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Using Google Classroom to Boost English Reading Comprehension in Rural Contexts

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Summary

This study analyzes the impact of blended **learning methodology** in the area of reading in English, focusing on the integration **of Information and Communication Technologies (ICT)** through **Google Classroom**. This research was carried out with students in the eighth, ninth and tenth grades of a rural educational institution in Colombia, which faces challenges derived from the lack of technological resources at home. Despite having some resources in the institution, the integration of virtual platforms such as Google Classroom allowed for pedagogical activities complementary to traditional teaching. The results obtained showed a significant improvement in students' reading skills, especially in terms of reading comprehension, vocabulary and motivation for learning English. This study proposes that the use of technological tools, such as Google Classroom, enhances autonomous and collaborative learning, which favors the development of language skills, particularly in rural contexts where digital learning opportunities are limited. The research offers a detailed analysis of how ICT can transform the teaching-learning process, proposing recommendations for future pedagogical interventions.

Keywords: Reading in English, Google Classroom, ICT, blended learning, reading skills.

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Introduction

Part One: Context and Problem Statement

The teaching of English as a foreign language has gained great relevance in the Colombian educational system, due to globalization and the demands of the labor market that require

competence in international languages. However, in rural contexts, English language learning faces **structural challenges** that limit access to up-to-date teaching resources, the availability of specialized teachers, and exposure to the language outside the classroom. These factors have a negative impact on the development of **language skills**, particularly in the area of **reading comprehension**, which is essential for autonomous learning and language proficiency (MEN, 2020).

Despite the efforts of the **Ministry of National Education (MEN)** with programs such as **"Colombia Bilingüe",** the teaching of English in rural areas has not yet reached the expected levels. The lack of **technological infrastructure**, **teaching materials** and **teacher training** has meant that students do not feel motivated to learn the language, since they often perceive the foreign language as something distant from their daily reality. This context raises the need to implement **innovative teaching strategies** that use **technological resources** to transform the teaching of English and make it more attractive and effective.

In this sense, the integration of **technological tools** such as **Google Classroom** in the teaching of English emerges as a viable solution, since it allows teachers to **create interactive**, **personalized** and **collaborative** learning spaces, which can overcome the limitations of the traditional classroom. Google Classroom, being an accessible and easy-to-use platform, allows the distribution of materials, interaction between teachers and students, and the monitoring of students' academic progress, favoring **autonomous** and **flexible learning**.

This research aimed to **evaluate the impact of Google Classroom** on the **reading comprehension of English learners** in a rural educational institution in Colombia. The purpose is to determine whether the use of this technological tool can improve students' reading skills and, if so, what pedagogical methodologies and strategies can be implemented to maximize their effectiveness in educational contexts with limited resources.

The research is justified not only by the need to improve English skills, but also by the urgency of **innovating teaching methodologies** in rural areas, where the use of technology is still in its early stages. In addition, it seeks to promote **educational inclusion** through technology, facilitating students in rural areas to access learning experiences that would normally be out of their reach.

Theoretical foundation

The integration **of Information and Communication Technologies (ICT)** in education has been globally recognized as a means to **transform teaching** and learning, providing new opportunities to **personalize learning** and **improve interaction** between teachers and students. In particular, the use of digital platforms such as **Google Classroom** has become a key tool to facilitate **collaborative learning**, **knowledge management** and **student autonomy**. This section explores the theoretical framework that supports the use of technological tools in English teaching and how they can support the development of **reading comprehension** skills in rural contexts.

The role of ICT in foreign language teaching

The incorporation of ICT in education has transformed traditional teaching methodologies and allowed for a **diversification of pedagogical methods**. According to **Warschauer and Kern (2000),** the use of digital technologies facilitates the creation of interactive learning environments, allowing students to practice **communication skills** in a more dynamic and meaningful context. In English language teaching, digital platforms not only offer students access to multimedia content, but also provide tools for **formative assessment**, **personalized feedback,** and **autonomous learning**.

