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ENHANCING READING SKILLS THROUGH ICT: A FOCUS ON SKIMMING AND SCANNING TECHNIQUES FOR 11TH GRADE STUDENTS AT INSTITUTO JULIO ACOSTA GARCÍA

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Dedication

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Resumen

Este estudio investiga la efectividad del uso de las Tecnologías de la Información y la Comunicación (TIC) para mejorar las habilidades de lectura de skimming y scanning en estudiantes de undécimo grado del Instituto Julio Acosta García. Reconociendo la importancia de la comprensión lectora para el éxito académico, esta investigación tuvo como objetivo mejorar la competencia de los estudiantes en estas técnicas específicas de lectura mediante el desarrollo e implementación de actividades de lectura basadas en TIC. El estudio siguió un enfoque estructurado: primero, se observaron los métodos tradicionales de instrucción en el aula, los cuales revelaron una interacción limitada entre el profesor y los estudiantes y un énfasis mínimo en las técnicas de skimming y scanning. Posteriormente, se diseñó una serie de lecciones para introducir estas técnicas junto con herramientas TIC, promoviendo un ambiente de aprendizaje interactivo y atractivo.

El estudio empleó una evaluación previa y posterior para medir el impacto de las intervenciones con TIC en las habilidades de lectura de los estudiantes. Se recopilaron datos cuantitativos y cualitativos mediante observaciones en clase, encuestas sobre el acceso a la tecnología, evaluaciones de desempeño en tareas y encuestas de opinión final, proporcionando información sobre la competencia lectora de los estudiantes, sus niveles de participación y sus actitudes hacia el uso de TIC en la educación de la lectura. Los hallazgos indican que la integración de herramientas TIC mejoró significativamente la capacidad de los estudiantes para aplicar las técnicas de skimming y scanning, mejorando su comprensión general y participación. Esta investigación contribuye a la comprensión de estrategias efectivas para integrar la tecnología en la instrucción de lectura y ofrece recomendaciones prácticas para educadores que

buscan fomentar la alfabetización digital y las habilidades de comprensión lectora en la educación secundaria.

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Chapter I

Introductory Framework

This research project investigates the efficacy of using Information and Communication Technology (ICT) as a pedagogical tool to enhance the reading skills of skimming and scanning among 11th-grade students at Instituto Julio Acosta Garcia. The main objective is to assess the impact of Information and Communication Technology (ICT) interventions on students' reading proficiency, engagement levels during the lessons, and attitudes toward reading, this aims to provide insights into effective strategies for integrating technology into literacy education using effective reading techniques. In the area of reading strategy studies, several techniques can be taught that enhance and develop reading comprehension.

Fauzi (2018) indicated that consistent application of reading strategies will eventually make readers proficient, allowing them to use these reading skills effortlessly and automatically. The most useful and effective ones for the students are skimming and scanning. They also help students to improve their reading speed. MacLeod (2018) stated that scanning involves rapidly reading a text to find specific details. It is used to locate particular information, such as a name, date, symbol, formula, or phrase. The reader recognizes what the information looks like and can identify it when it is found. This is a valuable skill for those learning a second language, as students often do not need to read the entire text in detail to find the necessary information. Meanwhile, MacLeod (2018) explains that skimming is used to understand the general overall and structure of a passage, allowing the reader to infer the author's intent. Unlike scanning, which involves simply locating information, skimming is more challenging as it necessitates organizing and retaining some of the details presented by the author.In summary, skimming is about getting a comprehensive overview of a text to understand the main ideas, while scanning is

more about quickly finding specific information related to a particular need. According to MacLeod (as cited in (Brown (1994) suggested that "perhaps the two most valuable reading strategies for learners as well as native speakers are skimming and scanning." (Ratheeswari, 2018).

Integrating technology as a pedagogical tool is expected to improve the students' engagement when they are reading. The learning environment needs to be more dynamic than how the educational system was originally designed. As mentioned, the integration of technology in the classroom prepares students for the modern workplace, it is essential to integrate technology into the curriculum. This ensures students develop digital literacy, learn to use digital platforms, productivity tools, and communication methods. They also gain information management skills, helping them handle and analyze data effectively. Exposure to various digital tools makes students adaptable and flexible, ready to learn new technologies as needed. Additionally, technology fosters creativity and innovation, enabling students to create and design projects. Finally, technology encourages collaboration and communication, mirroring the teamwork skills needed in the workplace through tools like video conferencing and online storage solutions.

Problem Statement

Reading skills are fundamental to academic success, yet many students struggle with reading comprehension, especially when reading in English. Additionally, students at Instituto Julio Acosta Garcia lack essential information-processing techniques like skimming and scanning, which are crucial for academic performance and success in the "prueba nacional estandarizada de lengua extranjera." since the test must be completed in a certain amount of time. Students need to

know how to manage time and accuracy when answering the reading comprehension questions. Melvin Duarte Chaves, Vice Minister of Academic Affairs, indicated that, "Urgently required is ensuring that the student population acquires the communicative competencies and expected learning outcomes in a second language, at an independent user level, to face the intercultural challenges demanded by a globalized society (Ministerio de Educación Pública de Costa Rica, 2023)

In today's digital age, the integration of Information and Communication Technology (ICT) in education offers new opportunities to enhance these critical skills. However, not all professors are taking advantage of these tools. The lack of ICT integration in language teaching can make educators appear outdated and impact students' engagement and expectations regarding technology use in the classroom. On the other hand, the access to the Internet among students in Costa Rica varies significantly by region, reflecting broader socioeconomic disparities. While the Central Region shows relatively high levels of connectivity, with 67% of students having home internet access, other regions like Huetar Caribe, Huetar Norte, and Brunca face greater challenges, with only 40% of households connected. Moreover, a significant portion of students and teachers in less connected areas rely solely on mobile phones for internet access, and some lack any connection at all.

These disparities in internet access highlight the need for targeted interventions to bridge the digital divide, ensuring that all students and educators have the necessary resources to benefit from digital learning opportunities and achieve educational equity. (Murillo, 2022) In today's digital age, the integration of Information and Communication Technology (ICT) in education offers new opportunities to enhance these critical skills. However, not all professors are taking advantage of these tools. The lack of ICT integration in language teaching can make educators

appear outdated and impact students' engagement and expectations regarding technology use in the classroom. Having mentioned this, it cannot be assumed that the students or teachers, those who are involved in the educational system across the country, have access to the Internet, which can be seen as a disadvantage.

Technologies and connectivity have the potential to amplify strengths and exacerbate weaknesses. Therefore, it is crucial to carefully assess the role of technological tools, particularly if we aim to integrate them as supportive components in democratizing education. This necessitates a structured management plan to govern their usage, ensuring sustainability and bolstering educational training processes. Additionally, aligning educational goals with technological capabilities is essential, alongside updating teaching staff to adeptly implement these advancements in education.

At Instituto Julio Acosta Garcia, 11th-grade students face challenges in reading comprehension. When given a text, students often resort to using apps to translate the text into Spanish to understand and answer comprehension questions. Despite this, many students still struggle to correctly answer the questions, even when the text is translated into their mother tongue. This indicates a lack of proficiency in skimming and scanning techniques. Students who consistently face challenges with reading comprehension often do so because they lack the necessary reading strategies to help them overcome these difficulties. Fauzi (2018) assumeed that students who struggle with reading comprehension lack effective reading strategies to overcome their difficulties.

Without the ability to efficiently skim and scan, students may fall behind academically, leading to lower grades and decreased confidence in their reading abilities. Addressing this issue

is crucial for improving their overall academic performance and future prospects. Enhancing skimming and scanning skills through ICT can lead to better engagement with learning materials and improved educational outcomes.

In addition, this investigation pretends to show what are the benefits of implementing Information and Communication Technology (ICT) as a pedagogical strategy to enhance reading comprehension through the techniques of skimming and scanning?

1.1 Objectives of the Investigation

1.2.1 General Objective

To analyze the benefits of employing Information and Communication Technology (ICT) as a pedagogical strategy to enhance the reading skills of skimming and scanning among the 11 graders at Instituto Julio Acosta Garcia.

