# FLIPPED CLASSROOM FOR DEVELOPING READING COMPREHENSION IN ENGLISH

## Aula invertida para desarrollar la comprensión lectora en inglés

## Sala de aula invertida para desenvolver a compreensão da leitura em inglês

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## ABSTRACT

Introduction: This study seeks to analyze the effectiveness of the flipped classroom approach in improving English reading comprehension in secondary school students. This skill, fundamental for learning a second language, is often difficult to develop with traditional methods that promote passive learning and little autonomy. As an alternative, the flipped classroom is proposed, a student-centered approach that promotes active participation and independent learning. Materials and methods: The research employed a mixed-methods design, combining quantitative and qualitative tools such as pre- and post-intervention tests, observations, and interviews. Eighty-four tenth-grade students participated, divided into a control group (taught with traditional methods) and an experimental group (instructed with the flipped classroom model). The latter received online materials before class, and in classroom they focused on active activities such as debates, interactive readings, and problem-solving. Results: The results showed that the experimental group significantly improved in reading comprehension compared to the control group. Furthermore, greater participation, vocabulary acquisition, and development of critical reading skills were observed. Discussion: The incorporation of digital resources and collaborative dynamics also fostered student autonomy and motivation. Conclusions: In conclusion, the findings indicate that the flipped classroom is an effective pedagogical strategy for improving reading comprehension in English and represents a valuable tool in the teaching of modern languages by promoting more independent, active, and meaningful learning.

**Keywords**: Reading, flipped classroom, skills, methodology, strategy.

## RESUMEN

Introducción: El estudio busca analizar la efectividad del enfoque de aula invertida para mejorar la comprensión lectora en inglés en estudiantes de secundaria. Esta habilidad, fundamental en el aprendizaje de una segunda lengua, suele ser difícil de desarrollar con métodos tradicionales que promueven un aprendizaje pasivo y escasa autonomía. Como alternativa, se propone el aula invertida, un enfoque centrado en el estudiante que promueve la participación activa y el aprendizaje independiente. Materiales y métodos: La investigación empleó un diseño de métodos mixtos, combinando herramientas cuantitativas y cualitativas como pruebas pre y post intervención, observaciones e entrevistas. Participaron 84 estudiantes de décimo grado, divididos en un grupo de control (enseñado con métodos tradicionales) y un grupo experimental (instruido con el modelo de aula invertida). Este último recibió materiales en línea antes de clase, y en el aula se enfocaron en actividades activas como debates, lecturas interactivas y resolución de problemas. Resultados: Los resultados mostraron que el grupo experimental mejoró significativamente en comprensión lectora en comparación con el grupo de control. Además, se observó mayor participación, adquisición de vocabulario y desarrollo de habilidades de

lectura crítica. Discusión: La incorporación de recursos digitales y dinámicas colaborativas también fomentó la autonomía y la motivación estudiantil. Conclusiones: En conclusión, los hallazgos indican que el aula invertida es una estrategia pedagógica eficaz para mejorar la comprensión lectora en inglés, y representa una herramienta valiosa en la enseñanza de lenguas modernas al promover un aprendizaje más autónomo, activo y significativo.

**Palabras clave**: Lectura, aula invertida, habilidades, metodología, estrategia.

## RESUMO

Introdução: Este estudo busca analisar a eficácia da abordagem de sala de aula invertida na melhoria da compreensão de leitura em inglês em alunos do ensino médio. Essa habilidade, fundamental para a aprendizagem de uma segunda língua, muitas vezes é difícil de desenvolver com métodos tradicionais que promovem a aprendizagem passiva e pouca autonomia. Como alternativa, propõe-se a sala de aula invertida, uma abordagem centrada no aluno que promove a participação ativa e a aprendizagem independente. Materiais e métodos: A pesquisa empregou um delineamento de métodos mistos, combinando ferramentas quantitativas e qualitativas, como testes pré e pós-intervenção, observações e entrevistas. Participaram 84 alunos do décimo ano, divididos em um grupo controle (ensinado com métodos tradicionais) e um grupo experimental (instruído com o modelo de sala de aula invertida). Este último recebeu materiais online antes da aula e, em sala de aula, concentrou-se em atividades ativas, como debates, leituras interativas e resolução de problemas. Resultados: Os resultados mostraram que o grupo experimental melhorou significativamente na compreensão de leitura em comparação ao grupo controle. Além disso, foram observadas maior participação, aquisição de vocabulário e desenvolvimento de habilidades de leitura crítica. Discussão: A incorporação de recursos digitais e dinâmicas colaborativas também fomentou a autonomia e a motivação dos alunos. Conclusões: Em conclusão, os resultados indicam que a sala de aula invertida é uma estratégia pedagógica eficaz para aprimorar a compreensão da leitura em inglês e representa uma ferramenta valiosa no ensino de línguas modernas, promovendo uma aprendizagem mais independente, ativa e significativa.