The **blended learning model** is one of the most effective approaches when implementing technological tools in foreign language teaching. According to **Garrison and Kanuka (2004),** blended learning involves an integration of face-to-face and distance learning, which offers flexibility to students to learn at their own pace, while encouraging social and collaborative interaction. This model is particularly useful in **rural contexts**, where access to educational resources and exposure to the language outside the classroom are limited.

Reading comprehension in English

Reading **comprehension** is one of the key skills in learning a language, as it involves not only the decoding of words, but also the ability to **interpret, analyze** and **synthesize** the information contained in a text. According to **Anderson and Lynch (1988),** reading in a second language goes beyond recognizing words; it requires the student to use cognitive strategies to **make inferences**, identify main ideas, and understand larger contexts. In this sense, technological platforms can offer students **access to a wide variety of texts** (readings, articles, subtitled videos, etc.) that facilitate the practice of these skills, while allowing the content to be customized according to the student's level and interests.

The use of digital tools also favors the **continuous practice** of reading and interaction with different **types of text**: from articles and stories to visual and multimedia content. These tools offer opportunities for students to be exposed to **authentic texts** and richer contexts, which fosters more contextualized and motivating learning (Chapelle, 2009). In addition, platforms such as **Google Classroom** can include interactive reading comprehension exercises, which provide **immediate feedback** and allow students to strengthen their skills in a low-risk environment.

Autonomous Learning and Motivation in Rural Contexts

One of the biggest challenges in teaching in rural contexts is the **lack of resources and materials** that can enrich language learning. However, the use of platforms such as **Google Classroom** makes it possible **to overcome these barriers** by offering students an **accessible virtual environment**, where they can work on activities autonomously, consult complementary materials and receive feedback continuously.

Motivation plays a crucial role in foreign language learning, especially in contexts where students may not be as exposed to the language as in urban areas. According to **Deci and Ryan (2002),** students are more motivated when they perceive that they have **autonomy** in their learning, and when the proposed activities are perceived as **interesting and relevant**. In this sense, Google Classroom allows **you to personalize the learning experience**, adapting the activities to the needs and learning styles of each student, which can **increase their motivation** and encourage a deeper commitment to the learning process.

Teaching English in rural areas

In rural contexts, the use of technologies in the classroom can be a critical tool to **overcome material limitations** and **facilitate access to educational resources** that would otherwise be unavailable. In these scenarios, **virtual content**, **interactive exercises** and **collaborative platforms** become key resources to boost teaching and improve the quality of learning, offering students **new ways of interacting** with English and **building communication skills** in a more accessible and flexible environment.

Using **Google Classroom** in this context not only provides students with access to teaching materials, but also facilitates group work, **constant feedback,** and **direct interaction** with the teacher. In this way, students in rural areas can benefit from an educational experience similar to that of their urban counterparts, without the physical barriers that often present themselves in areas with limited educational resources.

The theory on the use of ICT in the teaching of English, particularly through platforms such as **Google Classroom**, provides a solid basis for arguing its effectiveness in rural contexts. By integrating English teaching with **interactive technology and collaborative tools**, **reading comprehension** is improved and student motivation is increased, essential elements for success in the acquisition of a second language. The implementation of digital platforms such as Google Classroom is presented, therefore, as a viable and effective strategy to overcome the challenges in teaching English in rural contexts, **transforming the teaching-learning process** and offering new opportunities for students in areas with limited resources.

Methodology

Research Approach and Design

This research took a **mixed** approach, using both **quantitative** and **qualitative methods** to provide a comprehensive understanding of the impact of **Google Classroom** on the English **reading comprehension** of basic secondary education students in a rural institution. The design was **quasi-experimental** with **pre-test and post-test**, complemented with qualitative analysis to obtain a more complete view of students' experiences and teachers' perceptions. This design made it possible to measure variations in students' academic performance before and after the implementation of the model, while interviews and surveys provided a deeper perspective on the subjective impact of the digital tool.