1.2.2 Specific Objectives.

1. To develop reading activities utilizing Information and Communication Technology (ICT) to improve skimming and scanning techniques.
2. To implement the developed reading activities within the educational framework of Instituto Julio Acosta Garcia, leveraging Information and Communication Technology (ICT) tools and resources when reading.
3. To evaluate the effectiveness of the implemented reading activities in improving students' skimming and scanning skills by conducting pre- and post-intervention assessments

1.2 Justification of the Study

When students are learning English, four language skills need to be mastered. Those skills are listening, speaking, reading, and writing. Among all of them, reading is vital in language comprehension. Fauzi (2018) stated that the reading process means not only to "read" it but tries to make an interaction between the reader and the text. It is a constructive process that can help students to acquire new knowledge of the language, experience about life, and so on. Nowadays in Costa Rica, being able to speak English is imperative to compete for job opportunities. This study asserts that new, innovative approaches to teaching and learning must align with the evolving needs and advancements of our era. The teaching system in the country needs to be updated accompanied by enhancements in internet accessibility, provision of adequate equipment, and widespread technological integration in educational institutions. The new generations need to be prepared to face the world with all the updated tools for this timeline.

Nowadays, the use the ICT that nowadays is important to help students since they are so involved with technology. ICT improves the educational process and highlights the importance for teachers in their role as creators of a supportive learning environment (Ratheeswari, 2018). This investigation aims to encourage students and teachers to change the way of learning and teaching, keeping the use of technology as a tool for success and not as an obstacle. Students in the institute are not interested in learning. Their engagement in learning is low. The traditional approach of assigning texts from textbooks without giving them the proper techniques takes away the interest. It diminishes their interest and leaves them feeling lost. Students often express frustration, claiming they do not understand where to begin, even if they were inclined to try. The teaching of effective reading methods, the proper preparation, and the time that takes to plan a successful reading activity is believed to be the key to showing the students that they are

capable of succeeding. This research could lead to the development of innovative teaching strategies tailored to the needs of modern learners, leveraging technology to improve reading comprehension outcomes.

In addition, the importance of empowering educators regarding education is also a key. The educators need to be prepared and trained to use technology. Moreover, they need to be provided with all the necessary equipment to be able to carry out a successful lesson. The research aims to integrate technology into the curriculum so it can work as a whole system and not, the curriculum and technology, as separate.

It is hoped that educators learn new and better ways to teach reading. This could lead to practical benefits, like helping students become better readers and improving teaching methods at the school.

1.3 Antecedents

The first national research is aimed to demonstrate the effects of Information and Communications Technology (ICT) on the English as a Foreign Language (EFL) composition skills of eighth-grade students. The research was entitled “Information and communications technology (ICT) effects for improving EFL composition on eighth-grade students at Liceo HHC Experimental Bilingüe José Figueres Ferrer during the I quarter of 2024 “Despite focused on composition, the researcher integrated various ICT tools and activities throughout the reading and writing lessons. A pre-test to assess students' initial composition levels was done at the beginning and later on the research concluded with a post-test, final student survey, and a survey for the English teachers of the same group.

The objectives were based on analyzing the effects of using Information and Communications Technology (ICT) for Improving EFL Composition on Eighth Grade Students at Liceo HHC Experimental Bilingüe José Figueres Ferrer during the I quarter of 2024. It was focused on identifying students' writing level before the inclusion of Information and Communications Technology (ICT) 4, creating writing activities based on students' interests for classroom-engaging purposes, in addition to implementing writing activities using Information and Communications Technology (ICT) when creating a composition, and finally to evaluate the outcomes after implementing Information and Communications Technology (ICT) when creating a composition.

This investigation employed a qualitative research approach, which combined multiple study strategies to examine the behaviors and attitudes of eighth-grade students at Liceo HHC Experimental Bilingüe José Figueres Ferrer during their Reading and Writing lessons. The focus was on human interaction and the collection of data through direct contact with the learners. Conducted in the first quarter of 2024, the study aims to assess the impact of Information and Communications Technology (ICT) on the students' English as a Foreign Language (EFL).

The following conclusion related to the use of ICT were obtained. The second objective involved creating and implementing five different writing activities in class, aligned with the curriculum and designed to engage 13- and 14-year-old students. Despite the appealing nature of these activities, student participation was inconsistent, likely due to post-pandemic fatigue and a preference for virtual learning. The researcher noted limited attention spans and engagement, but collaborating with the English teacher provided valuable class management guidance.

The next conclusion was aimed at engaging students during class time by making Information and Communications Technology (ICT) tools central to the learning process. While implementing various ICT resources posed challenges, such as technical issues and unreliable internet connections, the researcher sought to introduce a diverse range of online resources for gamification activities. Despite providing guidance, some students encountered difficulties using these resources independently, leading to incomplete activities. Despite these challenges, the researcher's efforts underscored the importance of leveraging ICT to enhance students' composition skills. In addition, the researcher utilized various evaluation criteria, such as rubrics and checklists, to evaluate composition activities completed with ICT resources. The investigation revealed a significant enhancement in students' composition skills, including improved introductions, conclusions, supporting ideas, vocabulary, spelling, punctuation, and writing format. These findings confirm that ICT implementation positively impacts English composition skills.

For teachers and EFL educators, the researcher recommended staying updated on new teaching methods and educational programs, particularly those involving technology and ICT resources. Incorporating technology into lessons can enhance the learning process, making it more interactive and engaging, especially through gamification tasks. Traditional teaching methods may become dull, while technology offers assistance and develops new skills for both teachers and students. Despite challenges faced during the research, the benefits of ICT implementation on EFL composition improvement were evident. Future investigators are encouraged to explore the integration of Information and Communications Technology in educational activities, not limited to composition skills but across various subjects, language skills, and age ranges.

With the following national research entitled “Implementation of Costa Rican context based didactic materials for improving reading comprehension” the researcher state that the introduction of new didactic materials is an excellent method to enhance learners' English proficiency and reading skills. These resources will concentrate on both language development and reading strategy practices to ensure comprehensive understanding. One of the main areas teachers focus on when teaching English as a foreign language is vocabulary, aiming to help students to comprehend the information provided. However, they often overlook the importance of reviewing and reinforcing new teaching techniques and reading strategies tailored to students' needs and learning styles.

The research-specific objectives were the following: To investigate the implementation of Costa Rican context-based didactic materials for improving Reading comprehension of fourth-graders at Centro Educativo Bilingue Yinu´s during the first quarter of 2021. In addition, regarding specific objectives, the researcher wanted to establish the importance of creating didactic materials for students in the Costa Rican context for providing a better teaching-learning process, to demonstrate innovative didactic materials for ESL students for developing the skill of Reading the language, as well as to evaluate the impact that didactic materials can have in the acquisition of new vocabulary and reading comprehension during the students´ teaching-learning process. The didactic materials the researcher mentioned can be seen as the use of interactive whiteboards, educational Apps, Online learning platforms, and multimedia presentations, among many others that Information and Communications Technology provides. This investigation employed a qualitative approach, aimed at understanding social aspects of learning through methods that generate descriptive data. Moreover, it sought to explore the experiences, attitudes, and behaviors of students, providing diverse interpretations and complex insights.

The following conclusion was obtained, addressing the research study's objective, when the researcher indicated that teachers recognize the importance of diverse reading materials but often lack the skills to create new ones. The researcher found that students better understood lessons when related to their culture. Allowing teachers more time to adapt materials could significantly benefit language acquisition. Furthermore, using dynamic and innovative materials, such as classroom games and online activities, enhances students' reading skills and minimizes their lack of interest. This research showed that engaging resources help students to better acquire knowledge by making learning fun and interactive. Both educators and students value strategies that address learning difficulties, and students appreciate teachers' enthusiasm and patience. These materials encourage active participation and cooperation, fostering a positive attitude toward reading comprehension and creating an effective learning environment.

Additionally, this study highlighted the importance of using updated materials and innovative tasks to engage students in their learning process. At Centro Educativo Bilingue Yinu's, students learn better and faster when they are active participants. The use of diverse resources and techniques improves communication between educators and learners, fostering an interactive environment for sharing ideas.

For the above, it is recommended that all teachers should receive training in didactics, giving them the skills to create and modify activities with specific purposes to engage their students. Lessons should be planned with appropriate and appealing activities that consider students' preferences, making learning more effective and enjoyable.

