Enhancing Early Arabic Learning Through Digital Flashcards and Interactive Canva Games

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Abstract

The integration of digital technology into early childhood education has created new opportunities for developing engaging and developmentally appropriate language learning media. This study aims to examine the effectiveness of Canva-based digital flashcards and interactive games in supporting early childhood Arabic language learning, particularly in basic vocabulary acquisition and learner engagement. Employing a descriptive qualitative approach, the research was conducted at an Arabic supplementary learning program at BEM STIBADA MASA. Data were collected through participant observation, semi-structured interviews with tutors, parents, and children, as well as documentation of learning activities. The data were analyzed thematically to identify patterns related to children's engagement, vocabulary comprehension, learning motivation, and instructional interaction. The findings indicate that the use of digital flashcards and interactive games contributes positively to increased learner engagement, improved comprehension of basic Arabic vocabulary, higher learning motivation, and more active child–tutor interaction. The integration of visual, auditory, and interactive elements allows children to connect language input with concrete experiences and play-based activities, supporting meaningful and enjoyable early language learning. This study highlights the pedagogical potential of Canva as a flexible platform for designing interactive Arabic learning media for young learners.

Keywords: *early childhood education; Arabic language learning; digital flashcards; interactive games*

Abstrak

Integrasi teknologi digital ke dalam pendidikan anak usia dini telah menciptakan peluang baru untuk mengembangkan media pembelajaran bahasa yang menarik dan sesuai dengan perkembangan. Studi ini bertujuan untuk meneliti efektivitas kartu flash digital berbasis Canva dan permainan interaktif dalam mendukung pembelajaran bahasa Arab pada anak usia dini, khususnya dalam perolehan kosakata dasar dan keterlibatan peserta didik. Menggunakan pendekatan kualitatif deskriptif, penelitian ini dilakukan di program pembelajaran tambahan bahasa Arab di BEM STIBADA MASA. Data dikumpulkan melalui observasi partisipatif, wawancara semi-terstruktur dengan tutor, orang tua, dan anak-anak, serta dokumentasi kegiatan pembelajaran. Data dianalisis secara tematik untuk mengidentifikasi pola yang terkait dengan keterlibatan anak-anak, pemahaman kosakata, motivasi belajar, dan interaksi instruksional. Temuan menunjukkan bahwa penggunaan kartu flash digital dan permainan interaktif berkontribusi secara positif terhadap peningkatan keterlibatan siswa, pemahaman yang lebih baik tentang kosakata dasar bahasa Arab, motivasi belajar yang lebih tinggi, dan interaksi yang lebih aktif antara anak dan tutor. Integrasi elemen visual, auditori, dan interaktif memungkinkan anak-anak menghubungkan masukan bahasa dengan pengalaman konkret dan aktivitas berbasis permainan, mendukung pembelajaran bahasa awal yang bermakna dan menyenangkan. Studi ini menyoroti potensi pedagogis Canva sebagai platform fleksibel untuk merancang media pembelajaran interaktif bahasa Arab bagi anak-anak.

Kata kunci: *pendidikan anak usia dini; pembelajaran bahasa Arab; kartu flash digital; permainan interaktif*

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I. PENDAHULUAN

The rapid development of digital technology has significantly reshaped how young children interact with information and learning environments. Exposure to moving visuals, animations, and digital games influences children's attention patterns and cognitive processing from an early age. These changes require pedagogical approaches, particularly in language learning, to adapt to the learning characteristics of children growing up in the digital era. In the Indonesian educational context, this phenomenon presents both challenges and opportunities for developing more relevant and meaningful Arabic language instruction (Faedurrohman & Hakim, 2023).

In educational practice in Indonesia, Arabic language learning is still predominantly positioned as a means of understanding religious texts and is often delivered through formal and text-based approaches. This orientation limits the development of Arabic learning experiences that are pedagogically designed for early childhood learners (Zaharo et al., 2024). Consequently, the introduction of Arabic at an early age has not been optimally developed as a foundation for contextual and sustainable language competence.

Early childhood language learning differs substantially from learning at higher educational levels (Faedurrohman & Hakim, 2023). Children at this stage experience rapid cognitive and linguistic development, making early childhood a critical period for language acquisition (Adhimah & Hasan, 2024). Children under six years old demonstrate strong language absorption abilities when learning involves active interaction, visual stimulation, and enjoyable activities (Hasan, Adhimah, et al., 2024). Therefore, Arabic language instruction at this level requires learning designs that align with children's developmental characteristics.

Despite this potential, Arabic language learning for early childhood learners faces various challenges. The structural complexity of Arabic, especially for Indonesian speakers, and differences in writing systems and pronunciation compared to the Latin alphabet often hinder early learning processes (Adi Wijayanto et al., 2024). These challenges are further exacerbated by the limited availability of learning media that are developmentally appropriate for young learners (Zahro & Kusrini, 2023).