Population and sample

The study population was made up of **tenth and eleventh grade students** from a rural educational institution located in the department of Córdoba, Colombia. The sample consisted of **50 students**, intentionally selected based on their availability and consent to participate in the study. Students with varied levels of English proficiency and different learning styles were included, in order to ensure the representativeness and diversity of the group. In addition, **5 teachers** from the English area participated, who implemented and evaluated the use of Google Classroom in the teaching process.

Data collection tools and techniques

To evaluate the impact of the **Google Classroom** platform on reading skills, the following instruments were used:

- **Diagnostic test (pretest):** Applied at the beginning of the intervention to assess the initial level of **reading comprehension** in English of the students, focusing on vocabulary, comprehension of short texts and answers to inference questions.
- **Final test (post-test):** It was applied at the end of the intervention to measure the progress in the **students' reading comprehension**. The test included questions similar to those of the pre-test, to assess progress in the areas of vocabulary, text structure and global comprehension.
- **Student Perception Survey**: Designed to collect students' opinions on the **usefulness of Google Classroom**, their **motivation** during the process, and their **learning experience**. The survey included closed-ended and open-ended questions to obtain both quantitative and qualitative data.
- **Semi-structured interviews with teachers**: These interviews were conducted at the end of the process to learn about teachers**' opinions** and **perceptions** about the implementation of Google Classroom, its difficulties, and the effectiveness of the platform in the classroom.
- **Participant observation**: During the sessions in Google Classroom, a non-participatory observation was carried out to record **classroom dynamics**, **student participation** and the use of the platform in reading comprehension activities.
- **Platform interaction analysis**: Student interactions with materials and assignments uploaded to Google Classroom were recorded to assess their **engagement** and **frequency of participation**.

Procedure

1. **Diagnostic phase**:
    - Application of the initial diagnostic test to assess students' reading skills.
    - Application of the initial survey to know previous perceptions about the use of technologies in English learning.
2. **Design and implementation phase**:

- Creation of a space in Google Classroom with appropriate resources for the development of reading comprehension, including interactive readings, videos with subtitles, vocabulary exercises, collaborative activities and comprehension tests.
- The students worked autonomously on asynchronous activities, with **constant feedback** provided by the teacher through individual and group comments.
- The classes also included synchronous spaces, such as **live sessions** to discuss the texts read, where students were able to interact with each other and with the teacher.

3. **Evaluation and analysis phase**:
   - Application of the final test to measure progress in reading comprehension.
   - Conducting interviews with teachers to evaluate their experience with the use of the platform.
   - Compilation and analysis of student perception surveys to understand their level of motivation and their assessment of the use of Google Classroom.
   - Observation of students' interactions with materials on the platform and analysis of tasks performed.

Data analysis

The quantitative data obtained from the **diagnostic and final tests** were processed using **descriptive statistics** to obtain averages, standard deviations, and analyze the change in academic performance. A **t-test was also performed for paired samples** to compare the differences between the pretest and the posttest.

The qualitative data obtained from the **interviews**, **observations,** and **surveys** were processed through **thematic content analysis**, in order to identify emerging patterns and categories that reflect the perceptions of students and teachers about the experience with Google Classroom. The data were triangulated to ensure the validity and reliability of the results.

Results

The findings obtained from the implementation of Google Classroom in the process of teaching reading comprehension in English are organized into three main dimensions: **improvement in academic performance**, **student perceptions about the use of the platform** and **classroom dynamics and student** participation. These dimensions allow us to understand not only the effects on academic performance, but also the transformations in teacher-student interaction and student motivation.

1. Improvement in academic performance

The comparison between the results obtained in the **pre-test** and the **post-test** showed a **significant increase in the academic performance** of the students in terms of reading comprehension. In the initial diagnostic test, the overall average was **2.8 out of 5**, while in the final test it increased to **4.1 out of 5**, which represents an improvement of **1.3 points** (approximately **46% improvement**).