The following international research entitled "The Effectiveness of Skimming and Scanning Strategies In Improving Comprehension and Reading Speed Rates for the Students of English

Study Program" is related to knowing the effectiveness of skimming and scanning to enhance the student's ability to read. In this research, the pre-test and post-test control groups were also used. There were 54 students of English Study Programme of FKIP of Palangka Raya University from third year that were equally divided into an experimental group (supervised by the researcher) and a control group (that was not supervised by the researcher) In addition, regarding the objectives, the purpose of this study was to determine whether skimming and scanning strategies effectively improve students' comprehension in relation to five aspects of reading and to assess whether these strategies also enhance students' reading speed.

This study utilized a true experimental design, specifically a pre-test and post-test control group design, to assess the efficacy of treatments on two randomly selected groups: an experimental group and a control group. Both groups underwent a pre-test to gauge their proficiency levels before treatments were administered. The pre-test results were analyzed using independent sample t-test statistical analysis.

The study found that skimming and scanning strategies effectively enhance students' comprehension in reading tasks. The experimental group, which received these treatments, showed a notable increase in comprehension scores compared to the control group. Additionally, the experimental group exhibited superior reading speed rates, indicating quicker task completion. These results suggested that skimming and scanning strategies not only save time but also improve comprehension. Therefore, faster reading performance may lead to better task completion comprehension.

In the journal published about "Information Communication Technology in Education" it was explained that teachers play a crucial role in society by fostering creativity and developing

future social workers, politicians, poets, and philosophers. The rapid technological development has significantly impacted how we live and the demands of society. Recognizing this, teacher education institutions are updating their programs and classroom facilities to bridge the teaching and learning technology gap. ICTs are causing dynamic changes in society and influencing all aspects of life, especially in schools, by providing students and teachers with opportunities to tailor learning and teaching to individual needs. Schools must adapt to these technological innovations to meet societal demands. To optimize learning through new information and communication technologies (ICTs), three essential conditions must be met: ensuring sufficient access to digital tools and the Internet for both students and teachers within educational institutions, providing high-quality, culturally relevant digital content for teaching and learning purposes, and equipping teachers with the necessary knowledge and skills to effectively utilize these new digital resources.

The conclusions made by the researcher were: Utilizing technology in teaching training programs can significantly enhance teaching quality. It is crucial for teacher trainers and policymakers to comprehend the factors influencing the effectiveness and cost-effectiveness of various ICT approaches in teacher training. By incorporating ICT into training programs, the teaching-learning process can become smoother and more accessible to all types of students. Additionally, attention should be given to the roles of ICT in offering multimedia simulations of teaching practices, providing individualized training, overcoming teacher isolation, fostering teacher collaboration, and connecting teachers to a broader teaching community. Exploring both intended and unintended outcomes of ICT use in teacher professional development is essential.

Finally, as mentioned in the article entitled Websites for English Language Teaching Design, Contents, and Pedagogical Implications" the use of Information and Communication

Technologies (ICT) in education, particularly in language teaching and learning (LTL), has transformed the traditional learning paradigm. Students are now active participants in their own learning process, creating content rather than just receiving it. ICT offers a wide range of resources, from websites to multimedia tools, enabling teachers to adapt learning to individual needs and enhance communication. While ICT presents many benefits, challenges such as technical maintenance and teacher training must be addressed. Assessing the effectiveness of ICT resources is crucial, requiring careful evaluation of their specific features.

The objectives of the study were to analyze the structure and contents of websites created by English language teachers in Compulsory and Post-Compulsory Secondary Education in Spain. Specifically, the study aims to identify common patterns in website structure, types of exercises, promotion of language skills, and the level of interaction facilitated by these websites.

The methodology employed involves surveying the structure and content of websites created by English language teachers in Compulsory and Post-Compulsory Secondary Education in Spain. The study used research questions as objectives to guide the analysis, focusing on common patterns in website structure, types of exercises, promotion of language skills, and the level of interaction facilitated by these websites. Data obtained from the analysis are then examined and discussed to draw conclusions and identify pedagogical implications.

The study suggested that while ICT has been introduced to enhance language teaching and learning (LTL), there is still room for improvement. Isabel Pérez's website stands out for its comprehensive resources, but most sites lack interactive features. There is a focus on receptive skills like reading, with grammar exercises prevailing. However, there is a neglect of fostering student’s creativity, and interaction opportunities are limited mainly to teacher-student

engagement. Overall, there is a need for more effective websites in EFL education, especially in promoting student creativity and meaningful interaction.

1.4 Scope

- This research will help future English teaching students and investigators to have a base on the topic. This study aims to investigate the impact of Information and Communications Technology (ICT) on students' reading comprehension, particularly focusing on skimming and scanning techniques. It will involve the development of reading activities that utilize ICT to improve these skills among students. These activities will be implemented within the educational framework of Instituto Julio Acosta Garcia, with a dedicated focus on integrating ICT tools and resources to enhance the reading process and facilitate skill development.
- This study is conducted to determine whether or not the use of Information and Communications Technology (ICT) improves the students' reading comprehension when using skimming and scanning techniques.
- Enhancing students' outcomes in comprehensive reading when performing the prueba nacional estandarizada de lengua extranjera.
- Future educators can utilize this study as guidance for integrating the use of technology as a pedagogical strategy to stay informed about the new approaches in education

Chapter II

Theoretical Framework

This theoretical framework provides a comprehensive overview of the critical aspects of reading skills that are essential for EFL learners. Beginning with the analysis of reading skills and their pedagogy, it explores key techniques such as skimming and scanning, detailing their purposes and methods. The cognitive processes underlying these techniques are analyzed, highlighting how the brain manages skimming and scanning, along with factors affecting reading comprehension and speed. The framework then discusses diagnostic assessments, including timed reading tasks, text-marking activities, and questionnaires. Strategies for implementation, such as modeling, practice, pair and group work, and the integration of technology, are outlined. Additionally, the role of Information and Communication Technology (ICT) in education is examined, addressing technological literacy, the benefits and challenges of ICT, and its potential as a pedagogical tool for enhancing reading skills.

2.1 Reading Skill

In the book *Assessing and Correcting Reading and Writing Difficulties (*Gunning, 2016), it is stated that reading skill is defined as a set of abilities that includes comprehending written text, decoding symbols, and deriving meaning from written material. It involves cognitive processes such as fluency, and vocabulary comprehension, among others. This skill is crucial in today's world for several reasons. The first one to be mentioned is the information overload. People live in an information-rich age and being able to process information in a rapid way effectively is important. It allows individuals to sift through large volumes of information, identify relevant content, and understand it quickly. Moreover, it enhances critical thinking. The analysis of texts, evaluation of arguments, and the differentiation between fact and opinion are

crucial for informed decision-making. Besides, the ability to read well can significantly impact career growth and job performance. In the day-to-day tasks performed, professionals require strong reading skills, when reading reports, staying up-to-dated with the industry trends, and understanding technical documents or guides. Furthermore, reading can expand knowledge, improve language skills, extend vocabulary, and provide a source of enjoyment and relaxation to the reader. It provides a lifelong learning experience enabling the acquisition of knowledge and skills in a rapidly changing world.

2.1.1 Teaching and Learning Reading Skills

Reviewing the difference between teaching and learning how to read is crucial for this investigation. In the book, *Reading in a Second Language: Moving from Theory to Practice* Grabe (2009) stated that reading is a skill people consider a given. However, the ability to read is not natural for humans, therefore it requires understanding to be achieved. This book provides relevant information for the investigation since it discusses reading topics such as foundations, motivation, development of comprehension, and reading in different languages. Grabe (2009) stated that school systems now mandate that students learn English to access information and to enhance their ability to compete economically and professionally.

Moving forward, in *Teaching Reading Comprehension Processes* (Irwin, 2006) it is indicated that educators need to concentrate on the reader's active construction of meaning, highlighting techniques that students can apply on their own. Instead of passively receiving information, students should be encouraged to use various strategies to make sense of what they read. There are techniques that should be developed and practiced to enable students to become independent and effective readers who can comprehend and interpret texts on their own.

When teaching how to read, educators focus on the methods used to impart reading skills to students. While students need to focus on the processes required to acquire these skills. Educators play a crucial role in designing lesson plans that help students to achieve their goals by engaging in activities, practicing reading, and applying the techniques being taught.

