

Educaplay as a Pedagogical Strategy for the Strengthening of Reading and Writing Skills in Basic Primary

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Abstract

This study analyzes the implementation of the Educaplay platform as a pedagogical strategy to strengthen the teaching-learning processes of reading and writing in third-grade primary school students in Montería, Colombia. Using a quantitative approach and the Pedagogical Action Research model, interactive activities incorporating multimedia elements were designed and evaluated. The findings show significant improvements in literal and inferential levels of reading comprehension, as well as slight progress in critical reading skills. Moreover, students demonstrated increased motivation toward reading, enhanced reading habits, and expanded their ability to tackle narrative and non-continuous texts. This study highlights the importance of integrating innovative technological tools to foster reading and writing skills from an early age.

Keywords: Educaplay, reading, writing, reading comprehension skills, ICT, basic education, motivation.

Introduction

Context and Problem Statement

The development of reading and writing skills is an essential component in basic education, since these skills are not only fundamental for academic performance, but also for the comprehensive education of students. However, various studies in the Colombian context, such as the results of the Saber Tests (ICFES, 2020), have shown significant difficulties in reading comprehension and written expression of primary school students, especially at literal and inferential levels. These problems are aggravated by the lack of innovative pedagogical strategies and the limited use of technological tools that motivate and stimulate learning.

In this scenario, Information and Communication Technologies (ICTs) emerge as a potential solution to transform traditional educational processes. Platforms such as Educaplay offer interactive resources that integrate multimedia elements, such as quizzes, word searches, and digital narratives, designed to capture students' attention and foster meaningful learning. According to García and Torres (2021), these tools not only promote intrinsic motivation, but also enhance the development of key competencies by connecting educational content with students' interests.

In Montería, Colombia, difficulties in the reading and writing processes are aggravated by socioeconomic factors and a limited incorporation of technological tools in the classroom. Therefore, it is necessary to design strategies that combine pedagogy and technological innovation to respond to current educational needs and prepare students for the challenges of the twenty-first century.

Brief Literature Review

The integration of Information and Communication Technologies (ICT) in education has transformed traditional teaching dynamics, providing innovative tools to address difficulties in reading and writing skills. Previous research highlights that interactive platforms such as Educaplay offer a dynamic approach that combines multimedia elements, gamification, and personalized activities to capture students' attention and improve their academic performance (Hamari et al., 2014).

In the field of reading, the use of ICT platforms has proven to be effective in strengthening literal and inferential levels of comprehension. According to Solé (2006), these tools allow students to interact with texts in a meaningful way, developing skills to identify explicit information and relate implicit ideas. Studies such as those by García and Torres (2021) underline that

activities such as interactive quizzes and word games promote active participation and collaborative learning, increasing motivation and interest in reading.

In terms of writing, ICTs facilitate immediate feedback processes that improve the quality of texts produced by students. Platforms such as Educaplay offer guided writing exercises and automatic correction, allowing students to identify errors and perfect their skills autonomously. In addition, research such as that of Hernández and Fernández (2019) highlights that these tools promote creativity and self-confidence in textual production, especially at an early age.

Despite these advances, gaps persist in the implementation of ICT in vulnerable educational contexts, where factors such as limited access to devices and lack of teacher training hinder their effective integration. This study seeks to contribute to the field of education by exploring how the Educaplay platform can be used as a pedagogical tool to address reading and writing difficulties in third grade students in Montería, Colombia.

The main objective of this study was to evaluate the impact of the Educaplay platform as a pedagogical strategy to strengthen reading and writing skills in third grade students in Montería, Colombia.

This article is organized into five main sections. In the first section, the introduction is presented, which contextualizes the problem, reviews the relevant literature, and defines the objectives of the study. The second section develops the theoretical framework, which delves into the conceptual foundations of reading and writing skills, as well as the role of ICT in learning. The third section describes the methodology of the study, including the design, participants, instruments, and analysis procedure. In the fourth section, the results obtained are presented, accompanied by a discussion that relates the findings to previous studies. Finally, the fifth section concludes with a summary of the main contributions of the study, the limitations identified and recommendations for future research.

Theoretical Framework

Reading and Writing Skills: Conceptual Foundations

Reading and writing skills are fundamental skills in the comprehensive education of students, as they are key to the development of critical thinking and autonomous learning. According to Solé (2006), reading comprehension involves three main levels: literal, inferential, and critical. The literal level focuses on identifying explicit information in a text, while the inferential level requires interpreting implicit relationships and extracting underlying meanings. On the other hand, the critical level involves evaluating, reflecting and making judgments about the content and purpose of the text.

