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Interactive Multimedia-Based Arabic Language Learning: a Systematic Literature Review

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Abstract

This paper aims to describe the types of interactive multimedia that can be used in Arabic language learning and the effectiveness of using interactive multimedia in Arabic language learning. The research method employed is the Systematic Literature Review, which includes literature search, application of inclusion and exclusion criteria, and quality assessment of articles. The database used in this study is dimensions.ai. The research findings indicate that there are 20 types of interactive multimedia that can be used in Arabic language learning, namely: Adobe Flash, Visual Learning Multimedia, Android Multimedia, Canva Multimedia, Interactive Animated Videos, 3D Augmented Reality, Lecture Maker, Flash Mx, Mondly, Lectora Inspire, Wordwall Application, Plotagon Studio, Youtube, Educandy Platform, Interactive E-Modul, Powerpoint Ispring Presenter, Articulate Storyline 3, Android-Based Learning Media' Smart Tree: We Can', Media Quizizz, and Flash Macro Media. These interactive multimedia tools have proven effective in enhancing students' interest, learning motivation, speaking skills, vocabulary mastery, listening ability, text comprehension, and understanding of Arabic grammar in Arabic language learning. The results of this study can be used as a reference in selecting Arabic language learning multimedia that aligns with the hoped learning objectives.

Keywords: interactive, multimedia, arabic language, learning

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Introduction

Learning is the core of the educational process, where individuals acquire the expected knowledge and skills. Through learning, students gain knowledge, master skills and habits, and shape attitudes and beliefs (Baharuddin & Wahyuni, 2015; Suardi, 2018). The success or failure of educational goals greatly depends on how the teaching and learning process takes place (Arfani, 2018). Learning is a combination of the concepts of teaching and learning that occurs between educators and students, involving various other components such as objectives, teaching materials, procedures, facilities, and media (Suardi, 2018), approaches or methods, as well as learning resources and evaluation (Dolong, 2016; Syarifah & Juriana, 2020). Clear learning objectives will help teachers or educators determine the necessary lesson materials, select appropriate teaching methods and strategies, choose suitable learning resources and media, and design evaluation tools to assess student learning success (Sukmawati, 2021).

Arabic language learning is an interaction between educators and students to achieve the expected goal: mastery of Arabic language skills and the elements of the Arabic language (Effendi, 2017). Language skills or competencies include listening, speaking, reading, and writing. Meanwhile, the elements of language include phonology, orthography, morphology, grammar (syntax), and vocabulary (Effendi, 2017). Al-Fauzan and others combine Arabic language skills and elements into three competencies: linguistic competence, which refers to the mastery of phonetics in Arabic, differences and pronunciation methods, understanding language structure and the basics of grammar, including theory and its functions, and also includes understanding vocabulary and its usage; communicative competence, which refers to the ability to communicate fluently and spontaneously in Arabic, express ideas and experiences fluently, and easily absorb information from the language; and cultural competence, which refers to the understanding of the cultural context related to the Arabic language, the ability to express thoughts, values, customs,

ethics, and the arts contained in the language (Abdurrahman bin Ibrahim al-Fauzani, n.d.; Muradi, 2014). These objectives refer to the four Arabic language skills: listening, speaking, reading, and writing (Abdurrahman bin Ibrahim al-Fauzani, n.d.) and elements of the language (Effendi, 2017).

In the development of Arabic language learning, there are several systems for teaching language skills and the elements of the Arabic language, namely: first, the separated system. In this system, Arabic is taught through several subjects, such as Nahwu (Syntax), Sharaf (Morphology), Muthala'ah, Insha', Istima' (Listening), Kalam (Speaking), Imla' (Dictation), Khat (Calligraphy), and others. Each subject has its curriculum (syllabus), meeting hours, books, evaluations, and learning outcome scores. Second, the integrated system is often referred to as the all-in-one system. This system views Arabic as a cohesive whole, not divided into several separate subjects. Therefore, there is only one subject, one meeting hour, one book, one evaluation, and one learning outcome score, which is Arabic (Effendi, 2017). Third, there is the combined system. In this system, Arabic is taught using both the separated and integrated systems simultaneously. This combination of the two systems is usually implemented in a madrasah or pesantren (Islamic boarding school). In other words, in addition to the Arabic language subject, other subjects are branches of the Arabic language, both related to language skills and the elements of the language (Effendi, 2017).