Additionally, teaching requires to be adapted to strategies that meet the diverse needs of the students, using resources to improve the lessons, and providing the students with feedback in order to reach the goals. On the other hand, learning asks for consistent practice, participating in reading activities, and applying reading strategies in different contexts. Finally, learners benefit from feedback to identify strengths and areas for improvement.

2.2 Reading skills techniques

To improve reading skills, various techniques such as skimming, scanning, active reading, detailed reading, and structure-proposition-evaluation are employed. Each technique serves a specific purpose in enhancing different aspects of reading proficiency. Skimming helps in quickly gathering the main ideas, scanning is useful for locating specific information, active reading enhances comprehension and retention, detailed reading ensures thorough understanding, and structure-proposition-evaluation aids in critical analysis. This investigation will focus specifically on skimming and scanning, both of which contribute significantly to speed reading.

2.2.1 Skimming for main ideas

Sutz & Weverka (2009), authors of the book *Speed Reading for Dummies* explain this technique as helping readers when time is limited. They provide a clear understanding of the text and help identifying the sections that are most valuable to read, when the goal is to understand the main idea of a book, a newspaper, or an article. Information that is normally skimmed can be

found at the beginning and at the end of a paragraph since these often summarize the main points, tiles, and subtitles to grasp the organization and structure of the content, as well as tables, figures, and graphics to quickly understand visual representations of data or concepts, in addition to the conclusions or summaries when available to get an overview of the main findings or arguments presented. When a text is read applying this strategy, the normal speed increases at three to four times the normal reading speed. The reader's focus is on understanding the broader concepts rather than details.

The process entails selectively concentrating on certain visual elements within the text and utilizing the brain's innate capacity to deduce meaning from incomplete information. When skimming, readers scan the text for prominent visual elements such as headings, subheadings, titles, and key phrases, which act as signposts highlighting the main topics and ideas. They pay attention to the layout, including bullet points, lists, and paragraph structures, to quickly grasp the organization and flow of information. Utilizing peripheral vision, skimmers cover more content in a single glance, capturing chunks of information rather than focusing on each word individually. This technique leverages the reader's existing knowledge, allowing them to quickly understand the context and implications of the main ideas. The brain's ability to make quick inferences based on partial information helps skimmers to form a coherent understanding without processing every detail. By rapidly filtering through vast amounts of text, readers can identify relevant sections for more thorough reading, making skimming an efficient and time-saving technique, especially useful for extensive research papers, reports, or multiple sources of information.

Despite its benefits, skimming is unsuitable in certain situations. For in-depth analysis or academic study, comprehensive reading methods are necessary to achieve a thorough

understanding. When reading literature or poetry for enjoyment, skimming can compromise the immersive experience and appreciation of literary nuances. Additionally, skimming is inadequate for understanding intricate technical information, as it may lead to misunderstandings or overlooking essential details.

2.2.2 Scanning for specific words or phrases

The book "Speed Reading: Learn to Read a 200+ Page Book in 1 Hour Mind Hack" (Knight, 2018) explained that scanning facilitates rapid retrieval of relevant details by targeting specific data or keywords. When scanning a text, reading comprehension decreases since the author's overall message is not being fully read; instead, scanning focuses on finding specific words or sentences of interest. The reader's primary objective becomes locating exact pieces of information rather than understanding the overall content. This technique is particularly useful in situations where time is limited and specific answers are needed, such as when preparing for exams or conducting research. By honing in on keywords and phrases, readers can quickly navigate through large volumes of text, extracting necessary details without the need for thorough reading. While this method sacrifices depth of comprehension, it compensates by significantly enhancing efficiency and speed, making it a valuable skill in fast-paced or information-dense environments.

Scanning information during reading may not always be appropriate, especially in situations requiring thorough comprehension, literary appreciation, or technical understanding. When a comprehensive understanding is crucial for critical analysis or academic study, scanning falls short as it prioritizes specific details over a holistic grasp of the material. Similarly, in literature or poetry where enjoyment hinges on immersion and nuanced interpretation, scanning can detract from appreciating stylistic elements and thematic depth. For absorbing intricate

technical information, scanning may lead to oversights or misunderstandings due to its tendency to skip over detailed explanations. In legal or contractual documents, relying on scanning can result in critical clauses being overlooked, potentially affecting legal interpretations and agreements. Thus, while scanning is efficient for rapid information retrieval, its limitations become apparent in scenarios requiring depth, precision, and comprehensive understanding.

2.3 Cognitive Processes in Reading

The term "cognition," as defined by Mak (2023), refers to the mental activities involved in acquiring knowledge and understanding through thought, experience, and sensory perception. It encompasses the ability to process information while reading and to comprehend the meaning and implications of that information. In essence, cognition involves various mental processes such as perception, reasoning, memory, and problem-solving, all of which contribute to how individuals perceive, interpret, and interact with the world around them.

In the book *Reading in the Brain: The Science and Evolution of a Human Invention* (Dehaene, 2010) it is discussesed the nature of reading as an activity that seems effortless but is a complex cognitive process. Reading allows us to derive meaning from simple black marks on a white page, an extraordinary feat considering that our brains originally evolved for entirely different purposes. This book offers relevant information pertinent to the investigation since the author explained the complex brain pathways involved in moving from written symbols to understanding. He then discussed the historical development of reading, finally how children learn to read, and why dyslexia poses challenges for reading comprehension. He argued that reading skills are shaped by fixed, inherent brain structures that are crucial for the development of this skill. He proposed that humans are born with specific neural and cognitive structures that go beyond general learning abilities, influencing how the mind functions. This perspective is

widely accepted in cognitive science, which rejects the idea that the brain is entirely malleable or without inherent characteristics.

2.3.1 Metacognitive Awareness

In the book *Speculations about the Nature and Development of Metacognition* (E Weinert & Kluwe, 1987) it is explained metacognition as an individual's understanding of their own cognitive processes, outcomes, and anything associated with them. The student is conscious of how he or she learns, thinks, and comprehends information. It also helps learners to select and use effective learning strategies, leading to better understanding and retention of information and facilitating the application of learned strategies to new and different contexts.

Metacognitive awareness involves not only recognizing one's cognitive abilities but also being able to monitor, control, and regulate these processes effectively. This heightened awareness allows learners to evaluate their own understanding and performance continuously, identify areas where they may struggle, and adapt their approaches accordingly. Such self-regulation is crucial for developing independent learning skills, fostering a deeper engagement with the material, and enhancing problem-solving abilities. Furthermore, metacognitive skills enable students to transfer what they have learned to new situations, making them more adaptable and versatile in their thinking. This adaptability is particularly valuable in dynamic and complex learning environments, where the ability to modify strategies based on feedback and new information can significantly impact academic success and lifelong learning.

2.3.2 How the brain processes skimming and scanning

The following book provides important information as it delves into the intricate processes the brain undergoes while reading, including the mechanisms of skimming and

scanning. "Proust and the Squid: The Story and Science of the Reading Brain" (Wolf, 2007) explained the interplay between focus, memory, and language comprehension allows us to efficiently process and understand written texts, enhancing our ability to quickly extract relevant information when skimming and scanning. On the other hand, the author argueed the shift from traditional deep reading to techniques such as skimming and scanning. Practices that are more prevalent with the rise of digital content, and that might have a negative impact in processes such as sustained attention, critical thinking, and deep comprehension. Wolf (2007) explained that the brain's plasticity allows it to adapt to new reading formats, but this adaptation comes with trade-offs. While digital reading can enhance our ability to process and retrieve information quickly, it might weaken the neural circuits involved in deep reading. This change can lead to a superficial understanding of the material, reduced retention of information, and a decrease in the ability to critically analyze texts.

In the book *The Psychology of Reading* (Rayner et al., 2012) it is discussed that skimming and scanning techniques engage distinct mental processes compared to those utilized in in-depth reading. The cognitive skills involved when using skimming and scanning depend on the brain’s capacity to identify patterns within the text, including visual indicators such as keywords, headings, bold or italicized text, and bullet points. In addition, the use of prior knowledge and contextual clues to predict information that is relevant such as main ideas that are often found in the first or last sentences of paragraphs. Besides, the reader needs to quickly decide which parts of the text are worth focusing on and which can be ignored.