The areas that saw the greatest improvement were:

- **Vocabulary**: from 2.7 to 4.0, with an increase of **1.3 points**.
- **Comprehension of short texts**: from 2.8 to 4.2, with an increase of **1.4 points**.
- **Ability to infer and critical analysis**: from 2.9 to 4.1, with an increase of **1.2 points**.

This improvement is a clear indication that the strategies implemented through the **Google Classroom** platform, such as interactive activities, immediate feedback and the integration of multimedia, favored **the deep understanding of the content** and the **retention** of new vocabulary and grammatical structures. Personalizing **learning** through the platform allowed students to progress at their own pace, which appears to have increased their **confidence** in their abilities and, consequently, their performance.

2. Student perceptions of platform usage

The survey applied at the end of the intervention reflected a **mostly positive assessment** of the use of Google Classroom in the English learning process. **92% of students** said that the platform allowed them **to learn more dynamically** and **better understand English texts** . Some representative comments were:

"I like that I can watch the videos, read and then do activities where they help me understand what I read." I used to get bored just reading the book, but now I feel more motivated because I can interact with the content." The classes are more fun, we can do games and activities where we all participate."

A total of **88%** of students also mentioned that **constant feedback** through activity feedback in Google Classroom was a key factor in improving their understanding. In addition, **90%** of students indicated that they would prefer to continue using the platform in future classes, highlighting the effectiveness of Google Classroom in improving **motivation** and **autonomous learning**.

3. Classroom dynamics and student participation

Observations made during the use of the platform revealed that the classroom environment changed significantly. In classes prior to the implementation of Google Classroom, students tended to be more passive and relied heavily on the teacher's explanations. However, during the intervention, a shift towards **more active** and **collaborative** participation was observed. The activities carried out on the platform encouraged interaction between students, who worked in groups on various tasks such as **virtual debates**, **collaborative projects** and **role-playing**, which favored **social** and **cooperative learning**.

In addition, students showed greater **autonomy** when carrying out activities individually on the platform, which contributed to the improvement in their **self-confidence** to address new challenges in the language. The **direct interaction with the content** and the ability to **correct errors immediately** also allowed students to feel more confident when expressing themselves in English.

88% of students said that using Google Classroom helped **maintain their interest** in the subject and better **understand the texts** by having access to different resources such as videos, interactive texts and personalized feedback activities. This type of activity favored a **more inclusive and equitable classroom dynamic**, allowing students with diverse cognitive abilities to advance at their own pace.

Summary of the results

Indicator	Pretest Average	Average Post-Est	Increment
Vocabulary	2.7	4.0	+1.3
Comprehension of short texts	2.8	4.2	+1.4
Inference and analysis capabilities	2.9	4.1	+1.2
Student Engagement	60%	90%	+30%
Motivation	70%	92%	+22%

The results obtained show that the implementation of **Google Classroom** in the English teaching process, especially in **reading comprehension**, generated a **significant positive impact** on the academic performance of students, as well as on their **motivation** and **participation**. The digital platforms and interactive strategies used through Google Classroom contributed to a **better understanding of the content**, favoring **autonomous** and **collaborative** learning.

These results underscore the importance of using **educational technologies** to **transform English language teaching**, especially in rural contexts where traditional resources are limited. In addition, they highlight the value of creating **flexible learning environments** that adapt to the needs of students, offering them a **more dynamic**, accessible and attractive educational experience.

Discussion

The results obtained in this research provide strong evidence that the integration of **Google Classroom** into English teaching, particularly reading **comprehension**, has a significant impact on both **academic performance** and **motivation** of students. These results are then analysed in depth in relation to the existing literature on the use of digital platforms in education, especially in rural contexts.

Impact of the platform on academic performance

The significant improvement **in academic scores**, especially in **vocabulary** and **text comprehension**, is a clear indication that **differentiated pedagogical strategies** using digital platforms can **enhance learning** in key areas of English. The post-test results show an increase of approximately **1.3 points** in the overall average of the students, which signals a **marked improvement in their ability to understand and apply the language**. This finding is consistent with previous studies that have shown that the use **of virtual learning environments** allows students to interact with content at their own pace, revise material as needed, and receive immediate feedback, which reinforces their understanding (Garrison & Kanuka, 2004; Anderson, 2008).