For the objectives of Arabic language learning to be achieved, appropriate learning media are needed (Sari, 2019). Learning media are intermediaries or tools that can be used by teachers or educators in the learning process (Karo-Karo & Rohani, 2018). Media use is crucial in stimulating student engagement and facilitating educators' conveying information to students as recipients of the message in the learning process (Umarella, 2018). With the presence of learning media, educational objectives can be achieved effectively and efficiently. Among the functions of learning media are: first, shifting the focus from formal education, namely changing learning media from being abstract to more concrete and from initially theoretical learning to more functional and practical; second, increasing learning motivation by using media as an extrinsic motivator for students; this is because the use of learning media can make learning more interesting and capture students' attention; third, providing clarity, so that student's knowledge and experiences can be more easily understood with the help of media that clarify those concepts; fourth, providing stimulation for learning, especially in generating curiosity among students. The encouragement to acquire broader knowledge needs to be promoted through the provision of media to enrich learning skills; fifth, stimulating student participation; sixth, providing immediate feedback; and seventh, encouraging consistent practice (Miftah, 2013).

Along with the advancement of increasingly sophisticated technology, learning media has evolved into dynamic and interactive presentations that combine graphics, text, animations, videos, and audio, known as multimedia (Marjuni & Harun, 2019). In general, when developing learning multimedia, it is important to pay attention to the VISUAL principles, which can be understood as the combination of the following words: Visible (easy to see), Interesting (engaging), Simple (simple), Useful (beneficial), Accurate (correct/reliable), and Legitimate (reasonable/valid) (Miftah, 2013). In other words, the multimedia developed or used in learning must be easy for students to see, have an engaging and simple appearance, be beneficial and accurate or reliable, and be legitimate or recognized in its existence.

Multimedia is divided into linear and interactive multimedia types (Gunawan et al., 2015). Linear multimedia does not have control tools that can be used by the user (Gunawan et al., 2015; Setiadi, 2018). This type of multimedia operates sequentially, such as television and film (Manurung, 2020). Meanwhile, interactive multimedia is equipped with control tools that can be operated by the user (Gunawan et al., 2015; Manurung, 2020). Thus, the user can choose the next step according to preference (Manurung, 2020). Among the interactive multimedia that can be used in learning are game applications, e-learning applications, Google Classroom, Quizizz, 3D Aurora Presentation, Multimedia Virtual Reality Game Abbas, Adobe Flash CS6, visual learning-

based Arabic learning multimedia, Android-based multimedia, Multimedia Canva, Camtasia Studio, and others.

Among the SLR studies that have examined learning media is the research conducted by Ahmad Tarmizi and Fielga Permatasari, which states that audio-visual media significantly enhances students' understanding of the Arabic language. Therefore, the implementation of such media is considered urgent given the growing gap between learners and advancing technology (Tarmizi & Sari, 2023). Research conducted by Rizka Widayanti and Dandi Kurniawan states that social media can be used as a medium for Arabic language learning to monitor and evaluate learning, a tool to access learning materials, a learning discussion forum, as well as a platform for collaborative and innovative learning. Additionally, this study highlights the dangers of using social media in Arabic language learning activities, including social media addiction, unvalidated learning resources, distractions to students' concentration, and cyberbullying. By understanding the benefits and dangers of social media, it is hoped that students and teachers will use social media more wisely during Arabic language learning activities (Widayanti & Kurniawan, 2023). In addition, there is an SLR that discusses the framework elements of Game-Based Arabic Language Learning (GBALL) for Dyslexic Children. The research results indicate that there are two types of elements in the game: multimedia elements in game-based language learning for dyslexic children and Arabic language learning elements for dyslexic children (Masrop et al., 2023). Based on previous research, there is no SLR study has been found that specifically discusses multimedia-based Arabic language learning.

Therefore, the author intends to conduct a Systematic Literature Review (SLR) of journal articles on interactive multimedia-based Arabic language learning, which is related to the use of multimedia and the effectiveness of that multimedia in Arabic language learning. A Systematic Literature Review (SLR) is an evidence-based approach to searching for relevant literature concerning several predetermined research questions by selecting, assessing, and synthesizing findings in the literature to answer those research questions (Lusiana & Suryani, 2014).

SLR research is conducted for various purposes, including identifying, reviewing, evaluating, and interpreting all existing research on a particular phenomenon topic relevant to the established research questions. Its objectives also include providing a theoretical background for future research, serving as a guide and source of information in research on interesting topics, or providing more adequate answers by understanding previous research that has been conducted (Lusiana & Suryani, 2014). This paper focuses on the theme of interactive multimedia-based Arabic language learning. There are several reasons behind the selection of this object: 1) Arabic is a mandatory subject at several educational levels, especially in madrasahs (Islamic Schools), Islamic boarding Schools, and state Islamic universities; 2) One of the main components in achieving the objectives of Arabic language learning is the use of appropriate and accurate learning media; 3) Interactive multimedia is a learning medium for Arabic that encompasses visual, audio, and audiovisual components, making it quite comprehensive. By recognizing and using various interactive multimedia in Arabic language learning, the effectiveness and efficiency of achieving learning objectives can be improved regarding language skills and the elements of the Arabic language. Based on the research object that the author has previously chosen, the problem formulation or research questions to be addressed in this study relate to interactive multimedia-based Arabic language learning, namely:

RQ1: What multimedia can be used in interactive multimedia-based Arabic language learning?
RQ2: How effective is the use of interactive multimedia in Arabic language learning?