**Palavras-chave**: Leitura, sala de aula invertida, habilidades, metodologia, estratégia.

## INTRODUCTION

Nowadays the approach to teaching English in education must evolve to meet the demands of the modern world. This means integrating technology as a fundamental tool in the Teaching–Learning Process (TLP). This transformation is driven by the need for students not only to acquire knowledge but also to develop the skills necessary for independent learning. A technology-focused approach fosters autonomous learning while encouraging collaboration among students. These dynamic supports teamwork and the exchange of ideas, promoting active participation and meaningful learning of a foreign language.

The rapid pace of technological advancement is unfolding in an exponential trajectory. As Kurzweil (2021) notes, the rate of progress accelerates over time, fundamentally reshaping how education is approached. In this context, Levitskaia (2024) emphasizes that "the use of digital technologies is a consequence of educational transformation. The shift toward online learning has been made possible by digital platforms, web conferences, and other tools that facilitate meaningful learning experiences."

Collaborative learning environments not only enhance English language proficiency but also promote key competencies such as communication and interdisciplinary learning—skills that are essential for both personal and professional development in contemporary society. This phenomenon has profoundly transformed the way individuals access information and engage in autonomous learning. As a result, digital environments have become instrumental in fostering learner autonomy and expanding opportunities for knowledge acquisition beyond traditional classroom settings.

When discussing the teaching-learning process, it refers to students having the option to explore a variety of multimedia resources that facilitate English language acquisition. Tools such as videos, articles, podcasts, and interactive applications can significantly enhance reading comprehension and improve overall language performance.

According to Wrona (2018), "The flipped classroom was established in 2007 by two teachers, Jonathan Bergman and Aaron Sams." They began recording their lessons in order to share content with students who were absent from class, helping them keep up with the learning process. They soon realized that these recordings gained popularity beyond their own classroom, and as the digital format dramatically increased

their impact, the flipped classroom model began to take shape. Thus, the flipped classroom can be defined as a methodological approach in which traditional content is delivered outside the classroom, typically through videos, readings, and other online resources that students review at home. "The popularity of this approach has grown due to its effectiveness in improving student learning and engagement" (Bond, 2020).

In Ecuador, students show a "low level" of English proficiency. According to the most recent evaluation report from the EF English Proficiency Index (Index, 2023), this highlights the urgent need to implement methods that promote effective and autonomous learning. There is a growing demand for innovative strategies that can address this issue. Implementing the flipped classroom as a post-class teaching method, using technological tools to enhance English comprehension—specifically focusing on the development of reading comprehension skills—could benefit tenth-grade students at the "Cinco de Mayo" Educational Unit in Chone, Manabí.

This study aims to identify the factors that limit English language learning and to propose a self-learning strategy through the implementation of the flipped classroom model, with a particular focus on the development of receptive skills—especially reading comprehension.

To address this issue, a mixed-methods approach will be applied, allowing for the analysis of both quantitative and qualitative data. The goal is to support English language learning through the flipped classroom method as a reinforcement tool, in order to enhance students' reading comprehension in an autonomous way. The study will follow a comparative, explanatory, and exploratory design, as it will be conducted with two parallel groups in the selected educational institution.

A combination of strategies and empirical, scientific, deductive, and inductive methods will be employed. Initially, a diagnostic test will be administered to both groups, followed by a second assessment to evaluate changes in students' cognitive behavior and to analyze the impact of the flipped classroom approach on the development of English classes, specifically to improve reading comprehension. Techniques such as interviews, surveys, observation forms, content planning, diagnostic assessments, and the use of specific tools within the flipped classroom framework will be applied. These tools aim to facilitate reading comprehension in English in a way that is both engaging and motivating for students.

