

THE IMPACT OF EDUCATIONAL VIDEOS ON EARLY CHILDHOOD PERCEPTION: A SYSTEMATIC REVIEW

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Abstract

Using thematic systematic analysis, this study investigates the impact of educational videos on the perceptual development of preschoolers, with a specific focus on enhancing their vocabulary and reading skills and overall language skill development in preschool children. A thematic organized method was used to investigate the evolution of perception in childhood. A systematic strategy was employed to locate and evaluate relevant studies on the impact of instructional videos on the development of young children. Studies that examined preschool education and offered proof of the effectiveness of instructional videos were among the selection criteria. Moreover, the review only considered articles published in English or Arabic or with an accessible English translation. The review was conducted without a time limit and involved a thorough analysis across multiple databases. The findings show that more research is required to determine how successful video games are in improving preschoolers' language skills in Arab-speaking countries. To close this gap, future studies must examine the linguistic subtleties and cultural significance of learning Arabic through gaming platforms.

Keywords: Educational videos, preschool children, perception, regarding enhancements in vocabulary acquisition, reading abilities, and overall understanding.

Introduction

Early Childhood Education (ECE) is a critical developmental phase in a child's life that lays the foundation for their future cognitive and social growth. The importance of immediate action during this stage cannot be exaggerated, as it can significantly impact a child's academic prosperity. Resources and support during this period are required to ensure preschool children receive the appropriate teaching methods and learning environments that cater to their unique needs. Rooted in a rich history, ECE aims to achieve more than just preparing children for traditional academic systems. Its primary goal is to cultivate young minds that are curious, capable, compassionate, and engaged citizens, recognizing that the early years of a child's life are important for their learning and development (Essa and Burnham,2019).

The formative stage of early childhood education (ECE) is critical for the comprehensive development of a child and should not be viewed merely as a preparatory phase for compulsory schooling. In this regard, multimedia tools have emerged as significant components of ECE.

Specifically, in this paper, multimedia tools refer to various interactive digital media, with educational videos as a prime example. The use of multimedia tools in ECE is justified by their ability to engage multiple senses simultaneously, providing a natural and engaging tool for learning (American Academy of Pediatrics,2016).

Educational videos have gained popularity in Early Childhood Education (ECE) due to their informative and visually appealing content, which is easily understandable for young learners. Presented in a multimedia format, videos can enhance cognitive development, improve information retention, and elevate the learning experience. They can transform abstract concepts into relatable visuals, providing a tangible understanding of complex ideas. This is especially important as young children may struggle with abstract concepts. Videos can bridge this gap between the abstract and the concrete, making learning more effective and engaging (Yaqoob and Mansoor,2018).

This study conducted a systematic review to assess the influence of educational videos on early childhood learning. The researchers employed a thematic structured approach to analyze the development of perception in early childhood through a comprehensive process involving multiple data analysis stages. A meticulous methodology was used to identify and analyze relevant studies on the effects of educational videos on early childhood development. The selection criteria included studies focused on preschool education and provided evidence of the impact of educational videos. Furthermore, only articles published in English or Arabic or with an available English translation were considered for the review. An extensive analysis across various databases was performed, and the review was not limited to a specific time frame. The findings were extracted, and the data was categorized into comprehensive tables for detailed analysis and comparison. It is important to note that only one study (Fitriyana, 2022) was chosen for elementary schools for non-Arabic speaking learners whose language level is similar to the preschool level.

1.1 Research Question:

How does the utilization of educational videos influence the development of perception in early childhood, specifically regarding enhancements in vocabulary acquisition, reading abilities, and overall understanding?

1.2 Objectives:

- To systematically identify, assess, and synthesize the current body of research examining educational videos' influence on early childhood vocabulary acquisition.
- To evaluate the impact of using educational videos on enhancing reading skills among preschool children.
- To understand the role of educational videos in improving perception and understanding within the early childhood age group.
- To identify gaps in the existing literature and provide recommendations for future research in this area.

1. Methodology

This methodology demonstrates research strategy, study selection process, and data extraction

2.1. Research Strategy

The initial phase of the study involved a comprehensive and systematic identification of relevant literature. The study is Thematically structured. The following flowchart is deployed in the study to organize the review, as shown in Figure 1.