Method

In conducting this research, the author uses the Systematic Literature Review (SLR) method, a systematic approach to compiling literature reviews that map out specific stages. The Systematic Literature Review (SLR) method involves three phases. The first phase is planning. In this stage, the author formulates a plan that includes systematic planning and determining

research questions. Next, in the second phase, the author conducts a literature review that includes several processes: a series of searches applied to data sources, applying primary and secondary search criteria, inclusion and exclusion criteria, and applying quality assessment criteria. The third phase is reporting the research results, which consists of two processes: an overview of the selected studies or research and answering the research questions (Larasati et al., 2021). These stages are described in the following diagram:

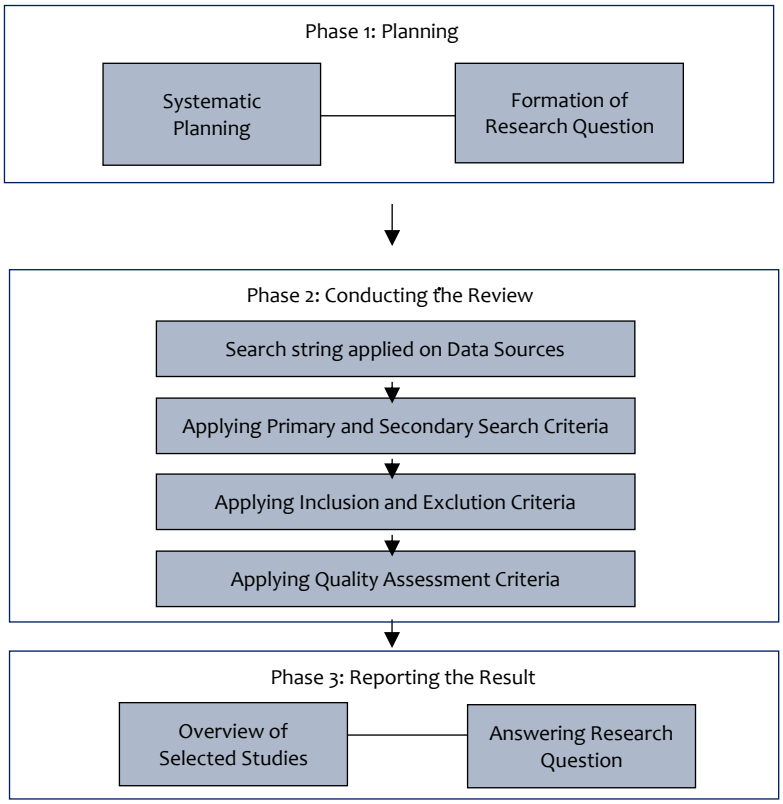

Figure 1. Stages in Systematic Literature Review

After creating a systematic plan, the first stage in the Systematic Literature Review (SLR) is to formulate research questions. After determining the topic and formulating the research questions, the next stage is the search for literature or relevant sources to answer the formulated research questions. In this stage, the author determines the database to be used in searching for data sources. This literature review aims to conduct an in-depth analysis of research articles relevant to the previously determined topic. Therefore, it is necessary to set limitations or criteria for the search to search for more focused and directed data sources. In this literature search, the author undertakes the following steps: Identifying keywords and defining the search string. At this stage, the author determines the keywords for the literature search or data sources. The keywords used by the author in this literature search (data sources) for this study are 'interactive multimedia-based Arabic language'. The author uses the Dimensions database via https://app.dimensions.ai in this data source search.

The articles used as data sources in this study are those published within the last ten years, specifically from 2014 to 2023, categorized as journal article documents. All data presented in this research are sourced from these various articles, not from data obtained through field research. The next step is the Search Process for Data Sources. After applying the publication year limit of 2014-2023 and the document type category of journal articles, the number of articles filtered using the keyword 'interactive multimedia-based Arabic language' was found to be 1,368. The next step is applying Inclusion and Exclusion Criteria. The data sources obtained through the previous search stage are analyzed according to the inclusion and exclusion criteria, as shown in Table 1. The

evaluation based on the inclusion and exclusion criteria is conducted by first reading the titles and abstracts, followed by checking whether the articles are related to the issues discussed in the Research Question.