In-depth reading requires full comprehension and involves multiple cognitive processes such as decoding (identifying words), parsing (understanding grammar), and integrating information to build a coherent understanding of the text. In contrast, skimming and scanning are

more about efficiency, allowing the reader to cover more material in less time by focusing only on certain aspects of the text.

2.3.3 Factors affecting reading comprehension and speed

Another book consulted for this investigation, “Reading Faster and Understanding More" (Miller & Steeber De Orozco, 2000) denoteed the factors influencing reading speed and comprehension, such as the reader's familiarity with the subject matter, the complexity of the text, and the reader’s specific reading objectives. Reading comprehension and speed are influenced by several interrelated factors. Comprehension is profoundly affected by vocabulary knowledge, as well as the reader's background knowledge of the subject matter, and overall language proficiency. Effective reading strategies, such as summarizing and inferencing, skimming, and scanning are essential. Cognitive skills, including memory and attention, play crucial roles in understanding texts, while awareness of text structures and reader motivation significantly enhance comprehension. Conversely, reading speed is determined by word recognition skills, the efficiency of eye movement, and reading fluency. The difficulty level of the text is another critical factor. Additionally, regular reading practice, familiarity with the material, and the reader's purpose also contribute significantly to reading speed. Both comprehension and speed can be optimized through targeted strategies that enhance vocabulary acquisition, improve reading fluency, and apply effective reading techniques tailored to the text's complexity and the reader's objectives.

2.4 Assessments for Skimming and Scanning

Educators must possess the appropriate tools for effectively teaching reading. One of the most valuable tools in this regard is the use of assessments, which provide essential insights into

students' skill development. The book "Assessment for Reading Instruction" (A. Dougherty Stahl et al., 2019) elucidated that assessments offer significant insights into students' reading abilities. Through these evaluations, teachers can ascertain whether students have mastered the requisite skills. Furthermore, the results of these assessments are instrumental in identifying common areas where students struggle, thereby enabling educators to adjust their teaching strategies to better address these issues. This targeted approach not only enhances the effectiveness of instruction but also ensures that lesson plans are modified to meet the specific needs of individual learners, thereby facilitating the tracking of their progress over time.

Additionally, implementing skimming and scanning techniques offers several benefits, such as enhancing reading efficiency, improving overall comprehension, and building students' confidence in their reading abilities. By incorporating these strategies into their instructional practices, educators can create a more dynamic and responsive learning environment that supports the diverse needs of their students

2.4.1 Timed reading tasks

Timed reading tasks are exercises where a limited amount of time is given to students to read a text. This assessment encourages students to focus and improve their reading rate, leading to greater academic success. It consists of reading a text several times while timing each session to measure progress. The book “Reading Assessment: A Primer for Teachers in the Common Core Era” (Caldwell, 2014) showed that the ability to read texts fluently and quickly is a skill that is critical for comprehension and overall academic success.

Timed reading tasks offer numerous advantages for instructors of English as a Foreign Language (EFL) seeking to enhance their learners' reading rate and comprehension. Firstly, these

exercises encourage readers to read more rapidly, aiding in the development of quicker word recognition and processing skills. Moreover, timed reading can improve understanding by compelling participants to focus on efficiently extracting key information. As they strive to meet the time constraints, students often become more proficient at skimming for main ideas and scanning for specific details, both of which are essential for effective reading. Additionally, practice helps readers to build concentration and endurance, critical for maintaining comprehension over longer texts.

Furthermore, the repetitive nature of timed reading tasks enables learners to monitor their progress and observe improvements in their reading rate and comprehension over time. This ongoing assessment can boost their confidence and motivation as they see tangible evidence of their development. In fact, instructors can use the data from these tasks to provide targeted feedback and adjust their instructional strategies to better support each learner's needs.

Incorporating timed reading tasks into the curriculum also prepares students for real-world scenarios where they may need to read quickly and comprehend information under time constraints, such as standardized tests, academic work, or professional environments. Therefore, it is crucial to understand how to implement timed reading tasks effectively.

The process begins with the careful selection of appropriate texts. Facilitators must choose materials that match the participants' proficiency levels, ensuring the texts are challenging enough to promote learning without causing frustration. Including a variety of genres, such as articles, short stories, essays, and reports, will expose participants to different writing styles and formats. Establishing clear objectives is also essential. Educators should set specific goals for improving reading speed, such as targets for words per minute (wpm).

Additionally, comprehension goals should be defined, including the ability to understand main ideas, identify key details, and make inferences from the texts.

Before initiating timed reading tasks, instruction on reading strategies is critical. Facilitators should teach participants effective techniques such as skimming for general ideas and scanning for specific information. The implementation should be systematic. Using a stopwatch or timer, teachers can set specific time limits for each reading task, starting with manageable durations and gradually increasing them as participants' skills improve. Regular practice, ideally a few times a week, is important for building consistency and routine.

Monitoring and assessment are integral components of the implementation process. Detailed records of each participant's reading rate and comprehension scores should be maintained to track progress. Providing immediate feedback is crucial, as it helps students to understand their performance, recognize areas for improvement, and acknowledge their progress. Additionally, post-reading activities are essential for reinforcing comprehension. Comprehension questions need to be prepared to assess participants' understanding of the text, including multiple-choice, true/false, and short-answer questions.

Adjusting the difficulty of the tasks is necessary as participants become more proficient. Encouraging self-assessment can also promote a sense of ownership and responsibility in participants. Teachers foster reflection on reading experiences, allowing participants to note effective strategies and challenges. Maintaining personal reading logs can help participants track their progress and set personal goals. Moreover, creating a supportive environment is vital for the success of timed reading tasks. Positive reinforcement motivates participants, acknowledging

their efforts and improvements, regardless of how small they may be. Peer support should be encouraged, allowing participants to share strategies and tips.

Finally, integrating technology can enhance the effectiveness of timed reading tasks. Utilizing reading apps and online resources that offer timed exercises and automatic progress tracking can be highly beneficial. Interactive tools such as online quizzes and games can reinforce reading skills engagingly and enjoyably.

2.4.2 Text Marking Activities

The following evaluation method is text marking activities. The book: "Classroom Strategies for Interactive Learning" (Buehl, 2012) indicated that students actively engage with the text through text-marking activities, which foster a deeper comprehension and retention of the subject matter, active engagement with the text, prompting readers to interact directly through actions like highlighting key information, making notes, or annotating passages. This interactive approach not only enhances concentration but also aids in identifying critical elements of the text, such as main ideas, supporting details, and unfamiliar vocabulary.

These activities facilitate deeper comprehension by encouraging readers to analyze and synthesize information. Actively marking the text prompts learners to establish connections across different sections, recognize patterns, and draw conclusions, thereby enhancing their ability to comprehend complex texts and extract meaning more effectively.

Moreover, text marking supports the development of efficient reading strategies. Participants learn to prioritize information, distinguish between essential and non-essential details, and enhance overall reading efficiency. This competency is particularly valuable in academic and professional environments where effective reading and comprehension are crucial

for achievement. Additionally, it cultivates metacognitive skills as learners reflect on their reading process by evaluating their understanding of the text, assessing their comprehension strategies, and adjusting their approach as necessary. This reflective practice promotes self-awareness and empowers learners to take ownership of their learning journey.

Lastly, the iterative nature of text-marking activities enables learners to monitor their progress over time. By reviewing their annotations and notes periodically, readers can observe enhancements in their reading speed, comprehension, and ability to critically engage with texts. This ongoing evaluation not only motivates learners but also reinforces their confidence in their reading abilities.

2.4.3 Questionnaires and Quizzes

Another effective method for evaluating skill development is the use of questionnaires and quizzes. According to 'Classroom Assessment Techniques: A Handbook for College Teachers' (Angelo & Cross, 1992), these tools assess students and provide timely feedback that requires immediate attention from teachers and students. This assessment offers multiple benefits for enhancing reading rate and comprehension among learners. Firstly, it provides structured opportunities for active engagement with texts, prompting students to respond to targeted questions or complete quizzes based on the material they have studied. This interaction encourages deep information processing, reinforcing understanding of main concepts, details, and nuances within the text.