The **improvement in reading comprehension** in particular highlights the effectiveness of the **diversification of strategies** provided by Google Classroom. Through **interactive activities** such as vocabulary exercises **in context**, **interactive readings,** and **videos with captions**, students had multiple ways to interact with the material, which favored their **deep understanding** and **retention** of the content. This modality is aligned with **blended learning approaches**, which integrate the best of face-to-face and distance learning to generate more dynamic and meaningful learning experiences (Garrison & Vaughan, 2008).

Student motivation and participation

One of the most outstanding transformations in the study was the increase in **student motivation** and **participation**, which is directly related to the use of the **digital platform**. In particular, 92% of students indicated that the tool made English classes more **interactive** and **fun**. This positive change in attitudes towards English can be explained through the principles of **intrinsic motivation** proposed by **Deci and Ryan (2002),** who argue that students are more motivated when they have **autonomy** and **control** over their own learning. The ability to work at their own pace and the opportunity to receive **immediate feedback** also contributed to students feeling more **empowered** in their learning process.

The use of **collaborative activities**, such as discussions and group projects in Google Classroom, also promoted **social motivation**, as it allowed students to feel part of a collective process, where the exchange of ideas and interaction with their peers were fundamental. According to **Vygotsky (1978),** learning is a **social and collaborative** process in which interaction with others plays a crucial role in the construction of knowledge. This approach appears to have been particularly effective in the rural context, where **social interactions** within the classroom are limited and opportunities for oral practice in English outside of school are minimal.

Transforming classroom dynamics

The analysis of **classroom dynamics** observed during the implementation of Google Classroom revealed a positive change in the **role of the student** and the **teacher**. Instead of being a **passive recipient**, the student took on a more **active** role, participating not only in individual activities but also in **collaborative tasks**, which favored **social** learning. This change is aligned with **active pedagogy**, which stresses the importance of involving the student in the learning process through **practical** and **collaborative activities** (Freire, 1998; Tomlinson, 2001).

In addition, the **teacher** went from being the only **transmitter of knowledge** to becoming a **facilitator** and **guide** of learning. The platform allowed the teacher to offer **personalized feedback**,

track student progress in real-time, and adjust activities based on individual needs. This **pedagogical flexibility** translates into a more **individualized approach** that favors the **autonomy** of students and allows them to advance at their own pace, generating a **more inclusive** and less rigid learning environment.

Challenges and limitations in implementing Google Classroom

While the results were positive, the research also revealed some **challenges** and **limitations** in implementing the platform:

- **Limited access to technology devices**: Despite Google Classroom being accessible from mobile devices, some students reported **technical difficulties** due to a lack of consistent access to appropriate devices at home.
- **Resistance to methodological change**: Some teachers experienced **initial difficulties** in adapting to the new methodologies, mainly due to lack of previous experience in the use of digital platforms.
- **Internet connectivity**: Although the educational institution has access to the internet, **intermittent connectivity** problems affected students' performance when accessing activities and materials.

Despite these limitations, teachers expressed a commitment to **the methodology**, recognizing that digital tools, although they require time to master, represent a **powerful alternative** to improve English teaching and **overcome the traditional barriers** of rural environments.

This study demonstrates that the use of **Google Classroom** in English language instruction, specifically in **reading comprehension**, has the potential **to improve academic performance**, **increase student motivation,** and transform **classroom dynamics** in rural contexts. The results obtained confirm that **digital platforms**, when implemented with an **appropriate methodology**, can be effective tools to enrich English learning and overcome the limitations faced by rural students.

However, it is necessary to continue **strengthening teacher training** in the use of **educational technologies** and to guarantee **equitable access to technological resources** so that the benefits of these tools can be used more effectively. Blended **learning** and the use of **Google Classroom** are pedagogical approaches that, if replicated in other rural institutions, can generate significant changes in language education in Colombia.

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