Table 1. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Literature focusing on interactive multimedia-based Arabic language learning	Literature that does not focus on interactive multimedia-based Arabic language learning
Literature that answers the research questions	Literature that does not answer the research questions
Literature published in Indonesian, English, or Arabic	Literature published in languages other than Indonesian, English, or Arabic
Literature that tests the effectiveness of interactive multimedia	Literature that does not test the effectiveness of interactive multimedia

The flow of the inclusion and exclusion process for data sources can be seen in the following diagram:

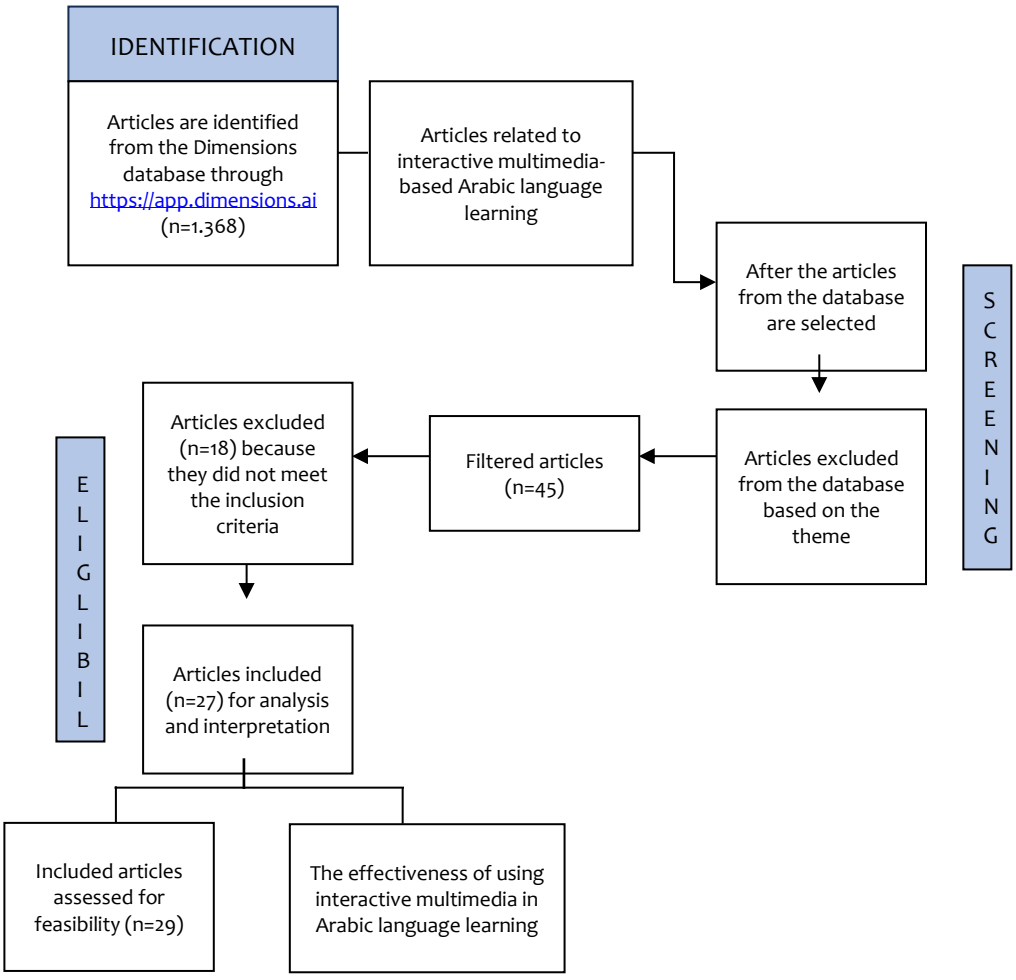

Figure 2. Flow of the Inclusion and Exclusion Process for Data Sources

After the author applies the inclusion and exclusion criteria, the next step is to evaluate the quality of the literature found through quality assessment as follows:

QA1: Was the article or literature found to have been published between 2014 and 2023?
QA2: Does the article or literature discuss interactive multimedia-based Arabic language learning?
QA3: Does the article or literature discuss the effectiveness of using interactive multimedia in Arabic language learning?

After applying inclusion and exclusion criteria to the 1,368 articles that were previously filtered, a comprehensive quality assessment was conducted. Based on the data, it can be concluded that the articles or literature meeting the quality assessment criteria amount to 27 journal articles. This paper does not include articles that do not meet the quality assessment. The distribution of filtered articles by publication year can be seen in the following diagram:

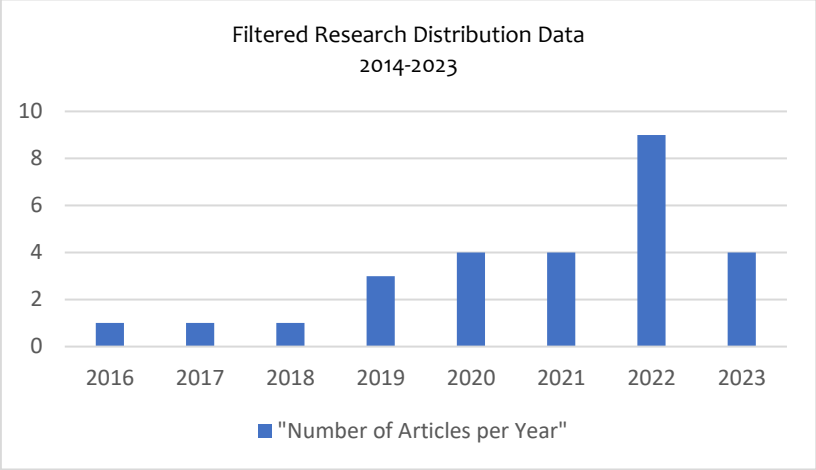

Figure 3. Distribution of Filtered Articles Meeting Quality Assessment from 2014 to 2023

Results and Discussion

The next step is to analyze the research data from the journal articles that have met the quality assessment criteria to address the research questions.

