than inherent to the media itself. These findings support the argument of Khotijah & Arifin (2021), who emphasize that the effectiveness of mobile learning is influenced by technological readiness, internet accessibility, and users' ability to utilize digital technologies effectively. Similarly, Rani et al. (2023) and Zuhirawati (2025) argue that the integration of technology into Arabic language learning continues to face challenges related to unequal technological access and variations in students' digital literacy and learning competencies.

Based on these findings, it can be concluded that the successful implementation of barcode-based audio media requires adequate technological infrastructure, effective classroom management, and continuous teacher support. Despite the challenges identified in this study, barcode-based audio media demonstrate considerable potential for enhancing *maharah istima'* instruction. With appropriate planning and implementation strategies, these challenges can be minimized, allowing students to benefit more fully from the advantages offered by technology-enhanced learning environments.

5. CONCLUSION

This study demonstrates that barcode-based audio media can be effectively implemented in *maharah istima'* instruction at the senior high school level through the integration of learning modules, smartphones, and digital audio resources. The implementation was carried out through systematic instructional stages, including preliminary activities, core learning activities, and closing activities, with QR Codes serving as a gateway to audio materials used in listening exercises. The findings indicate that the use of barcode-based audio media encourages more active student participation by engaging learners directly in accessing, listening to, comprehending, and processing information from audio materials. The study further reveals that

barcode-based audio media positively influence students' learning motivation, as reflected in increased attention, enthusiasm, and engagement throughout the learning process. In addition, the media offer several advantages, including easy access to learning materials, flexibility in use, opportunities for repeated listening, and support for independent learning. These features make barcode-based audio media a relevant instructional alternative for supporting *maharah istima'* learning in the digital era.

Despite these benefits, several challenges were identified, including dependence on internet connectivity, differences in students' listening proficiency, difficulties in understanding unfamiliar vocabulary, and the potential for distraction associated with smartphone use. However, these challenges are primarily related to technical and pedagogical factors rather than to the media itself. Therefore, the successful implementation of barcode-based audio media requires adequate technological infrastructure, effective classroom management, and continuous teacher support. Overall, the findings suggest that barcode-based audio media have considerable potential as an innovative approach to Arabic language learning by integrating digital technology with the specific needs of *maharah istima'* instruction. Consequently, this media can serve as a promising alternative for the development of Arabic language learning resources at the senior high school level.

6. REFERENCES

- Al-Hashimi, R., & Bauer, M. (2025). The Impact of Mobile-Assisted Language Learning (MALL) on Vocabulary Acquisition in Arabic as a Foreign Language. *IJAS: International Journal of Arabic Studies*, 2(4), 214–223.
- Amin, I. A. N., & Ilmiani, A. M. (2025). Penggunaan Media Audio Visual Berbasis Animasi dalam Pembelajaran Maharah Istima'. *Indonesian Journal of Arabic Education and Learning*, 1(1), 66–75. <https://doi.org/10.58363/ijael.v1i1.587>
- Anwar, F. R. M., Ramdani, F., Millah, D., & Amin, C. M. N. (2025). Digital Media and Arabic Language: The Relevance of Digital Media in Arabic Language Learning. *Tofedu: The Future of Education Journal*, 4(7), 2868–2876. <https://doi.org/10.61445/tofedu.v4i7.811>
- Arta, E. B., Hidayat, T., & Ilham, G. D. (2025). Analisis Kesulitan Mahasiswa dalam Menguasai Keterampilan Istima' Bahasa Arab dan Strategi Pemecahannya. *Ar-Riyadh: Jurnal Pendidikan Dan Bahasa Arab*, 1(1), 1–7. <https://doi.org/10.65877/ar-riyadh.v1i1.1>
- Auliya, A., Aljanah, D. S., Sagala, R., Hijriyah, U., & Ghazi, F. (2025). The Digital Revolution in Arabic Language Learning: An Analysis of Trends, Results, and the Future of Language Education in the Digital Age. *Raden Intan: Proceedings on Family and Humanity*, 2(1), 194–203. <https://doi.org/10.47352/3032-503x.69>
- Bambang, Tanjung, I., Ritonga, D. H., Hasibuan, L. P., & Pohan, A. H. (2023). Planning and Strategies for Maharah al-Kalam Learning Arabic Language in Madrasah. *Waraqat : Jurnal Ilmu-Ilmu Keislaman*, 8(1), 91–100. <https://doi.org/10.51590/waraqat.v8i1.457>