## Flipped classroom

The flipped classroom emerged as a response to the limitations of traditional teaching and learning models. These conventional approaches were centered on the teacher's transmission of information, often without the use of additional resources. This educational model, which prioritizes memorization and repetition, has proven insufficient for fostering critical and analytical thinking skills in students. As technology has advanced, the need for methods that promote active participation and meaningful learning has become increasingly evident. Integrating digital tools into the educational process allows students to access a wide range of technological resources, facilitating autonomous learning that can be tailored to individual needs.

According to the eLearning Editorial Team (2023), the Flipped Classroom is a type of pedagogical model within Blended Learning—a hybrid approach combining in-person and online instruction. This methodology represents a significant shift in educational paradigms, offering an alternative to the traditional system in order to adapt to the diverse learning needs of students. In the flipped classroom, learning happens through doing, not merely memorizing.

In essence, the flipped classroom is a methodology that has had a growing impact on teaching and learning. It involves shifting the delivery of content outside the classroom, giving students the opportunity to explore and learn material at home through technology-based resources such as videos, readings, and interactive activities. Classroom time is then used for discussion, application, and deeper exploration of the content. This approach fosters both active and collaborative learning.

The methodology supports skill development and encourages critical thinking, as students become the protagonists of their own learning process.

Some of the key benefits of the flipped classroom include:

- Increased motivation: Students feel more engaged when they have control over their learning and are more confident in expressing ideas and sharing knowledge based on their personal experiences.

- Improved knowledge retention: Active in-class practice reinforces what has been learned at home. Teachers can assign activities for students to complete at home and then use classroom time to reinforce

and assess their understanding the following day.

- Development of soft skills: The flipped classroom promotes communication, teamwork, critical thinking, and problem-solving.

It is essential to implement evaluation methods that align with this approach. Formative assessments, self-assessments, and continuous feedback can be used to help students reflect on their own learning process and progress.

## Application of learning theories

The flipped classroom has emerged as an innovative methodology that transforms the traditional dynamic of teaching and learning. This approach is based on the idea that students should take an active role in their own learning process, which aligns with various contemporary educational theories. Instead of passively receiving information during class, students prepare at home using digital resources such as videos and readings, and then use classroom time to apply, discuss, and deepen their understanding collaboratively.

## Constructivism

This learning theory, proposed by Vygotsky and Piaget (1978), introduces the concept of "active learning," which refers to the idea that "students construct knowledge for themselves" (p. 295). In the context of the flipped classroom, students build their understanding and explore content at home with the help of technology, and later apply or discuss it actively and collaboratively in the classroom.

## Experiential learning

Proposed by Kolb (1984), this theory describes "a particular way of learning through life experiences; it is often contrasted with classroom-based learning." In relation to the flipped classroom, students engage in practical activities during class time, allowing them to reinforce their learning and apply what they have previously studied at home through hands-on experiences.

## Autonomous learning

This concept emphasizes the student's ability to take control of their own learning process, where "the teacher acts as a guide who maintains the learning environment by providing the curriculum, diverse materials and tools, and also continuously supervises the students' progress" (Pratiwi et al., 2023). The flipped classroom encourages this autonomy, as students are responsible for their preparation before class, allowing them to manage their time and resources effectively.

## Cognitive load

According to Sweller (1980), "Cognitive load theory suggests that when teaching students new content and skills, teachers are more effective when they provide explicit guidance accompanied by practice and feedback." In other words, this theory proposes that learning is more effective when cognitive load is properly managed. By allowing students to review content at home, the flipped classroom helps reduce cognitive load during in-class activities, enhancing information retention and improving content comprehension.

(Dexway, 2023) explains that the flipped classroom is a strategy that represents a positive shift from the traditional learning process by reversing the structure of classes, harmonizing face-to-face learning with online training. "Flip" refers to inverting the class. With this reversed model, students learn and deepen their understanding in a personalized and autonomous way through online applications, and later practice and expand on that knowledge in person. This strategy adapts to the diversity of the classroom, significantly strengthens student learning, and fosters meaningful learning.