Multimedia That Can Be Used in Arabic Language Learning

The types of interactive multimedia that have been proven to be suitable and effective for use in Arabic language learning, based on validation tests from subject matter experts and media experts, as well as effectiveness testing in Research and Development (R&D) studies, experimental research, and classroom action research, are as follows:

Table 2. Multimedia That Can Be Used in Arabic Language Learning

No	Author	Types of Interactive Multimedia	Teaching Materials	Types of Testing
1.	(Danis, 2019; Nasrullah & Baihaqi, 2022; Sholehah, 2021)	Adobe Flash	Arabic Language, Vocabulary	Validation testing by subject matter and media experts, as well as effectiveness testing
2.	(Rini & Abdullah, 2020)Z	Visual Learning Multimedia	Arabic Language	Effectiveness testing through classroom action research
3.	(Basyir, 2016; Huda, 2022; Mizan et al., 2022)	Android Multimedia	Arabic Language, Vocabulary	Validation testing by subject matter and media experts, as well as effectiveness testing

4.	(Usamah & Lutfi, 2022)	Canva Multimedia	Arabic Language	Validation testing by subject matter and media experts, as well as effectiveness testing
5.	(Hamidi et al., 2023; Mitra & Khuryati, 2022)	Interactive Animated Videos	Arabic Language and Hijaiyyah Letters	Validation testing by subject matter and media experts, as well as effectiveness testing
6.	(Setiawan, 2019)	3D Augmented Reality	Speaking	Validation testing by subject matter and media experts, as well as effectiveness testing
7.	(Salam & Agustina, 2022)	Lecture Maker	Vocabulary	Validation testing by subject matter and media experts, as well as effectiveness testing
8.	(Jannah & Al Ghozali, 2020)	Flash Mx	Speaking	Validation testing by subject matter and media experts, as well as effectiveness testing
9.	(Windasari & Nurzaki, 2020)	Mondly	Arabic Language	Effectiveness testing through pre-experimental type one
10.	(Oktaria, 2016)	Lectora Inspire	Arabic Language	Effectiveness testing through classroom action research
11.	(Fakhruddin et al., 2021)	Wordwall Application	Vocabulary	Effectiveness testing through associative quantitative testing
12.	(Zulfanuria & Asy'ari, 2023)	Plotagon Studio	Listening	Validation testing by subject matter and media experts, as well as effectiveness testing
13.	(Alkayisy et al., 2022; Vatullah & Rawafi, 2023)	Youtube	Arabic Language, Speaking	Effectiveness testing through quasi-experimental research
14.	(Fitria & Roziqi, 2022)	Educandy Platform	Vocabulary	Effectiveness testing through experimental research
15.	(Belanisa et al., 2022)	Interactive E-Modul	Arabic Language	Validation testing by subject matter and media experts, as well as effectiveness testing
16.	(Jamilah, 2019)	Powerpoint Ispring Presenter	Vocabulary	Validation testing by subject matter and media experts, as well as effectiveness testing
17.	(Sukmarini et al., 2021)	Articulate Storyline 3	Arabic Language	Effectiveness testing through one group pretest-posttest pre-experimental design
18.	(Suaibah & Rahman, 2020)	Android-Based Learning Media' Smart Tree: We Can'	Arabic Language	Validation testing by subject matter and media experts, as well as effectiveness testing
19.	(Sadiyah, 2023)	Media Quizizz	Reading Comprehension	Effectiveness testing through classroom action research
20.	(Ali & Aqodiah, 2018)	Flash Macro Media	Grammar	Effectiveness testing

Based on the table above, it can be seen that 20 types of interactive multimedia have been proven to be suitable and effective for use in Arabic language learning. The feasibility testing of these multimedia types was conducted through validation tests by subject matter and media experts, and effectiveness tests were conducted with students. Based on the validation from subject matter and media experts, the Adobe Flash-based teaching materials for Arabic language learning received a very good rating and were deemed suitable for use as a learning media application (Danis, 2019; Nasrullah & Baihaqi, 2022). Furthermore, experimentation has proven that using Adobe Flash in Arabic vocabulary learning is effective (Sholehah, 2021). Similarly, visual

learning-based multimedia positively impacts student engagement in Arabic language learning (Rini & Abdullah, 2020).