In the case of writing, this competence not only involves the ability to produce coherent and well-structured texts, but also the ability to communicate ideas effectively and adapt to different contexts and purposes. According to Cassany (2003), writing development requires a progressive approach that combines guided activities, constant feedback, and opportunities for creative practice.

Various studies have indicated that students at an early age face significant difficulties in these competencies, especially in vulnerable socioeconomic contexts. These difficulties include a lack of motivation to read, a limited vocabulary, and problems organizing ideas when writing. Therefore, it is essential to implement innovative pedagogical strategies that address these problems from an integrative approach.

ICT and its Impact on Reading and Writing Skills

The integration of Information and Communication Technologies (ICT) in the field of education has significantly transformed pedagogical practices, offering new opportunities for the development of reading and writing skills. According to Hamari et al. (2014), ICT facilitates interactive and personalized learning, allowing students to actively participate in their training process and adapting to their specific needs.

In the case of reading, ICTs provide tools such as digital platforms, interactive narratives and multimedia resources that motivate students to explore texts autonomously. These tools also promote comprehension at the literal and inferential levels, by combining visual and auditory elements that reinforce textual content (Solé, 2006). For example, activities such as interactive quizzes and educational games help students identify key information and relate implicit concepts in a playful way.

In terms of writing, ICT allows immediate and collaborative feedback processes that improve the quality of the texts produced by students. Digital platforms such as Educaplay integrate activities that guide students in the structure, style, and coherence of their textual productions, while fostering creativity and self-confidence. According to Cassany (2003), technology-mediated writing not only optimizes learning, but also facilitates the inclusion of students with different learning styles.

Despite its benefits, the implementation of ICT in the teaching of reading and writing faces significant challenges. Factors such as lack of access to devices, limited connectivity, and insufficient teacher training can hinder their effective integration, especially in vulnerable contexts. However, when properly implemented, ICTs represent a powerful tool for transforming learning and improving performance in key competencies.

Methodology

Study Design

The present study adopted a quantitative approach with a pedagogical action research design, which allowed evaluating the impact of the Educaplay platform in strengthening the reading and writing skills of students in the third grade of primary school. This approach is appropriate because it combines the implementation of pedagogical strategies with a reflexive and systematic process for evaluating and improving educational practice (Kemmis & McTaggart, 2000).

Participants

The study population consisted of 25 third-grade students from an educational institution in Montería, Colombia. The students, aged between 8 and 10 years, presented a heterogeneous level in their reading and writing skills. A teacher with experience in the use of educational technologies also participated, who was previously trained to implement the Educaplay platform in their pedagogical activities.

Data Collection Instruments

1. **Diagnostic and Final Tests:**

- Designed to assess reading comprehension levels (literal, inferential, and critical) and the quality of written productions before and after the implementation of the strategy.

2. **Perception Surveys:**

- Applied to students and teachers at the end of the intervention to explore their opinions about the Educaplay platform and its impact on learning.

3. **Participant Observation:**

- Carried out during the implementation sessions to record the dynamics of student interaction with the platform, their level of participation and progress in the activities.

Procedure

1. **Diagnostic phase:**

- Diagnostic tests were applied to identify the students' initial level of reading and writing skills.
- The results made it possible to design specific activities adapted to the needs of the group.

2. **Design of the Proposal:**

- Interactive activities were developed on the Educaplay platform, including quizzes, crossword puzzles, association games and creative writing challenges, aligned with the pedagogical objectives.

3. **Implementation of the Strategy:**

- Over a six-week period, students participated in weekly 90-minute sessions in which they interacted with the Educaplay platform. The activities were structured in three levels of difficulty to work on reading and writing skills.

4. **Final Evaluation:**

- Final tests were applied to measure progress in the competencies worked on and the perceptions of students and teachers were collected through surveys and observations.

Data Analysis

The quantitative data obtained from the diagnostic and final tests were analyzed using descriptive statistics, comparing the initial and final results to identify advances in reading comprehension levels and the quality of written productions. The qualitative data

from the observations and surveys were analyzed thematically, categorizing the responses around motivation, use of the platform and learning achieved.

