IMPLEMENTING CANVA IN PRESCHOOL EDUCATION: AN EXPERIMENTAL STUDY ON DIGITAL VISUAL LEARNING[i]

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Abstract:

This research investigates the effects of incorporating Canva, a digital graphic design tool, into the preschool educational environment. The study was conducted at Kindergarten "Ralitsa" in Voyvodinovo, Bulgaria, during the 2024/2025 academic year, involving two cohorts of five children aged 6 to 7 years. The experimental cohort participated in learning activities enhanced with Canva-based visual tasks and interactive games, whereas the control cohort followed conventional teaching methods. Findings indicate that the experimental group exhibited significant advancements in cognitive abilities, verbal expression, creativity, attention regulation, independence, and social engagement. These results underscore the potential of digital visual platforms to foster comprehensive developmental outcomes in early childhood education. The paper discusses the implications of integrating Canva as an effective, engaging, and accessible educational resource for practitioners aiming to innovate pedagogical practices through digital technologies.

Keywords: Canva, preschool education, digital learning, early childhood development, visual learning tools, educational technology

Резюме:

Настоящото изследване разглежда ефектите от въвеждането на Canva – дигитален инструмент за графичен дизайн – в предучилищната образователна среда. Проучването е проведено в ДГ „Ралица“, с. Войводиново, България, през учебната 2024/2025 година и включва две групи по пет деца на възраст от 6 до 7 години. Експерименталната група участва в обучителни дейности, обогатени с визуални задачи и интерактивни игри, създадени с помощта на Canva, докато контролната група следваше традиционни методи на преподаване. Резултатите показват, че децата от експерименталната група демонстрират значителен напредък в когнитивните умения, вербалната изразителност, креативността, уменията за

съсредоточаване, самостоятелността и социалното взаимодействие. Изводите подчертават потенциала на дигиталните визуални платформи да подпомагат цялостното развитие в ранното детство. Статията разглежда и възможностите за интегриране на Canva като ефективен, достъпен и ангажиращ образователен ресурс за педагози, стремящи се към иновации чрез дигитални технологии.

Ключови думи: Canva, предучилищно образование, дигитално обучение, ранно детско развитие, визуални обучителни инструменти, образователни технологии

1. Introduction

In the era of digital transformation, early childhood education is progressively integrating interactive and visual technologies to enhance learning outcomes. Canva, a widely adopted online graphic design platform, provides engaging and child-friendly visual content that can facilitate both cognitive and emotional development. While digital tools have been extensively utilized in primary and secondary education, their application within preschool settings remains relatively underexplored. This study aims to investigate the potential of Canva to enrich preschool learning environments through an experimental approach, thereby contributing to the growing body of research on digital innovation in early childhood education (e.g., 1).

Recent literature illustrates that Canva's intuitive interface and versatile design features offer unique opportunities to represent abstract concepts in a tangible and appealing manner, which is particularly beneficial for young learners at early developmental stages. For instance, by enabling the creation of visually stimulating learning materials such as storybooks, posters, and interactive activities, Canva supports the development of attention span, language skills, and creativity among preschool children. Furthermore, the platform's capacity to foster collaboration through shared projects aligns with constructivist educational theories that emphasize social interaction as pivotal for knowledge construction.

Despite the well-documented advantages of digital tools in upper educational levels, the relative scarcity of empirical research focusing on preschool contexts signals a critical gap. This study addresses this gap by providing empirical insights and practical implications for integrating Canva into early childhood curricula. By doing so, it not only enriches the instructional repertoire available to educators but also responds to the developmental and motivational needs of children born into a digitally saturated environment.

Moreover, the findings from this investigation are expected to contribute to evidence-based pedagogical frameworks that promote inclusive and differentiated instruction. Given Canva's accessibility and adaptability, educators can customize learning experiences to cater to the diverse cognitive, social, and emotional profiles characteristic of preschool populations. Thus, integrating Canva into early childhood education has the potential to enhance holistic development and prepare children for the

demands of 21st-century learning, fostering essential digital literacy and creative competencies from an early age.