## Reading comprehension

The flipped classroom is presented as an innovative methodology that not only transforms the way teaching is delivered, but also has a significant impact on the development of students' reading comprehension. In this approach, students access content from home through digital resources such as videos, articles, and interactive activities. This flexibility is key to fostering deeper and more meaningful learning.

Reading comprehension is an essential skill in the educational process, as it enables students to interpret, analyze, and evaluate information. "Reading is not simply the process of sounding out words or sentences; it also requires interpretation to grasp the meaning of the text. Reading is the process of receiving and interpreting information in the form of language through written text" (Fahmi et al., 2020). Moreover, the

flipped classroom allows students to engage with a variety of text types and formats, enriching their reading experience. By having access to diverse and relevant materials, students can develop more effective reading strategies such as making inferences, synthesizing information, and engaging in critical evaluation. These skills are fundamental to improving their overall reading comprehension abilities.

## METHODOLOGY

This study aims to identify the factors that hinder English language learning and to propose a self-learning strategy through the implementation of the flipped classroom approach, with a focus on the development of receptive skills—particularly reading comprehension. Its primary objective is to support English language acquisition using the flipped classroom model as a reinforcement tool to enhance students' reading comprehension in an autonomous way.

The research adopts a comparative, explanatory, and exploratory design, as it will be conducted with two parallel student groups within the selected educational institution. The sample size consisted of 84 tenth-grade students, 65% female and 35% male, aged between 14 and 15 years.

A combination of strategies and empirical, scientific, deductive, and inductive methods will be used. A diagnostic pre-test will be administered to both groups, followed by a post-test to measure changes in students' cognitive performance and to assess the impact of the flipped classroom model on English instruction, specifically in developing and improving reading comprehension.

Data collection instruments will include interviews, surveys, observation checklists, content planning documents, and diagnostic evaluations. In addition, specific tools designed for the flipped classroom will be applied to make reading comprehension more accessible, engaging, and motivating for students.

## RESULTS

Table 1 Double-entry table.

| Categories | Research Instruments | |
|---|---|---|
| | **Interview** | **Observation Sheets** |
| Flipped Classroom | Defined as a methodological strategy that promotes autonomous and progressive work by the student. | Students develop their autonomous learning skills during class sessions. |
| Methodology | Teachers consider methodology a fundamental part of the teaching and learning process. | Active participation was observed, which supports the development of reading comprehension. However, if an appropriate methodology is not applied, it may hinder its progress. |
| Resources | The flipped classroom enhances deeper and more meaningful learning, as it allows students to explore content at their own pace using digital resources and complementary materials. | A predominance of physical materials, such as texts and posters, was observed, with only occasional use of technological tools. This limits the implementation of the flipped classroom approach, as digital and audiovisual resources are key to preparing students before class and reinforcing autonomous learning. |
| Reading Skills | Reading comprehension is essential in the process of acquiring a new language. | It was observed that the teacher attempts to incorporate activities that support reading comprehension; however, they are still closely tied to traditional resources. |
| Strategies | The strategies used provide students with opportunities to perform positively and autonomously. | Students respond well to dynamic strategies that effectively contribute to the development of reading comprehension. |
| Motivation | Motivation plays a key role in the process of acquiring a new language. | Students appear motivated by the use of various resources implemented through the flipped classroom, which strengthens their oral communication skills as a fundamental part of their academic growth. |

Source: results obtained from the interview with the EFL teachers, and the observation sheet

Elaborated by: The authors.

### Analysis

Category 1: Flipped Classroom. Statistics show that the flipped classroom promotes the development and improvement of reading comprehension when appropriate methodological strategies are applied to support

language acquisition. During the observation period, it was evident that students became more autonomous as this methodology was incorporated into their lessons.

Category 2: Methodology. Using the flipped classroom as a methodology to develop reading comprehension proves to be an innovative teaching approach. It is considered dynamic and encourages students to enhance their skills in a positive manner. The observation sheet showed active student participation; however, it was also noted that without a suitable methodology, the development and improvement of these skills may be negatively affected.