Furthermore, the Android-based Arabic language learning media developed using Microsoft Word, Microsoft PowerPoint, iSpring Suite 10, and Website 2 Apk Builder Pro 4.0 was deemed suitable and effective for application as a learning tool based on validation from subject matter experts with a score of 86.6% (very good category), validation from multimedia experts with a score of 91.6% (very good category), student feedback with a score of 79.6% (good category), and teacher feedback with a score of 90% (very good category) (Basyir, 2016; Huda, 2022; Mizan et al., 2022). Canva Multimedia can also be used to learn Arabic (Usamah & Lutfi, 2022). Interactive Animated Videos are highly effective in learning Arabic, especially for developing speaking skills, supported by a media feasibility validation score of 92.5%, content feasibility at 96.9%, and program feasibility at 96.4% (Hamidi et al., 2023). Based on the effectiveness of the testing, 2D animated videos can also be used as media for teaching Hijaiyah letters and the Arabic language.

Augmented Reality (AR) technology is deemed suitable for implementation and development in teaching Arabic speaking skills based on assessments from various aspects (Setiawan, 2019). Additionally, Arabic language learning media based on Lecture Maker can be used for teaching Arabic vocabulary, with subject matter expert validation scoring 3.64 and media expert validation scoring 3.47, both categorized as very interesting (Salam & Agustina, 2022). The validity of the Flash MX-based Arabic learning media, based on assessments from subject matter experts (Arabic language lecturers), is rated at 4.1 and categorized as very valid. The assessment from subject matter experts (teachers) is rated at 4.6, also categorized as very valid. Meanwhile, the assessment from media experts is rated at 3.7, categorized as valid, and student feedback is at 87%, categorized as strongly agree (Jannah & Al Ghozali, 2020).

Mondly Applications (Windasari & Nurzaki, 2020) and Interactive animated media make Arabic language learning enjoyable and engaging, positively impacting students' skills in Arabic learning (Mitra & Khuryati, 2022). Based on classroom action research, learning Arabic using Lectora Inspire media has enhanced students' interest in learning (Oktaria, 2016). The Wordwall application is also quite effective in learning Arabic, particularly for vocabulary acquisition (Fakhruddin et al., 2021).

Teaching listening skills in Arabic using Plotagon Studio is deemed suitable based on validation scores of 81.25% from subject matter experts, 79.5% from design experts, and 90% from language experts (Zulfanuria & Asy'ari, 2023). YouTube-based Arabic language learning media has been proven to positively impact students' interest and learning outcomes (Vatullah & Rawafi, 2023) and can be used to teach speaking skills (Alkayisy et al., 2022).

The Educandy platform effectively enhances students' understanding of Arabic vocabulary (Fitria & Roziqi, 2022). Interactive e-modules have been proven to enhance student motivation and are suitable for learning in Arabic language education (Belanisa et al., 2022). The use of PowerPoint iSpring Presenter in teaching Arabic vocabulary received validation scores of 84% from media experts, 89% from subject matter experts, and 92% from language experts. Student responses to the appeal of the learning media, based on small-scale trials, yielded an average score of 86.5% (categorized as 'very interesting'), and large-scale trials yielded an average score of 95.7% (also categorized as 'very interesting'). Meanwhile, the average score from educators as users was 86%, categorized as 'very suitable' (Jamilah, 2019).

Based on experimental research, Articulate Storyline 3 multimedia can enhance learning motivation in Arabic language education based on four indicators: students' interest in the Arabic language, students' engagement and responsiveness in Arabic lessons, student's attention to the teacher's explanations, and students' willingness to ask questions and answer problems (Sukmarini et al., 2021). The Android application 'Smart Tree: We Can' is considered useful as a learning media in enhancing students' motivation and understanding of Arabic vocabulary (Suaibah & Rahman, 2020). Based on classroom action research, it has been proven that interactive

quizzes using the Quizizz media can effectively teach reading skills in Arabic texts (Sadiyah, 2023). Similarly, interactive media (Macro Media Flash) can enhance students' understanding of Arabic grammar instruction (Ali & Aqodiah, 2018).

Interactive multimedia-based Arabic language learning can be implemented using various multimedia tools, including Adobe Flash, Visual Learning Multimedia, Android Media, Canva Multimedia, Interactive Animated Videos, 3D Augmented Reality, Lecture Maker, Flash MX, Macro Media Flash Interactive Multimedia, Mondly, Mobile Applications, Lectora Inspire, Wordwall Application, Plotagon Studio, YouTube, Educandy Platform, Interactive E-Modules, PowerPoint iSpring Presenter, Articulate Storyline 3, Smart Tree: We Can Android Learning Media, and Quizizz Media. These interactive multimedia tools can be utilized in Arabic language learning for listening, speaking, reading, vocabulary, grammar, and phonetics. Therefore, the multimedia selection should be aligned with the teaching materials to ensure effective learning outcomes.