Future research should continue to explore the longitudinal effects of such digital interventions and examine strategies to optimize their integration, ensuring equitable access and meaningful engagement across varied early learning settings.

2. Research Objective

The primary objective of this study is to assess the effectiveness of integrating Canva into preschool instruction and its impact on enhancing learning outcomes and holistic development among children aged 6 to 7 years. Specifically, the study aims to evaluate improvements in cognitive skills, language development, creativity, motivation, and social interaction facilitated by Canva-based activities. Additionally, the research seeks to explore educators' perceptions of digital tool integration and identify potential challenges and best practices for implementing Canva within early childhood education settings. Ultimately, the study aspires to contribute empirical data that inform evidence-based strategies for incorporating innovative visual technologies to support inclusive and differentiated instruction in preschool curricula.

3. Methodology

3.1 Participants
A total of 10 children were involved, divided into an experimental group (n=5) and a control group (n=5).

3.2 Setting
The study was conducted at Kindergarten "Ralitsa" located in Voyvodinovo, Bulgaria.

3.3 Age Group
Participants belonged to the fourth preschool group, aged between 6 and 7 years.

3.4 Duration
The intervention spanned six months during the 2024/2025 academic year.

3.5 Data Collection
Data were gathered through systematic observation, teacher journals, and analysis of children's activities.

The experimental group engaged in interactive learning activities utilizing Canva, including digital storytelling, matching games, visual puzzles, and collaborative poster creation. Conversely, the control group received traditional instruction based on standard paper-based lessons. (e.g. 2, 4)

This methodological approach aligns with prior research emphasizing the value of digital visual tools in education to enhance engagement, motivation, and cognitive development. Triangulation of observational and qualitative data ensured the validity and reliability of findings.

4. Results and Discussion

The experimental group consistently outperformed the control group across all measured indicators, demonstrating the substantial benefits of integrating Canva into preschool instruction. The use of Canva-enhanced activities significantly increased children's engagement, comprehension, and active participation during lessons. Visual content, presented through Canva's user-friendly platform, enabled children to articulate ideas with greater clarity and confidence, fostering enhanced language expression and communicative skills. Moreover, the visually rich and interactive nature of the tasks encouraged children to approach problem-solving with increased creativity and flexibility, supporting the development of critical thinking and innovation (e.g., 3, 5, 6).

These findings suggest that Canva's integration not only promotes academic skills but also contributes to the growth of intrinsic motivation and learner autonomy. Children in the experimental group showed a marked willingness to explore and experiment, indicative of a positive shift towards self-directed learning. This underscores the potential of digital visual tools to transform traditional pedagogical approaches by creating more dynamic and inclusive learning environments that cater to diverse learner profiles and foster holistic development.

Table 1: Development Indicators (Average Scores on a 5-point Scale)

Indicator	Control Group	Experimental Group
Cognitive development	3.2	4.6
Attention and concentration	3.4	4.8
Language expression	3.1	4.5
Creative thinking & imagination	3.3	4.9
Collaboration and teamwork	3.5	4.7
Motivation to participate	3.0	5.0
Autonomy	3.2	4.6

4. Discussion

The present study's findings align with a growing body of contemporary research in early childhood education, indicating that the purposeful integration of digital tools can effectively facilitate the acquisition of essential developmental skills. Canva's visually rich templates and interactive features render abstract concepts more concrete and accessible for young learners, thereby fostering both cognitive and linguistic development.

Moreover, the collaborative dimension embedded in digital activities encourages social interaction and teamwork, key components in early socio-emotional growth. Concurrently, the design-centered tasks stimulate creative thinking and imaginative exploration, which are fundamental for the development of higher-order cognitive processes. Notably, the significant improvements observed in children's motivation and autonomy within the experimental group further affirm the capacity of digital visual platforms to nurture a broad spectrum of competencies, encompassing academic, personal, and social domains (e.g., 6, 7).