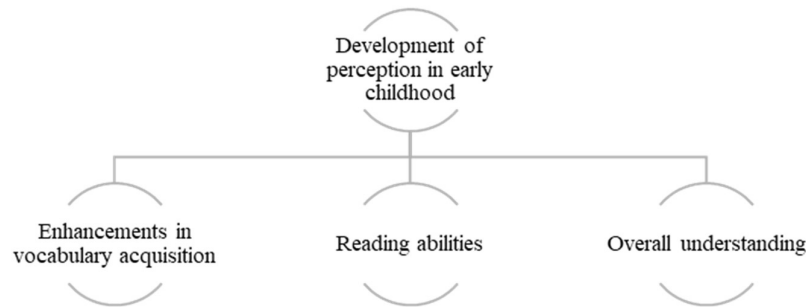


Figure 1: Focus on the effect of early childhood educational videos on the development of perception.

Criteria were utilized to select only studies that directly addressed the impact of educational videos on early childhood development. The studies included had to focus on the preschool years, be published in English and Arabic, or be in other languages with English translation. The studies selected constitute sound empirical or research reports. Exclusion criteria included studies outside the stipulated age range, anecdotal accounts, commentaries, editorials, or conference papers. Multiple databases, including Saudi SDL, PsycINFO, ERIC (Education Resources Information Center), and Google Scholar, were searched to ensure a comprehensive and unbiased overview of the existing literature. Relevant studies were excavated using keywords such as "educational videos," "early childhood development," "child learning outcomes," "educational media impact," and their derivatives.

2.2 Study Selection Process

After a detailed literature search, all the records obtained were transferred to the EndNote citation manager for initial screening. Duplicate articles were identified and removed promptly. The remaining articles' titles and abstracts were carefully reviewed to determine their relevance to the study. Any reports that did not address the main objective were eliminated.

After a thorough analysis, The well-fitting options were closely examined to ensure they matched the selection standards. If they didn't, these studies were excluded. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach was implemented to explain how many documents were looked at, reviewed, appropriate, and included in the final report. A detailed illustration of this process can be found in Figure 2.



Figure 2: study selection process

2.3. Data Extraction

A standardized data extraction form was utilized to maintain accuracy and consistency while extracting relevant variables and information from the selected studies. The relevant variables and information, including authors, publication year, country, study design, sample size, participant demographics, method of educational video utilization, outcome measurements, and key findings, were all recorded in the data extraction form. The collected data was synthesized through a narrative review approach, allowing for comprehensive and contextual interpretation of the various study results. Meta-analytic techniques were applied for data analysis, particularly for studies with comparable methodologies and outcome measurements. Proper statistics were used across studies to ensure reliability and validity, and all extracted data were rigorously inspected and cross-checked.

Table 1: List of Articles in Development of perception in early childhood	
Level 1: Enhancements in vocabulary acquisition	
Ruo Wei Chen and Kan Kan Chan, Journal of Educational Computing Research, Volume 57, 2019	Using Augmented Reality Flashcards to Learn Vocabulary in Early Childhood Education
Çekiç, Ahmet Journal of Educational Technology, v19 2022.	Incidental L2 Vocabulary Learning through Listening vs. Viewing: The Role of Visual Aid
Soraya Aldena Al Maqayis: Jurnal Pendidikan Bahasa Arab dan Kebahasaarabanp-2021	Developing Songs for Children to Upgrade the Arabic Vocabulary Comprehension