Category 3: Resources. Data indicates that technological resources play a fundamental role in learning English and fostering effective reading comprehension. However, a reliance on traditional resources was observed. While these do support the teacher's goals, they limit the full development and acquisition of reading comprehension skills. This also restricts the implementation of the flipped classroom approach, as digital and audiovisual materials are essential for preparing students before class and reinforcing autonomous learning.

Category 4: Reading Skills. Reading comprehension is an essential skill in the educational process, as it allows students to interpret, analyze, and evaluate information. Teachers strive to incorporate reading activities that support cognitive development; however, these activities often remain tied to traditional resources.

Category 5: Strategies. The results show that the strategies used by teachers in the flipped classroom encourage students to become more autonomous in their learning and actively participate in class. It was also observed that students respond positively to the strategies implemented by the teacher, which significantly contributes to the development of reading comprehension.

Category 6: Motivation. Motivation has always played a key role in student learning. The data shows that teachers encourage their students through the use of digital resources and the application of strategies that strengthen oral communication skills, which are a fundamental part of their academic growth.

**Pre and Post Test Analysis**

In the first phase, a preliminary test was administered to Group A students, with reading comprehension as the primary focus of the study. This skill is considered one of the core components of language learning in English, yet it is also one of the most challenging to develop. Researchers observed that while the use of traditional materials in the initial test provided some support for students in understanding and improving their reading skills, it also posed certain limitations.

Through the application of a follow-up test—this time incorporating digital resources and carefully selected strategies aimed at promoting autonomous learning and achieving optimal reading comprehension—researchers found that the learning process became more effective. Students demonstrated greater interest and engagement, which in turn strengthened their analytical and reading comprehension abilities.

This section presents the findings of the study, focusing on assessing the effectiveness of the flipped classroom approach in enhancing English reading comprehension. The goal was to support students in improving their reading abilities. The results were drawn from both instructional cycles and were based on scores from the post-test, supported by data collection tools such as observation checklists and interviews. The reading comprehension scores are presented in the table, along with the results of the T-test.

Table 2. Students' Reading Comprehension Performance in Cycle One

|  | Comprehension/Sequence | Accuracy/connections | Vocabulary | Main ideas/details |
|---|---|---|---|---|
| Preliminary C1 | 2 | 2 | 3 | 3 |

The preliminary study identified a decline in student performance on a scale from 1 to 5, with 5 representing the highest level of perceived progress in the development of reading comprehension. During the first term, it became evident that students showed a decrease in the acquisition and development of this skill. Approximately four instructional sessions were delivered, during which the researcher designed, implemented, and structured a lesson plan incorporating traditional materials such as textbooks and reading worksheets. These activities aimed to analyze the students' linguistic skills in reading comprehension at the tenth-grade level and to identify areas in need of reinforcement to help them improve.

Following the initial assessment, the data revealed that students struggled with sentence comprehension and sequencing, identifying connectors, and recognizing key details or main ideas within a text. However, there was a slight improvement in vocabulary acquisition, which seemed to support their ability to learn new

words. Out of a total possible score of 100, the average score on the preliminary test was 58, with the highest score reaching 67.

In the second term, several lessons were delivered, during which the researcher continued to plan, develop, and implement lessons—this time incorporating the flipped classroom approach as the primary instructional methodology. The flipped classroom emphasizes a blended learning model that combines face-to-face instruction with online learning. Blended learning seeks to integrate the best of both environments to enhance the learning experience.

During this phase, classroom activities included brainstorming sessions, student presentations, and exercises conducted through various interactive platforms, all designed to effectively enhance reading comprehension. Additionally, the use of dynamic visuals and descriptive audio tied to selected texts supported a deeper understanding of the material. The average test score among the 40 students in Group B rose to 71, with the highest score reaching 87.

Table 3. Students' Reading Comprehension Performance in Cycle two

| | Comprehension/Sequence | Accuracy/connections | Vocabulary | Main ideas/details |
|---|---|---|---|---|
| Preliminary C2 | 4 | 3 | 5 | 4 |

To assess students' reading comprehension skills, the researcher provided specific instructional materials that, through the use of interactive platforms, demonstrated improvements in reading comprehension, vocabulary, and the identification of main ideas, while also allowing for appropriate feedback.