An additional advantage of Canva lies in its accessibility and intuitive user interface, which afford educators the flexibility to tailor activities in accordance with diverse learner profiles. This aspect is particularly critical in early childhood education, where developmental trajectories and learning needs can vary substantially. Such adaptability enhances inclusive pedagogical practices and supports differentiated instruction, both recognized as best practices in fostering optimal developmental outcomes.

In sum, these findings underscore the strategic value of integrating digital visual tools like Canva into preschool curricula. Doing so not only promotes holistic child development but also prepares learners to meet the complex demands of the 21st century. Embedding innovative digital technologies within early educational contexts enriches the learning environment and equips children with vital digital literacy skills. This foundational digital competence is indispensable for their academic progression and broader societal participation in an increasingly technology-mediated world.

Future research should continue to investigate the long-term impacts of digital tool integration on early development and explore how such platforms can be optimized to support diverse learning needs, thereby contributing to evidence-based pedagogical frameworks in early childhood education.

5. Conclusion

This study provides empirical evidence that the integration of Canva into preschool instruction has a positive impact on children's overall development. The findings demonstrate significant improvements in attention, creativity, language expression, and motivation among children exposed to Canva-based activities. These results highlight the potential of digital visual tools to enrich early learning experiences and support the holistic growth of young learners.

Given the increasing prevalence of digital technologies in children's lives, educators are encouraged to incorporate such innovative platforms into early childhood education. Doing so can better address the developmental needs of today's digital-native generation and foster essential skills for lifelong learning. Furthermore, by integrating tools like Canva, educators can create more engaging and interactive lessons that resonate with children's multimodal learning preferences. This not only nurtures critical cognitive and communicative abilities but also empowers children to become confident

creators and problem solvers in a digital world. Ultimately, embracing digital visual tools in early education can contribute to bridging the gap between traditional teaching approaches and modern technological advancements, ensuring that young learners thrive in an increasingly digital society.

Conflict of Interest Statement
The author declares no conflicts of interest.

About the Author(s)
Elena Boncheva is a qualified preschool teacher currently working at Kindergarten "Ralitsa" in Voyvodinovo, Bulgaria. She holds two master's degrees: one in International Economic Relations and another in Pedagogy, the latter marking the beginning of her dedicated career in early childhood education since 2023. Prior to her pedagogical qualification, Elena gained extensive professional experience in the economic sector, specifically within the Fast-Moving Consumer Goods (FMCG) industry, where she held various leadership roles. This diverse background enriches her educational philosophy and practical approach. Elena's research interests focus on the implementation of modern software applications, digital platforms, and tools for creating interactive visual content that facilitate young children's deeper understanding of otherwise complex concepts. She places special emphasis on early childhood education, considering this developmental period critical for establishing foundational skills, knowledge, and competencies essential for lifelong learning. This publication represents Elena's first scientific article. Importantly, it constitutes a natural and anticipated extension of the research conducted as part of her master's thesis work, entitled "Forming Mathematical Concepts in Preschool Children through Block Programming." The article presents the findings of a pilot study carried out during the 2024–2025 academic year that forms a component of an ongoing empirical investigation. This research endeavor aims to substantiate the hypothesis that digital competence among preschool educators is an indispensable prerequisite for effective and modern pedagogical interaction. Moreover, it highlights how the incorporation of digital content within the learning process facilitates children's comprehension of challenging concepts. While Elena actively utilizes ResearchGate mainly as a platform to explore academic literature and scientific publications, she is currently in the initial stages of developing her own publication portfolio and does not yet maintain profiles on additional academic networking sites such as ORCID or Academia.edu. Her work is deeply motivated by both professional commitment and personal experience as a parent, striving to integrate innovative pedagogical methodologies with technological tools to foster creativity, engagement, and cognitive growth among preschool learners.

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