Of course, the selection of multimedia should be tailored to the needs. Not all multimedia are suitable for all learning materials. For example, materials for listening, speaking, reading, writing, and vocabulary acquisition cannot use the same learning media, because the expected goals are different. Therefore, a teacher must have the ability to choose and select the appropriate multimedia for the material to be taught so that the use of multimedia is effective and the learning objectives can be achieved.

Effectiveness of Using Interactive Multimedia in Arabic Language Learning

Arabic language learning using interactive multimedia is effective in enhancing students' interest, motivation, speaking skills, vocabulary mastery, listening abilities, text comprehension, and understanding of Arabic grammar, as illustrated in the following table:

Table 3. Effectiveness of Using Interactive Multimedia in Arabic Language Learning

No	Author	Types of Interactive Multimedia	Effectiveness of Using Interactive Multimedia
1.	(Zulfanuria & Asy'ari, 2023)	Plotagon Studio	Enhancing listening skills
2.	(Alkayisy et al., 2022; Hamidi et al., 2023; Jannah & Al Ghozali, 2020; Setiawan, 2019)	Animation Video, *Augmented Reality* Technology, Flash Mx, and *Youtube*	Enhancing speaking skills
3.	(Fakhruddin et al., 2021; Fitria & Roziqi, 2022; Jamilah, 2019; Salam & Agustina, 2022; Sholehah, 2021; Suaibah & Rahman, 2020)	Adobe Flash, Android-Based Learning Media 'Smart Tree: We Can', Lecture Maker, Wordwall Application, Educandy Platform, and Powerpoint Ispiring	Enhancing vocabulary mastery
4.	(Sadiyah, 2023)	Quizizz	Enhancing text comprehension
5.	(Ali & Aqodiah, 2018)	Macro Media Flash	Enhancing grammar understanding
6.	(Nasrullah & Baihaqi, 2022; Oktaria, 2016; Usamah & Lutfi, 2022; Vatullah & Rawafi, 2023)	Adobe Flash Cs6, Canva, Youtube, and Lectora Inspire	Enhancing learning interest
7.	(Belanisa et al., 2022; Suaibah & Rahman, 2020; Sukmarini et al., 2021)	E-Module Interactive, Articulate Story Line 3, and Android-Based Learning Media' Smart Tree: We Can'	Enhancing student motivation

The use of interactive multimedia is effective in enhancing students' listening skills (istima') in Arabic language learning. Research results indicate that the use of Plotagon Studio in teaching listening skills (istima') has proven effective. This is evidenced by the paired sample T-Test results,

which show a significance value (Sig (2-tailed)) < 0.005, indicating that the alternative hypothesis (Ha) is accepted. Meanwhile, the N-Gain test results show a score of 64.2, categorized as moderate effectiveness (Zulfanuria & Asy'ari, 2023).

Based on the t-test results, the effectiveness test of interactive animated video media shows a significance value (Sig) of .000 < 0.05. The calculation results indicate that Thitung > Ttabel (74.061 > 2.021), leading to the rejection of the null hypothesis (Ho). Therefore, it can be concluded that interactive animated video media effectively teaches speaking skills (Hamidi et al., 2023). Augmented Reality (AR) technology can effectively and efficiently engage students in learning to speak Arabic (Setiawan, 2019). The effectiveness testing of Flash MX-based media through normality tests, homogeneity tests, and simple paired t-tests concludes that H1 is accepted, leading to the rejection Ho. This indicates that the development of Flash MX-based media is effective for teaching muhadathah (speaking) (Jannah & Al Ghozali, 2020). The results of the Independent Samples T-Test for using YouTube in Arabic language learning show a significance value (2-tailed) of 0.004, which is less than 0.05, indicating that Ha is accepted. Therefore, using YouTube in Arabic language learning effectively enhances students' speaking skills (Alkayisy et al., 2022).

The use of interactive multimedia is effective in enhancing students' vocabulary mastery in Arabic language learning. Research results indicate that using Adobe Flash, the Smart Tree Android multimedia, Lecture Maker, Wordwall, Educandy platform, and PowerPoint iSpring has improved Arabic vocabulary mastery. The effect size results for using Adobe Flash in teaching vocabulary show an effect size (Es) of 0.92 in Class X A, categorized as effective, and an Es of 0.59 in Class X B, categorized as moderately effective. Additionally, student performance in vocabulary lessons improved from a score of 1321 (average 31) to a score of 2493 (average 77.22) after the research was conducted (Sholehah, 2021). The Wordwall application is quite effective in enhancing students' mastery of Arabic vocabulary, as indicated by the effectiveness test results showing a significant difference between the pretest and post-test scores, with the pretest score of 45.63 being lower than the post-test score of 77.50. The average difference between the pretest and post-test results has a significance value of 0.000, less than 0.05 (0.000 < 0.05). The percentage N-Gain indicates a score of 56.6%, categorized as moderately effective (Fakhruddin et al., 2021).