Level 2: Reading abilities	
Americo N. Amorim, Lieny Jeon, and Natália Martins Dias AERA- <u>Volume 49, Issue 3</u>	Using Escribo Play Video Games to Improve Phonological Awareness, Early Reading, and Writing in Preschool
Fitriyana, Ana (2022) (Arabic Education Program. Postgraduate of Kyai H. Ahmad Siddiq State Islamic University of Jember. Supervisor: Dr. H. Syamsul Anam, M.Pd and Dr. Maskud, S.Ag., M.Si.	The Development of Learning Media for speaking & reading skills via youtube at SD Al-Baitul Amien Full Day School Jember
Khadijah; Pulungan, Enny Nazrah; Hariati, Rizki; Maisarah International Journal of Language Education, v6 n1 p25-35 2022	Developing the Educational Game Tool to Improve Reading Ability of Early Childhood
Level 3: Overall understanding	
Borzekowski, Dina L. G. Lando, Agnes Lucy Olsen, Sara H.Giffen, Lauren International Journal of Early Childhood: Journal of OMEP: l'Organisation Mondiale pour l'Education Prescolaire. 51(1):109-126	The Impact of an Educational Media Intervention to Support Children's Early Learning in Rwanda
Sadik, Alaa M.; Badr, Khadeja Journal on Educational Psychology, v5 n3 p21-34 Nov 2011-Jan 2012	The effectiveness of classroom-based supplementary video presentations in supporting emergent literacy development in early childhood education
Ellen Wartella , Rebekah A. Richert , Michael B. Robb Developmental Review Volume 30,2010	Babies, television, and videos: How did we get here?
Yaqoob, N., Bibi, T., & Mansoor, M. O. (2018). Journal of Early Childhood Care and Education Vol. 2, 2018	Early childhood learning videos on youtube: a thematic analysis of viewer's perceptions

2. Research Findings

2.1. Enhancements in vocabulary acquisition Focus

Each exploration of educational videos can be valuable for comprehending how to create engaging and high-quality online activities, courses, and programs. Understanding the intricacies of different teaching methods and refining instructional approaches can assist educators and instructional designers in developing and providing new online courses. However, there may be a need to comprehend the bigger picture of the online learning system. The articles in this section offer a systems-level perspective and investigate the components and factors that boost the quality of online courses and promote learner success. These results align with the (Fitriyana, 2022) study highlighting the stages of language skills development for Arabic as a second language in a school with a few Arabic-speaking teachers and students. Children enjoy singing, and if physical movements accompany the songs they listen to, they find it even more enjoyable. Vocabulary is crucial for communication. Teaching it through themes is effective for elementary language learners. Research Trends in Early Childhood Educational Videos in enhancement in vocabulary includes:

1. Interactivity: That means they have games, quizzes, and stories that children can participate in. as appeared in (Chen and Chan, 2019), a study that stresses the positive impact on engagement and excitement while using technology.
2. The usage of many different senses: According to (Çekiç,2022), children learn best when seeing, then by hearing. So, these videos use bright colors, music, and movements to help children remember new words and ideas.
3. Celebrate diversity: All chosen studies (Çekiç,2022), (Chen and Chan, 2019), and (Aldena,2021) offer topics that reflect the diversity and different cultures and backgrounds. This way provides a good way for children to gain vocabulary from diverse sources.
4. Parental Engagement: Many studies, such as (Çekiç,2022), highlight that parents can help their children to learn better by talking about what they see, even when watching videos. Some videos even include tips for parents to make learning even more fun.
5. The quality of educational videos designed to teach children new vocabulary has significantly improved in recent years. Thanks to technological advancements, creators can now produce videos that are not only informative but also entertaining and captivating for young minds. Several factors contribute to the success of these videos, including their ability to engage children through interactive features, use of visual aids, and employing storytelling techniques. Overall, these videos have proven to be a valuable tool for early childhood education.

3.2 Reading abilities Focus

Witnessing the promising results of research focused on developing preschoolers' reading skills through educational videos and game tools is captivating.

Recent research has highlighted the effectiveness of educational videos and game tools in improving reading skills among preschoolers. In a study by Khadija and colleagues 2020, preschool children showed a remarkable improvement of 90.32% in their reading skills. However, the study also identified minor areas for improvement, and validators raised concerns about the potential influence of the product's attractiveness on its effectiveness.