Secondly, questionnaires and quizzes promote consistent practice, crucial for enhancing reading speed and fluency. By regularly assessing their comprehension through these tools, students cultivate habits of purposeful and focused reading, thereby improving their ability to

read more swiftly and accurately over time. Moreover, to provide immediate feedback is essential for learning and growth. Detailed feedback on quiz responses or questionnaire results allows students to pinpoint strengths and weaknesses in their comprehension and adjust their reading strategies accordingly. This process not only deepens their grasp of the material but also promotes self-reflection and metacognitive development. Additionally, questionnaires and quizzes empower students to monitor their own progress. Tracking their performance across multiple assessments enables learners to observe enhancements in their reading rate, comprehension skills, and effective application of reading strategies. This self-monitoring fosters motivation and a sense of accomplishment, encouraging students to continuously strive for improvement in their reading abilities.

2.5 Strategies for Implementation

Effective integration of Information and Communication Technology (ICT) into educational practices requires well-planned strategies to maximize its benefits for enhancing reading skills, particularly skimming and scanning. This section outlines the key strategies that facilitate implementing ICT in pedagogical settings. These strategies are designed to create an interactive, collaborative, and supportive learning environment, ensuring students acquire and master the skills necessary for efficient reading. The three primary strategies discussed include Modeling and Practice, Pair and Group Work, and the Use of Technology. Each of these strategies plays a pivotal role in harnessing the potential of ICT to improve reading proficiency, fostering both individual and collective learning experiences.

2.5.1 Modeling and Practice

Educators can teach students by modeling and practicing, and students can understand better the process and steps involved. This will result in an effective learning strategy. Moreover, students can transfer theoretical knowledge into practical applications by repeated practice. In the book *Visible Learning for Literacy, Grades K-12: Implementing the Practices That Work Best to Accelerate Student Learning* (Fisher et al., 2016) it is provided valuable information for this investigation as it explains that modeling refers to the explicit demonstration of skills, strategies, and processes by teachers. This approach involves teachers showing students how to perform a task or understand a concept by thinking aloud and making their thought processes visible. The key practices that this book highlights include close reading, collaborative learning, and independent reading.

First, close reading teaches learners to engage with the text more deeply by analyzing and discussing them in detail, as well. Next, collaborative learning encourages students to work together to solve problems along with building understanding. Finally, independent reading allows readers to choose their own material to read for various purposes to foster a love of literacy and improve fluency. The book offers practical examples and insights to help teachers implement these strategies effectively in their classrooms.

2.5.2 Pair and Group Work

This strategy can be helpful to educators who have many students in the classroom. It promotes collaborative learning since learners can learn from each other’s insights. Moreover, it provides a support system where they can encourage and assist each other. The book consulted "Collaborative Learning Techniques: A Handbook for College Faculty" (Barkley et al., 2014)

highlighted that the involvement of students in discussions in a collaborative learning environment enhances comprehension as well as critical thinking. The book delved into various methods for incorporating pair and group work into the classroom, highlighting the benefits of collaborative learning, such as enhanced critical thinking, improved communication skills, and increased student engagement.

Effective collaborative learning strategies encompass several key techniques. Firstly, think-pair-share encourages active participation and deepens understanding by having students initially contemplate a question individually, then discuss their thoughts with a partner, and finally share their conclusions with the larger group. Secondly, the jigsaw method involves dividing students into small groups, with each group assigned a different segment of a topic to become "experts" on. Subsequently, new groups are formed, each containing one expert from the original groups, who then teach their segment to the new members. Thirdly, round robin requires students to contribute sequentially to a discussion or task, ensuring equal participation and the expression of diverse opinions. Lastly, peer review allows students to evaluate and provide feedback on each other's work, fostering the development of critical evaluation skills and the acquisition of multiple perspectives.

To implement these strategies effectively, it is crucial to provide clear instructions and set explicit expectations for pair or group activities. Actively monitoring group interactions and providing timely feedback is imperative to guide students and ensure productive collaboration.

2.5.3 Use of Technology

The use of ICT tools enhances the learning process by making it more interactive and engaging. Online platforms, multimedia resources, and educational materials can capture

students' attention, moving beyond traditional methods and aligning with learners' needs. In the *book Integrating Technology in the Classroom: Tools to Meet the Needs of Every Student* (Hamilton, 2018) it is provided important information to this investigation because it focuses on the integration of technology into the classroom to enhance learning experiences and meet the diverse needs of students. It covers a wide range of tools and strategies that can be used to incorporate technology effectively.

2.6 Information and Communication Technology (ICT)

The use of Information and Communication Technology in teaching has become increasingly important due to its numerous benefits. ICT in learning and teaching enhances learning experiences as the lessons become interactive. The incorporation of videos, animations, and other technologies can be used to teach aiming to use multiple intelligences. Furthermore, it prepares students for the digital world. The students develop essential digital skills required in the modern workforce. In the book titled *Teaching and Learning with Technology* (Lever-Duffy, 2011)it is said that constructivist learning methods highlight the crucial role of technology in delivering genuine, engaging, and significant educational experiences.

Key tools and strategies for integrating technology in the classroom include interactive whiteboards, which facilitate dynamic lessons and interactive learning experiences with multimedia content; educational software and apps, tailored to support specific learning goals and offer personalized learning paths; learning management systems like blackboard and canvas, which streamline course management and enhance communication between educators and students; the flipped classroom model, enabling students to access instructional materials outside class, freeing up class time for interactive activities and deeper engagement; and assistive

technology tools such as speech-to-text software and adaptive keyboards, ensuring inclusive access and support for diverse learning needs.

Effective implementation of technology in education involves several critical components. Firstly, selecting tools aligned with educational objectives ensures that technology enhances rather than distracts from learning goals. Providing comprehensive training for both educators and students is essential to ensure they can effectively utilize and integrate technology into their teaching and learning processes. Moreover, leveraging technology to enhance feedback mechanisms allows for more timely and personalized assessments of student progress, fostering continuous improvement and understanding. Additionally, technology can enrich interactive learning experiences by enabling collaborative projects, simulations, and real-world applications that engage students actively in their learning. By integrating these strategies thoughtfully, educational institutions can create a supportive and innovative learning environment that prepares students for the challenges of a digitally connected world.

2.6.1 Technological literacy

Technological literacy refers to the capability to proficiently utilize, evaluate, comprehend, and handle technology. It includes skills and knowledge in areas such as practical skills, critical thinking, and problem-solving. Technological literacy is not just about knowing how to operate devices or software, but also about understanding the principles behind technology, its impact on society, and how to apply it to solve real-world problems. In the book *The Importance of Technological Literacy* by Barton (2012) it is explained that technological literacy is crucial for students to effectively engage in the 21st-century workforce and society. The author emphasized that as technology continues to evolve and permeate all aspects of life, being technologically literate becomes essential for personal and professional success. The book

argued that educational systems need to prioritize technological literacy to prepare students for the demands of modern careers, where technological competence is often a prerequisite.

Moreover, it discussed how technological literacy contributes to informed citizenship. In a world increasingly shaped by digital technologies, individuals must be able to critically evaluate technological advancements and their implications. This includes understanding issues related to privacy, security, digital ethics, and the social and environmental impact of technology. By fostering technological literacy, educational institutions can equip students with the tools they need to navigate and shape the future effectively.

2.6.2 Benefits of ICT in Education

Students nowadays need the integration of technologies in the learning environment as already is in all the areas of their lives. That is why educators need to look for strategies that allow students to engage and be motivated to learn. The International Handbook of Information Technology in Primary and Secondary Education (Voogt & Knezek, 2008) indicated that ICT in education improves the quality of the experience and provides options for teachers and students.

The advantages that the integration of information and communication technology provides to students are important to mention. Learning styles refer to the ways individuals acquire new information, which can vary widely among people and are categorized by specific characteristics. Each student possesses unique learning styles, and the use of ICT tools such as interactive whiteboards, educational software, and multimedia presentations enhances learning by catering to these diverse preferences. Moreover, the access that students have to educational resources online, including e-books, research papers, and multimedia content is another benefit that ICT offers in education.

For teachers, it enhances teaching effectiveness including digital lesson plans, online assessments, and interactive simulations, as well as efficiently managing educational resources and administrative tasks, such as grading, attendance tracking, and communication with students and parents. Using technology in the classroom boots the engagement and motivation, which provides the students with an enjoyable experience and the teachers with a successful lesson.