Quizizz media has enhanced students' understanding of Arabic texts in Maharah al-qiraah (reading skills) lessons. The average class score on post-test 1 was 60, categorized as sufficient, indicating that students have begun to understand Arabic texts in the Maharah al-qiraah lessons. This score reflects an increase of 6.59 from the previous average of 53.41, meaning that 16 students, or 39.02%, still do not understand Arabic texts. Additionally, the mastery percentage improved by 21.95%, from 43.90% previously, with the mastery level in Cycle I at 43.90%. In Cycle II, the test score was 74.14, with 100% of students achieving mastery. Based on these research results, it can be concluded that there is a significant improvement in both the average score and the percentage of student mastery in Maharah al-qiraah lessons from Cycle I to Cycle II. Students responded positively to using interactive quizzes with Quizizz media in maharah al-qirah lessons, indicating that implementing interactive quizzes using Quizizz can enhance students' understanding of Arabic texts in these lessons (Sadiyah, 2023).

The use of interactive multimedia is effective in increasing students' interest in learning Arabic. Several interactive multimedia tools have proven effective in enhancing student interest in learning Arabic. Before implementing Arabic learning materials designed with Adobe Flash CS6, pretest results showed an average learning interest of 75.88. Meanwhile, post-test results after the implementation showed an average learning interest of 87.88. Based on these results, it can be concluded that using Arabic learning material designs based on Adobe Flash CS6 has been proven effective in increasing students' interest in learning Arabic (Nasrullah & Baihaqi, 2022). The percentage calculation before the implementation of interactive multimedia showed that the overall average student response was 35.82%. After implementing interactive multimedia, the percentage calculation showed an overall average student response of 50.84%. This indicates that using instructional media, particularly Canva-based interactive multimedia, effectively increases

student interest in learning by 15.02% (Usamah & Lutfi, 2022). Arabic language learning using Lectora Inspire media also effectively enhances student interest in learning (Oktaria, 2016). The use of YouTube-based Arabic learning media has a positive impact on increasing student interest and learning outcomes in the experimental class. This is evidenced by the average score of the experimental class, which reached 50%. Before using YouTube media, the average learning outcome was 48.8. After using YouTube media, student interest increased to 63.2%, and the average learning outcome improved to 86.2 (Vatullah & Rawafi, 2023).

The use of interactive multimedia is effective in increasing student motivation in Arabic language learning. Research results show that interactive e-modules can enhance student motivation and are suitable for use as learning media in Arabic lessons, as evidenced by an effectiveness test showing a percentage of 84.91% (Belanisa et al., 2022). Using interactive multimedia Articulate Storyline 3 can increase student motivation in learning Arabic. Based on the Paired Sample T-Test results, a significance value of 0.000 ≤ 0.05 was obtained, indicating a difference in motivation levels before and after the media implementation. The Gain calculation yielded a score of 0.71, indicating high effectiveness (Sukmarini et al., 2021). Implementing the Android-based learning media, *Pohon Pintar Kita Bisa* (Smart Tree-We Can), effectively increased student motivation in learning Arabic grammar and vocabulary. According to a survey, 61.82% of respondents strongly agreed, 28.18% agreed, and 5.45% somewhat agreed with the effectiveness of the media (Suaibah & Rahman, 2020).

Interactive media has proven effective in enhancing students' understanding of Arabic grammar. This is evidenced by the results of pretests, practice exercises, and post-tests using Macro Media Flash interactive multimedia. The expected outcomes were met in line with the competency standards despite five students scoring below 70. In class VA, 20 students scored between 70-90, and a similar trend was observed in class VB, although there were differences in achievement levels. Out of 25 students, eight scored below 70, while the rest scored between 70-90. Nonetheless, there was an overall improvement in students' understanding of Arabic grammar (nahwu) (Ali & Aqodiah, 2018).

Thus, it can be concluded that interactive multimedia has proven effective in enhancing student interest, learning motivation, speaking skills, vocabulary mastery, listening ability, text comprehension, and understanding of Arabic grammar in Arabic language learning.

Conclusion

Based on the analysis of the Systematic Literature Review, it can be concluded that 20 types of interactive multimedia can be used in Arabic language learning. These include Adobe Flash, Visual Learning Multimedia, Android Multimedia, Canva Multimedia, Interactive Animated Videos, 3D Augmented Reality, Lecture Maker, Flash Mx, Mondly, Lectora Inspire, Wordwall Application, Plotagon Studio, Youtube, Educandy Platform, Interactive E-Modul, Powerpoint Ispring Presenter, Articulate Storyline 3, Android-Based Learning Media' Smart Tree: We Can', Media Quizizz, and Flash Macro Media. These interactive multimedia tools have proven effective in enhancing students' interest, learning motivation, speaking skills, vocabulary mastery, listening ability, text comprehension, and understanding of Arabic grammar in Arabic language learning.

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