Previous studies have emphasized the importance of innovative learning media in language education, particularly for young learners who often perceive foreign languages as difficult and less engaging (Setyawati & Hasan, 2024). Research indicates that visual and multimedia-based learning media, including images, animations, and interactive games, contribute positively to improving children's comprehension and learning engagement (Qodir & Hasan, 2024). Visual and digital media provide additional stimuli that support more effective information processing compared to purely verbal approaches (Hasan & Adhimah, 2024).

In the context of language learning, visual media have long been used to support early childhood learners in acquiring basic vocabulary (Jamil & Putri, 2021). With technological advancements, visual media have evolved into digital formats, such as digital flashcards equipped with audio and animation, which enable more dynamic and interactive learning experiences (A. P. Fitriani et al., 2021). Digital flashcards integrate visual and verbal representations simultaneously, a process explained by Dual Coding theory as enhancing comprehension and memory (Ramlah et al., 2023; Nachiappan, 2023; Hasan, 2023a). Additionally, the integration of interactive games supports participatory and play-based learning environments (Mahmudah & Rochma, 2022; Maftuhin & Junaedi, 2021).

Although prior research has demonstrated the benefits of visual and digital media in language learning, studies specifically examining the effectiveness of integrated digital flashcards and interactive games for early childhood Arabic language learning remain limited. In many educational settings, digital-based Arabic learning media have not yet been optimally utilized, despite their potential to support vocabulary acquisition and learner engagement (Hijarani & Nuraeni, 2023; Astini & STKIP, 2019; Hasan, Nurharini, & Hasan, 2024; Hadiyanto et al., 2024).

This gap indicates the need for empirical research that examines how digital flashcards and interactive games function as effective learning media in early childhood Arabic instruction. Specifically, there is a lack of studies that measure effectiveness not only in terms of vocabulary mastery but also in relation to children's learning engagement during the instructional process.

Therefore, this study aims to measure the effectiveness of Canva-based digital flashcards and interactive games in early childhood Arabic language learning. The effectiveness of these media is examined in terms of vocabulary acquisition and learner engagement. The findings of this study are expected to provide empirical evidence and pedagogical insights into the use of digital interactive media as an adaptive, engaging, and developmentally appropriate approach to early childhood Arabic language education.

II. METODE PENELITIAN

This study employed a descriptive qualitative approach aimed at providing an in-depth and contextual description of the implementation of digital flashcard–based learning media and interactive games in Arabic language learning for young learners (Creswell, 2014). The research was conducted at Arabic supplementary learning program BEM STIBADA MASA, which serves early childhood learners through non-formal instructional activities. This approach was selected to capture the learning process as it naturally occurs, particularly in understanding how children interact with digital media and how such media are perceived by teachers and parents within the instructional context.

Data were collected through participant observation, in which the researcher was directly involved in the learning activities to observe children's responses to the use of digital flashcards and interactive games. The observation focused on learners' engagement, intensity of participation, as well as visual and verbal responses during the learning process (Jumanta Hamdayana, 2018).

In addition, semi-structured interviews were conducted with teachers, parents, and children to obtain deeper insights into their experiences and perceptions regarding the use of digital learning media in Arabic

language instruction. The interviews explored aspects such as media usability, attractiveness, and perceived effects on children's learning motivation and engagement.

To strengthen the research findings, documentation in the form of field notes, photographs, and recordings of learning activities was also collected as supporting data. This documentation provided visual and contextual evidence of the implementation of digital flashcards and interactive games during the instructional process (Muhbib Abdul Wahab, n.d.).

The collected data were analyzed using thematic analysis by identifying recurring patterns and themes related to children's learning engagement, vocabulary comprehension, and learning motivation in Arabic language learning. The analysis was conducted systematically and iteratively to ensure that the findings accurately reflected the learning conditions in a comprehensive and in-depth manner.

III. HASIL DAN PEMBAHASAN

Before presenting the research findings, it is important to clarify that Arabic language learning in this study focused on body-part vocabulary. This selection was based on pedagogical considerations, as body parts represent concrete concepts that are closely related to children's daily experiences and are easily visualized and integrated into digital flashcards and interactive games. Focusing on body-part vocabulary allows children to connect language with sensory experiences and play-based activities, thereby encouraging active engagement in the learning process, as emphasized in cognitive developmental theory which positions concrete experiences as the foundation of early learning (Piaget, 1970).

The learning conditions of early childhood Arabic instruction before and after the implementation of Canva-based digital flashcards and interactive games are presented in Table 1. Overall, the results indicate improvements across all observed learning aspects, including learner engagement, basic vocabulary comprehension, learning motivation, child–tutor interaction, and interest in Arabic learning.