Over time, research trends in early childhood educational videos have evolved to align with the developmental needs of young learners. Pioneering studies by Amorim et al. in 2020 and Fitriyana in 2022 identified several important trends that are reshaping educational videos and making them more effective at improving reading skills among preschoolers. These trends include:

1. **Phonics Emphasis:** Educational videos emphasize the relationship between letters and sounds, which is fundamental in boosting reading skills by facilitating phonetic comprehension.
2. **Sight Words and Vocabulary:** Educational videos now incorporate engaging stories and interactive games tailored to impart high-frequency words, fostering increased reading fluency among preschoolers.
3. **Narrative Comprehension:** Story-based videos enhance children's grasp of story elements, significantly bolstering their comprehension abilities.
4. **Visual Supports:** Educational videos now integrate illustrations, text highlights, and animated aids that reinforce word recognition and comprehension, thus aiding in effective learning outcomes.
5. **Interactive Learning:** Educational videos ingeniously incorporate games that actively engage children in a spectrum of reading-related activities, fostering participative learning experiences.

The evolution of research trends in early childhood educational videos demonstrates a paradigm shift towards more engaging and targeted approaches to augment preschoolers' reading skills. While Khadija et al.'s study revealed substantial improvements, considering attractiveness as a factor in effectiveness prompts further exploration. Understanding these trends provides valuable insights into the future design and utilization of educational videos tailored to enhance reading skills among preschool children.

3.3. Overall understanding Focus

Research on trends in educational videos for young children has evolved to focus on their holistic development. This can be seen in studies like (Borzekowski et al., 2019) and (Sadik & Badr, 2012), which have shown significant improvements in integrating language skills such as reading and speaking. Another trend is the inclusion of various aspects that contribute to comprehensive learning experiences, as demonstrated by (Wartella et al., 2010) and (Yaqoob et al., 2018).

Some of the key trends that have emerged in educational videos for young children include:

1. **Multisensory Engagement:** Videos combine auditory, visual, and sometimes tactile elements to stimulate multiple senses. This results in better comprehension and retention of concepts.
2. **Conceptual Learning through Play:** Educational videos integrate playful learning experiences to introduce and reinforce abstract concepts. This approach helps children understand complex ideas more tangibly and enjoyably.
3. **Cross-Curricular Integration:** Rather than focusing on isolated subjects, videos integrate various disciplines such as language, math, science, and social studies. Encouraging children

to establish connections between various areas of knowledge can aid in developing a more comprehensive understanding of the world.

4. Cognitive Development Stages: Educational videos are designed to consider the cognitive developmental stages in early childhood. Content creators align their material with age-appropriate cognitive milestones, ensuring that concepts are presented developmentally appropriately.

5. Visual Storytelling Techniques: The use of storytelling techniques helps present information in a narrative format. This storytelling approach captures children's attention, aids in information retention, and helps them understand complex ideas through relatable contexts.

6. Interactive and Inquiry-Based Learning: Videos encourage interaction and inquiry, prompting children to ask questions, explore, and discover answers. This fosters curiosity, problem-solving skills, and a deeper understanding of concepts.

7. Adaptive and Personalized Learning: Some videos incorporate adaptive learning technologies, tailoring content to individual learning styles and pacing. This personalized approach optimizes understanding by catering to each child's unique needs.

3. Conclusion

Extensive research has been conducted on the impact of video games in enhancing the language skills of preschoolers. However, there is a significant research gap in the Arab world. Despite the increasing attention to educational technology and its potential advantages, there is a need for further research on the effectiveness of video games specifically designed to enhance language skills in preschoolers within Arab-speaking regions. Future research must investigate the cultural relevance and linguistic nuances pertinent to Arabic language acquisition through gaming platforms to address this gap. Adopting this approach can effectively bridge the gap between educational technology and language development in the preschool demographic and ensure our young learners receive the best education possible.

Moreover, while existing studies have emphasized either reading or writing skills, there needs to be more research that holistically examines how video games can synergistically enhance these fundamental language competencies in young learners. Thus, it is crucial to understand the interconnectedness between reading and writing within the realm of video game-based learning to develop comprehensive educational strategies tailored to the preschool demographic.

Furthermore, research endeavors concentrating on the listening-speaking domain in preschoolers within the context of video game interventions are limited. While reading and writing have garnered considerable attention, studies focusing on the oral aspects of language development, such as listening and speaking skills, need to be more extensive. Thus, investigating how video games can effectively engage preschoolers to enhance their verbal communication, listening comprehension, and speaking proficiency represents an essential avenue for further research.

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