Results

Changes in Reading Skills

The comparative analysis between the diagnostic and final tests showed significant improvements in students' reading skills after the implementation of the Educaplay platform:

1. **Literal Level:**

- In the diagnostic test, 40% of the students achieved a satisfactory performance. This percentage increased to 85% in the final test, evidencing considerable progress in the identification of explicit information in the texts.

2. **Inferential Level:**

- Initially, only 30% of students demonstrated ability to interpret implicit meanings. At the end of the intervention, this percentage rose to 70%, showing outstanding progress at this level.

3. **Critical Level:**

- Although the advances were more modest, the percentage of students with an adequate performance went from 10% in the diagnostic test to 35% in the final test. This suggests the need to continue working on specific activities that encourage reflection and critical analysis.

Changes in Writing Skills

The students also showed improvements in their writing skills, especially in aspects such as structure, coherence and creativity. The texts produced at the end of the intervention showed a greater use of connectors, a better organization of ideas and a larger vocabulary compared to the initial writings.

- **Structure and Organization:** 75% of the students managed to structure texts with introduction, development and conclusion at the end of the intervention, compared to the initial 45%.
- **Creativity:** Activities such as writing stories and creating interactive descriptions in Educaplay stimulated the students' imagination, reflecting on more original productions.

Student Perceptions

The surveys revealed a positive assessment of the Educaplay platform by students. Interactive elements, such as puns and quizzes, were highlighted as key motivators. Some representative comments include:

- "I like it because I learn by playing and I can earn points."
- "The activities are fun and help me understand the stories better."

90% of the students indicated that they felt more motivated to participate in the reading and writing activities thanks to the interactive dynamics of the platform.

Teacher Perception

The participating teacher highlighted that Educaplay facilitated the integration of technology in the classroom effectively, promoting the active participation of students. In addition, he pointed out that the activities designed on the platform made it possible to meet the diversity of levels in the group, adapting to learning needs. However, he also suggested including more time to work on the critical level and encourage group discussions based on the activities.

Relationship with Previous Studies

This study contributes to the existing body of literature by providing empirical evidence on the impact of gamification and ICT on reading and writing learning in vulnerable educational contexts. It coincides with research such as that of Hernández and Fernández (2019), which underscore the importance of integrating technological resources into teaching to meet the diverse needs and levels of students. In addition, the findings reinforce the idea that platforms such as Educaplay can transform learning by connecting educational content with students' interests.

Practical Implications

The results have important implications for educational practice. First, they demonstrate that interactive platforms can be an effective tool to address difficulties in reading and writing skills in primary school students. Secondly, they highlight the need to train teachers in the design and use of technological tools, ensuring that the activities are aligned with the pedagogical objectives. Finally, they underline the importance of complementing digital activities with strategies that promote critical analysis and collaborative learning.

Conclusion

This study confirms the effectiveness of the Educaplay platform as a pedagogical strategy for strengthening reading and writing skills in elementary school students. The results showed significant improvements in the literal and inferential levels of reading comprehension, as well as notable advances in the structure and creativity of written productions. These improvements highlight the potential of ICT to transform teaching-learning processes, especially in contexts where traditional methodologies have failed to overcome difficulties in these competencies.

Main Contributions

1. Impact on Learning:

- The implementation of interactive activities fostered student interest and motivation, which resulted in an active commitment to learning.
- The improvements in reading and writing skills reflect how the pedagogical design of the Educaplay platform effectively connects playful dynamics with educational objectives.

2. Assessment of ICTs:

- This study reinforces the importance of integrating technological tools in the classroom as a means to diversify pedagogical strategies and respond to the learning needs of students.

3. Pending Challenges:

- Limited advances at the critical level underscore the need to complement digital platforms with specific strategies that stimulate reflective analysis and critical appraisal.

Implications and Recommendations

The findings have important implications for educational practice. On the one hand, they demonstrate that gamification and interactive platforms are valuable resources to overcome traditional barriers in the teaching of reading and writing. On the other hand, they highlight the need to train teachers in the design and implementation of these strategies, ensuring that they are aligned with pedagogical objectives.

Future studies could explore the impact of Educaplay in other contexts and educational levels, as well as analyze its effectiveness in the development of transversal competencies such as creativity and critical thinking. In addition, it would be valuable to implement longitudinal designs that allow evaluating how these strategies influence sustained learning and the transfer of skills to different areas of knowledge.

In conclusion, the integration of platforms such as Educaplay represents a promising tool to transform learning in basic primary, promoting key competencies for the academic and personal development of students.

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