- Creswell, J. W., & Creswell, J. D. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications.
- Dahlia, I., Azzahra, L. Q., Fauziah, A., Zikrillah, & Gunawan, R. (2025). Developing 'Mumtaz Al-Lughah Al-Arabiyyah': QR Code Innovation for Arabic Learning. *Arabiyatuna: Jurnal Bahasa Arab*, 9(1), 95–116. <https://doi.org/10.29240/jba.v9i1.11295>
- Fahraini, S., Nawawi, M. I., Huda, H., & Alribdi, N. I. (2026). An Integrative Arabic Language Learning Model Based on Neurolinguistics and Digital Learning for the Development of Maharah Istima' in 21st Century Islamic Schools. *Assuthur: Jurnal Pendidikan Bahasa Arab*, 5(1), 1–17. <https://doi.org/10.58194/as.v5i1.3515>
- Ghozali, M. D. H. A., Aisa, A., & Shofiyani, A. (2025). Arabic Language Learning Innovation: Utilizing QR Code-Based Digital Textbooks for Enhanced Comprehension. *Prosiding Konipbsa: Konferensi Nasional Inovasi Pembelajaran Bahasa dan Sastra Arab*, 5(1), 139–156.
- Hamidah, H., & Marsiah, M. (2020). Pembelajaran Maharah Al-Istima. *Al-Ta'rib : Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya*, 8(2), 147–160. <https://doi.org/10.23971/altarib.v8i2.2282>
- Handayani, S., & Syafi'i. (2022). Pemanfaatan Video Animasi Youtube Untuk Meningkatkan Pengembangan Maharah Istima' Bahasa Arab. *Tatsqify: Jurnal Pendidikan Bahasa Arab*, 3(2), 104–115. <https://doi.org/10.30997/tjpba.v3i2.6138>
- Hidayati, N. (2021). The Use of Quick Response Codes for Listening Comprehension in Junior High School. *Retain: Journal of Research in English Language Teaching*, 9(3), 11–17. <https://doi.org/10.26740/rt.v9i03.40292>
- Khotijah, K., & Arifin, A. (2021). Desain dan Implementasi Mobile Learning sebagai Upaya Peningkatan Pembelajaran Bahasa Arab di Madrasah Aliyah. *An Nabighoh*, 23(1), 109–126. <https://doi.org/10.32332/an-nabighoh.v23i1.3373>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis*. SAGE.
- Misnawati, M., Yusriadi, Y., & Tahir, S. Z. B. (2023). QR Code Scanning System as a Meaning-Focused Input Approach in English Textbook. *Mextesol Journal*, 47(3), 1–11.
- Mustofa, S. (2017). *Strategi Pembelajaran Bahasa Arab Inovatif*. UIN Maliki Press
- Nadziro, M., Aisa, A., & Rahmawati, R. D. (2023). The Development of QR Code-Based Arabic Textbooks for Non-Arabic Education Students. *Scaffolding: Jurnal Pendidikan Islam dan Multikulturalisme*, 5(2), 960–981. <https://doi.org/10.37680/scaffolding.v5i2.3386>
- Nafilah, S. A., Hamidi, S. R., Maulidiyah, R. L., Faruq, M., & Mufidah, N. (2024). Arabic Language Learning Methods in The Digital Era. *Ijaz Arabi Journal of Arabic Learning*, 7(1), 280–290. <https://doi.org/10.18860/ijazarabi.v7i1.23183>
- Rahma, O. T., & Ismail, M. (2025). Influence of Digital Technology on Arabic Language Learning in the Modern Era. *Tatsqify: Jurnal Pendidikan Bahasa Arab*, 6(1), 61–68. <https://doi.org/10.30997/tjpba.v6i1.15415>
- Rajais, M., Muslimin, M., & Nurdiniawati, N. (2025). Penggunaan Media Audio dalam Meningkatkan Maharah Istima' Siswa Kelas X-2 di MAN 1 Kota Bima. *Action Research Journal Indonesia (ARJI)*, 7(1), 365–379. <https://doi.org/10.61227/arji.v7i1.303>

- Rani, S. A., Zikriati, Z., Muhammady, A., Syukran, S., & Ali, B. (2023). Arabic Language Learning Based on Technology (Opportunities and Challenges in the Digital Era). *International Journal of Education, Language, and Social Science*, 1(1), 1–11. <https://doi.org/10.62612/ijelass.v1i1.4>
- Rosyidi, A. W., & Ni'mah, M. (2011). *Memahami Konsep Dasar Pembelajaran Bahasa Arab*. UIN-Maliki Press
- Saputra, Y. (2026). Hambatan dan Solusi dalam Pembelajaran Maharatul Istima' di Sekolah Menengah Islam. *An-Nuriyah: Journal of Islamic Technology and Informatics Education*, 2(01), 198–209.
- Syaiful, S. L. (2025). Problematika Pembelajaran Bahasa Arab di Sekolah Tinggi Agama Islam (STAIBA) Balikpapan. *Serambi Pendidikan: Jurnal Pendidikan Islam*, 1(1), 9–16.
- Tampubolon, M. S., & Ilahi, R. (2024). The Priority of Istima' Skills in Arabic Learning. *Amorti: Jurnal Studi Islam Interdisipliner*, 3(2), 88–98. <https://doi.org/10.59944/amorti.v3i2.285>
- Taufik, T., & Jannah, S. W. (2024). Penggunaan Media Audio Visual dalam Pembelajaran Istima'. *Edu Journal Innovation in Learning and Education*, 2(1), 31–39. <https://doi.org/10.55352/edu.v2i1.934>
- Vigil, K. M. (2017). *Quick Response (QR) Codes for Audio Support in Foreign Language Learning*. ProQuest LLC
- Zuhirawati, Z. (2025). Dynamics of Arabic Language Learning in the Digital Era. *At-Tasyrih: Jurnal Pendidikan dan Hukum Islam*, 11(2), 122–134. <https://doi.org/10.55849/attasyrih.v11i2.356>