Finally, education systems also benefit significantly from the implementation of ICT. It supports efficient data management and facilitates remote classes, enabling access to education in remote and underserved areas. ICT enhances retention rates by engaging students more effectively through interactive learning experiences and personalized education pathways. Moreover, it prepares students for future careers in a world increasingly dominated by technology and digital communication, equipping them with essential skills and competencies needed to thrive in a globalized workforce.

2.6.3 Challenges of ICT in Education

It cannot be left behind that there will always be challenges when incorporating technology into teaching and learning. In the *book Technology and Social Inclusion: Rethinking the Digital Divide* Warschauer (2004) concluded that the major obstacle to the fair and equitable use of ICT is the digital divide. This book provided relevant information since it discusses the disparity between those with and without access to digital technologies. The author asserted that the issue extends beyond mere access to how technology is utilized and integrated into society. He analyzed the social, economic, and cultural factors affecting technology use and access, highlighting their role in either promoting social inclusion or exacerbating exclusion. Through various global case studies, the book demonstrated how technology can both perpetuate existing inequalities and help to mitigate them. Warschauer underscored the significance of education,

infrastructure, policy, and community engagement in fostering digital inclusion. He advocated for a comprehensive approach that considers the broader social context and how technology is woven into everyday life.

Integrating Information and Communication Technology (ICT) in education presents several challenges despite its numerous benefits. Firstly, infrastructure limitations, such as inadequate internet connectivity and insufficient hardware, can hinder the effective implementation of ICT tools in classrooms. These technological barriers restrict access to digital resources and limit students' and teachers' ability to fully utilize ICT for learning. Secondly, the implementation often requires substantial financial investment for acquiring and maintaining technology, training educators, and updating software and hardware regularly. Limited budgets and funding constraints in educational institutions can pose significant challenges in ensuring equitable access to ICT resources for all students. Furthermore, ICT integration may face resistance or skepticism from educators who may lack confidence or expertise in using technology effectively for teaching and learning purposes. Overcoming teachers' resistance and providing comprehensive professional development are essential for successful adoption in education.

Moreover, ensuring digital literacy among students and educators is crucial but can be a challenge. Effective use of ICT requires not only technical skills but also critical thinking, information literacy, and ethical use of technology. Addressing the digital divide and ensuring all learners have equal opportunities to develop these competencies is essential for equitable educational outcomes. Additionally, concerns about the privacy and security of student data in digital environments raise significant challenges. Educational institutions must implement robust

data protection policies and practices to safeguard sensitive information and comply with privacy regulations, which can be complex and demanding to manage.

Lastly, maintaining relevance and keeping pace with rapidly evolving technology trends present ongoing challenges. Educational institutions must continually update their ICT infrastructure, curriculum, and teaching methods to align with advancements in technology and meet changing educational needs effectively.

Chapter III

Methodological Framework

This chapter outlines the methodological framework used to investigate the efficacy of Information and Communication Technology (ICT) in enhancing the reading skills of skimming and scanning among 11th-grade students at Instituto Julio Acosta García. The research employs a qualitative approach, chosen for its suitability in capturing the nuanced experiences and perceptions of students. Through this approach, the study seeks to gain an in-depth understanding of how ICT tools influence reading abilities.

The research design incorporates the descriptive method. This method is used to implement specific strategies in a group of students and systematically describe the outcomes, providing detailed insights into the effectiveness of the interventions. Additionally, information for this study is gathered from both primary and secondary sources. Primary sources include books and literature reviewed in Chapter II, offering foundational theories and context. Secondary sources consist of thesis investigations, articles, and magazines that provide additional perspectives on ICT in education and reading skills development. Consent from the students ensures ethical considerations are met, allowing them to participate willingly.

The analysis focuses on three main categories: Information and Communication Technology ICT, reading skills, and the specific techniques of skimming and scanning. Data collection instruments include class observations, surveys on access to technology, pre-task evaluations, structured lessons, and post-task assessments. The lessons are designed to teach and practice skimming and scanning through activities like timed reading tasks and text-marking

exercises. Post-task assessments involve questionnaires and quizzes to evaluate the student's application of the skills learned.

Following the lessons, a final opinion survey will be conducted. This survey aims to gather students' final reflections and opinions on their learning experiences with the ICT-enhanced reading techniques. It will provide valuable qualitative insights into the overall impact and effectiveness of the teaching strategies employed. Finally, the data collection process involves a series of structured activities, each followed by assessments using online quiz platforms. The analysis of this data will provide a comprehensive understanding of the impact of ICT-enhanced teaching strategies on improving the reading skills of 11th-grade students.

3.1 Research Approach

For this investigation, a mixed research approach was chosen. This approach is particularly suitable for exploring the efficacy of using Information and Communication Technology (ICT) to enhance the reading skills of skimming and scanning among 11th-grade students at Instituto Julio Acosta García. The mixed methods approach combines both qualitative and quantitative techniques to provide a comprehensive understanding of student's experiences and the impact of ICT tools on their reading abilities. The qualitative component offers rich, detailed insights into students' perceptions and experiences, capturing nuances that numbers alone might miss. Meanwhile, the quantitative component complements this by measuring the impact of ICT tools on reading abilities through objective data, allowing for a balanced and robust analysis.

3.2 Research Design

The method chosen for this investigation is descriptive. This method is used to implement a specific strategy in a group of students and provide detailed descriptions to analyze the outcomes. The descriptive method enables the researcher to systematically describe the implementation process and the results, offering insights into the effectiveness of the strategies employed. Through detailed observation and documentation, this approach helps to identify patterns, behaviors, and interactions within the classroom setting. By employing descriptive statistics and qualitative analysis, the researcher can draw comprehensive conclusions about the efficacy of the educational strategies and their impact on students' learning outcomes. Additionally, the descriptive method allows for the exploration of contextual factors that may influence the success of the interventions, providing a holistic understanding of the educational environment and its dynamics.

3.3 Information Sources

The study will utilize both primary and secondary sources of information to ensure a comprehensive analysis of the research topic. Primary sources include books and other literature reviewed in Chapter II, which provide foundational theories and context for the study. The primary sources offer essential insights into existing knowledge and theoretical frameworks related to the use of ICT in education and the enhancement of reading skills among students. Following with secondary sources, include thesis investigations, articles, and magazines that offer additional perspectives and findings related to the use of ICT in education and the development of reading skills. Secondary sources help to broaden the understanding of the research topic by presenting diverse viewpoints and empirical data from previous studies.

The population targeted for this study consists of 11th-grade students at Instituto Julio Acosta Garcia. To ensure ethical considerations are met, consent from the students will be obtained. This consent process ensures that students participate willingly and are fully informed about the nature and purpose of the study. By securing informed consent, the study upholds ethical standards and respects the autonomy and rights of the participants.

This combination of primary and secondary sources, along with the inclusion of ethical considerations, will provide a robust and well-rounded foundation for investigating the efficacy of ICT tools in enhancing the reading skills of 11th-grade students.

3.4 Analysis Categories

By clearly defining the categories for analysis, the researcher can maintain a focused approach on these specific characteristics throughout the study. In this research, the categories are drawn from the primary topic, emphasizing three main areas: reading skills, Information and Communications Technology (ICT), and skimming and scanning techniques. Establishing these definitions allows the study to concentrate on tracking the developments and changes within these categories during the analysis.

3.4.1 Information and Communications Technology

According to UNESCO (2017), Information and Communications Technology (ICT) covers a broad array of technological instruments and resources employed for communication, information creation, storage, and management. These encompass computers, the internet, broadcasting technologies, and more. ICT is pivotal in contemporary education, fostering interactive learning, improving access to educational materials, and facilitating communication and collaboration among students and educators.

3.4.2 Reading skill

Reading skill pertains to the capability to comprehend, interpret, and critically assess written text. It encompasses several elements such as decoding, fluency, and comprehension. Proficiency in reading is crucial for academic achievement and continuous learning, enabling individuals to gain knowledge, foster critical thinking, and engage effectively with a variety of texts throughout their lives.