These interactive platforms allowed for level adjustments and offered a variety of reading texts suitable for different age groups. It was observed that the activities carried out using interactive and digital platforms increased student participation, concentration, and overall performance. Adjustments and recommendations based on learning outcomes were effectively provided, focusing on categories such as vocabulary, understanding of main ideas, use of connectors, and the development of a coherent sequence.

## DISCUSSION

The literature review underscores that, unlike traditional language teaching environments—where instructors deliver most of the content and students assume a largely passive role—the Flipped Classroom approach in EFL/ESL contexts prioritizes the active development of learners' language skills (Arslan, 2020).

It also promotes learner independence by motivating students to take charge of their own educational journey. This shift not only increases motivation but also helps cater to diverse learning styles and paces, as students can revisit materials as needed. Furthermore, teachers can use classroom time more efficiently to address individual student needs, provide targeted feedback, and facilitate collaborative tasks that reinforce language acquisition.

Student participation plays a crucial role in the learning process, as emphasized by Karimi and Hamzavi (2017) and Alhasani et al. (2017), who highlight the importance of teachers placing trust in students to engage with video lectures at home. Moreover, learners tend to interact more actively with out-of-class materials, which enhances the effectiveness of instructional activities beyond the classroom setting (Kheirzadeh & Birgani, 2018; Hashemifardnia et al., 2018; Fahmi et al., 2020).

This greater level of engagement encourages learners to develop a sense of responsibility and self-control. In addition, the use of multimedia resources in the Flipped Classroom—such as video, audio, and interactive quizzes—can cater to multimodal learning preferences, making language input more engaging and accessible. As a result, students arrive in class better prepared, leading to more meaningful and productive in-class interactions.

The Flipped Classroom approach has been shown to significantly improve students' critical thinking abilities and reading comprehension. Allowing students to study at their own pace, encouraging peer collaboration, and fostering timely discussion of questions and concerns are considered effective strategies for supporting the development of these skills (Fulgueras & Bautista, 2020).

Moreover, engaging in pre-class preparation enables students to activate prior knowledge, which enhances their ability to analyze, evaluate, and synthesize information during class discussions. Peer collaboration, particularly through group work and peer feedback, further strengthens these cognitive processes by exposing learners to diverse perspectives and prompting reflective thinking. This dynamic interaction between

independent learning and collaborative practice.

The literature reviewed for this study strongly supports the effectiveness of the Flipped Classroom Method in enhancing reading and speaking proficiency in English. This collaborative instructional model serves as a valuable scaffolding tool that promotes active classroom engagement, introduces innovative pedagogical practices, and contributes to the holistic development of learners' language skills and components (Yousufi, 2019).

In particular, the integration of authentic language tasks—such as role-plays, debates, and problem-solving activities—within the classroom allows learners to practice communicative competence in realistic contexts. The method also aligns with constructivist learning principles, as students co-construct knowledge through interaction and experiential learning. Ultimately, the Flipped Classroom not only improves language proficiency but also cultivates essential 21st-century skills such as collaboration, digital literacy, and self-regulation.

## CONCLUSION

The findings of this study highlight the effectiveness of the Flipped Classroom approach in enhancing reading comprehension in English as a foreign language. Unlike traditional methods—where reading texts are often introduced in class and students passively receive instruction—the Flipped Classroom model encourages learners to engage with materials independently before class, allowing in-class time to be used for deeper analysis, discussion, and application of reading strategies. The integration of interactive platforms played a pivotal role in this process, offering customizable content, age-appropriate reading selections, and immediate feedback mechanisms that significantly increased student motivation, focus, and performance. These tools also enabled differentiated instruction by adapting to individual learning needs and pacing. Overall, the shift from a teacher-centered to a learner-centered model not only improved students' ability to comprehend texts, extract main ideas, and expand vocabulary, but also fostered greater autonomy and active participation in their learning journey.

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## Conflict of interest

The authors declare that they have no conflicts of interest.

## Declaration of responsibility of authorship

We, the authors of the aforementioned manuscript, DECLARE that we have directly contributed to its intellectual content, as well as to the genesis and analysis of its data; therefore, we are able to take public responsibility for it and accept that their names appear on the list of authors in the order indicated. Furthermore, we have complied with the ethical requirements of the aforementioned publication, having consulted the Declaration of Ethics and Publication Malpractice.

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