Table 1. Comparison of Early Childhood Arabic Learning Conditions Before and After the Implementation of Digital Flashcards and Interactive Games

No	Learning Aspect	Before	After
1	Learner engagement	52%	82%
2	Basic vocabulary comprehension	45%	78%
3	Learning motivation	58%	87%
4	Child–tutor interaction	48%	83%
5	Interest in Arabic learning	55%	86%

The data presented in Table 1 demonstrate that the implementation of digital learning media positively impacted the Arabic learning process for young learners. Prior to the use of digital media, children's engagement in learning activities was moderate and tended to be passive. Following the introduction of digital flashcards and interactive games, learner engagement increased significantly, as indicated by higher levels of active participation, responsiveness to instructions, and enthusiasm during game-based learning activities. These findings suggest that digital visualization effectively captures children's attention and sustains their involvement in the learning process (Ardiana, 2021; Melisa & Halim, 2021), aligning with Vygotsky's (1978) assertion that learning occurs most effectively through activity and social interaction.

Improvements were also observed in children's comprehension of basic Arabic vocabulary. Before the implementation of digital media, vocabulary understanding was limited and largely dependent on repetition. After the use of digital flashcards and interactive games, vocabulary comprehension increased substantially. The visual presentation of body parts through digital media helped children associate visual forms, sounds, and meanings more effectively, in accordance with their cognitive developmental stage (Jamil & Putri, 2021; Hasan & Machmudah, 2022). This process is consistent with Dual Coding Theory, which posits that information presented through both visual and verbal systems is more easily processed and retained (Paivio, 1986).

From a learning theory perspective, these findings are consistent with the principles of Multimedia Learning Theory, which emphasize that learning is enhanced when information is presented through integrated visual and verbal representations (Mayer, 2001, 2009). The digital visualization of vocabulary also contributes to reducing children's cognitive load, as information is delivered in a more accessible format compared to verbal explanation alone (Sari, 2022), in line with Cognitive Load Theory, which highlights the limited capacity of working memory (Sweller, 1988; Sweller et al., 2011).

The observed increase in learning motivation and instructional interaction indicates that visually based digital media can create a more enjoyable and less monotonous learning environment. Learning activities designed as interactive games provide relevant and engaging learning experiences, encouraging children's active participation (A. P. Fitriani et al., 2021; Hasan, 2023c). Within the framework of Self-Determination Theory, such active involvement can be understood as a driver of intrinsic motivation, as children are given opportunities to

participate, explore, and experience competence in the learning process (Deci & Ryan, 2000; Allya Syafira & Hatta, 2023).



Gambar 1: https://mywarna.my.canva.site/a-tubuh-audio-20251224-054539-0000-pptx

To support the learning of body-part vocabulary, a set of basic Arabic lexical items appropriate for early childhood learners was employed, including رَأْس (ra'sun), عَيْن ('aynun), أَنْف (anfun), and يَد (yadun). These vocabulary items were presented through clear visual illustrations accompanied by audio pronunciation in digital flashcards, while interactive games were used to reinforce comprehension through activities such as pointing, matching, and responding to simple instructions. This approach enables children to build associations between language and concrete experiences, consistent with schema-based learning principles (Piaget, 1970).



Gambar 2: https://mywarna.my.canva.site/dag8wc9onek

Beyond cognitive and motivational outcomes, the use of digital flashcards and interactive games also contributed to increased children's interest in Arabic learning. Engaging visual representations and interactive learning activities helped reposition Arabic as an enjoyable and accessible subject rather than a difficult or monotonous one (Cendana et al., 2022; Hasan, 2023b).

From a constructivist perspective, learning that involves observation, action, and interaction allows children to actively construct knowledge through meaningful experiences (Subarjo et al., 2023). Digital visual media and interactive games provide opportunities for direct interaction with learning materials, aligning with the principles of Constructivist Learning Theory, which emphasize the importance of concrete and socially mediated experiences in learning (Piaget, 1970; Vygotsky, 1978; Ramlah et al., 2023). Overall, these findings confirm that the design of visually based digital learning media tailored to children's developmental characteristics plays a crucial role in enhancing the quality of Arabic language learning in early childhood.

IV. SIMPULAN DAN SARAN

This study concludes that the implementation of Canva-based digital flashcards and interactive games is effective in enhancing Arabic language learning for early childhood learners. The findings indicate improvements in learner engagement, basic vocabulary comprehension, learning motivation, instructional interaction, and children's interest in Arabic learning. The integration of visual and interactive elements enables children to connect language input with concrete experiences and play-based activities, thereby fostering active participation and supporting early language development in a meaningful and enjoyable manner.

From a pedagogical perspective, the results underscore the importance of developmentally appropriate digital learning media in early childhood Arabic education. The use of Canva provides a practical and flexible platform for designing interactive learning materials that align with the characteristics of young learners in the digital era. While this study is limited to a descriptive qualitative design and a specific vocabulary focus, it offers valuable empirical insights into the effectiveness of digital flashcards and interactive games. Future research is recommended to explore their impact on broader language skills and to employ more rigorous research designs to strengthen evidence on digital media use in early childhood Arabic language learning.

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