3.4.3 Skimming and Scanning

Skimming and scanning are two distinct reading techniques used to quickly locate specific information within a text. Skimming involves rapidly moving one's eyes over the text to get an overall sense of its content and main ideas, typically focusing on headings, subheadings, and highlighted keywords. Scanning, on the other hand, involves searching for particular details or pieces of information, such as names, dates, or specific terms, without reading the entire text. Both techniques are valuable for efficient reading and information retrieval, particularly in academic and research settings (PTE Reading: Scanning and Skimming Techniques for Quick Analysis | Prep 27, n.d.)

3.5 Data Collection Instruments

This chapter presents a comprehensive methodology for assessing and enhancing the reading skills of skimming and scanning among 11th-grade students. First, the approach begins with classroom observations to understand student behavior, teacher-student interactions, and current knowledge of reading techniques. Following this, students will complete an online survey to assess their access to and usage of ICT tools in both daily activities and during English

lessons, as well as a pre-task evaluation will establish a baseline for the student's reading skills before introducing targeted lessons on skimming and scanning. These lessons will include timed reading tasks and text-marking activities, followed by practice sessions. Finally, it concludes with a post-task evaluation to measure the effectiveness of the interventions.

3.5.1 Class observation

The initial phase of this investigation involves the observation of 11th-grade students at Instituto Julio Acosta García. The researcher will attend classes to observe how students engage with the topic, interact with both peers and the teacher, and apply their knowledge of reading techniques. A checklist will be used to systematically record observations and any pertinent comments. This checklist will cover student engagement and behavior, interaction among students and teacher, knowledge and application of reading techniques, use of ICT tools, classroom environment, teacher's instructional strategies, overall observations, and additional notes.

3.5.2 Access to Technology Survey

The researcher will distribute an online link to students to complete a digital survey. This survey aims to gather information regarding their daily utilization of ICT tools, including whether such tools are integrated into their lessons. Additionally, it will ascertain whether students have access to or possess smart devices such as smartphones, laptops, tablets, or desktop computers. This data will provide insights into the students' familiarity with and reliance on digital technology, facilitating an informed analysis of the study's outcomes.

3.5.3 Pre-task evaluation

To evaluate students' baseline reading skills before the intervention, a pre-task will be applied to the students. The method involves first selecting relevant texts appropriate for the student's grade level and aligning with the lesson plan. The passages should be structured to necessitate both skimming, for grasping main ideas, and scanning, for pinpointing specific details. Subsequently, students are presented with the chosen reading materials and tasked with two sequential activities. It is important to mention that the use of the ICT tools will be present during both tasks. Firstly, in Task 1 (skimming), students are directed to swiftly read through the passage to discern its main ideas and overarching themes within a specified time frame, typically around 5 minutes. Following this, they are prompted to summarize the identified main points or themes. Moving to Task 2 (scanning), specific questions or prompts are provided to guide students in locating precise information within the text. Students are then required to locate, highlight, or note down the answers, while the time taken for completion is monitored to gauge their scanning efficiency.

The assessment criteria include evaluating the accuracy of main idea identification during skimming, the effectiveness of locating specific details during scanning, and the time efficiency of completing each task.

3.5.4 Lesson 1: Teaching Skimming (Timed Reading Tasks/ Using Modeling and Practice)

Introduction to the Lesson

The lesson will begin with a warm-up activity. The researcher will display a newspaper on the TV screen and allow students 5 minutes to examine the information independently. After

this time, the newspaper will be removed, and students will be asked to recall and discuss what they observed without receiving direct answers.

Following the warm-up, the researcher will introduce the concept of skimming, explaining its purpose and practical applications. The teacher will then demonstrate how to skim effectively using an article displayed on the TV screen. Subsequently, the initial newspaper used in the warm-up will be presented again, and students will be given 5 minutes to practice skimming it.

After the skimming exercise, the researcher will engage students in a discussion by asking questions about the content of the newspaper. This will help assess their understanding and application of skimming techniques in extracting key information efficiently.

To reinforce the lesson, the researcher will show a brief video providing an overview of skimming techniques.

Practice (Timed Reading Tasks /Using Pair and Group Work)

Students will collaborate in pairs, depending on their internet access capabilities. The researcher will distribute a digital text via a shared online platform such as Google Docs. A timer displayed on the TV will prompt students to skim the text independently, focusing on identifying the main ideas and key points. Following the skimming activity, the researcher will provide a link to an online quiz platform like Google Forms. This quiz will assess students' comprehension by posing questions related to the main ideas and key points identified in the text.

Closure

Following the completion of the quiz, the researcher will review the answers with the students. She will offer feedback on their responses and address any questions or concerns they

may have regarding the quiz content or their understanding of the text. This feedback session aims to clarify concepts, reinforce learning, and ensure students have a comprehensive grasp of the main ideas and key points covered in the activity.

3.5.5 Lesson 2: Teaching Scanning (Text Marking Activities)

Introduction to the Lesson/ Warm Up

The lesson will commence with a warm-up activity. The researcher will display a reading text on the TV screen and instruct students to read it individually. Once all students have completed reading, the text will be removed, and the researcher will prompt students to recall specific details from the reading without providing answers. Following this, the researcher will introduce the concept of scanning, explaining its purpose and practical applications in reading comprehension. Next, the researcher will demonstrate effective scanning techniques using a different reading displayed on the TV. Subsequently, the initial reading text from the warm-up activity will be presented again. Students will be tasked with scanning the text to locate specific details mentioned earlier. They will have a few minutes to complete this exercise before discussing their findings. To support learning, the teacher will show a brief instructional video outlining scanning techniques.

Practice (Text Marking Activities /Using Pair and Group Work)

Students will collaborate in groups of three, depending on their internet access availability. The teacher will distribute a digital text via a shared online platform like Google Docs. Students will then be given time to scan the text for specific details as indicated on the TV screen. Following the scanning activity, the researcher will provide a link to an online quiz

platform such as Google Forms. This quiz will assess students' understanding by asking questions related to the main ideas and key points identified during the scanning exercise.

Closure

The researcher will conduct a collective review of the marked texts using a screen-sharing tool. Following a discussion that will ensue regarding the effectiveness of the scanning strategies employed, with additional tips offered for improvement. Finally, students will be encouraged to apply these newly acquired techniques in their future reading tasks.

3.5.6 Lesson 3: Practicing (Questionnaires and Quizzes)

Introduction to the Lesson

The researcher will introduce the lesson by explaining to students that they will be practicing skimming and scanning techniques.

Practice

The lesson begins with an introduction where the teacher explains to students that they will be focusing on practicing skimming and scanning techniques. In the first practice session, the researcher displays a reading on the TV screen. Students are instructed to skim through the text to capture their main ideas quickly. After completing the skimming exercise, students are asked to verbally summarize what they understood from the text based on their quick reading. This will be done twice with two different texts. Moving to the second practice session, theresearcher provides a reading. Here, the researcher presents questions related to the text and highlights keywords within these questions. Students are then guided to scan the text to locate and

underline these keywords, preparing them to answer the questions using an online quiz platform like Google Forms.

Closure

To conclude the lesson, the researcher uses a presentation created in Canva or a similar tool to recap both skimming and scanning techniques, reinforcing the learning outcomes of the lesson.

3.5.7 Post-tasks

The post-task will be administered when all three lessons have been completed. This will help to evaluate students' progress in applying skimming and scanning techniques. It will consist of two tasks. The first task will mirror the pre-task, allowing for a direct comparison of students' baseline and post-intervention reading skills. This task will involve a relevant text requiring students to skim for main ideas, similar to the initial assessment. The second task will be a quiz with multiple-choice questions based on a different text. In this quiz, students must use scanning skills to efficiently identify the correct answers. This combination of tasks will provide a comprehensive assessment of students' ability to apply the techniques they have learned and practiced throughout the lesson, ensuring a thorough evaluation of their reading comprehension and information retrieval skills.

3.5.8 Final Opinion Survey

The Final Opinion Survey aims to gather students' feedback on their experiences with the reading skills improvement program, specifically focusing on the skimming and scanning techniques they learned and practiced. The survey consists of multiple-choice questions and

open-ended questions, designed to assess the effectiveness of the activities, the usefulness of the ICT tools, and the overall impact of the lessons. The survey is structured with the following sections: overall experience, the effectiveness of skimming and scanning activities, usefulness of online quiz platforms, the impact of video tutorials, comfort with skimming and scanning techniques, the impact of ICT tools, enjoyment of lessons, challenges faced, suggestions and comments. This comprehensive survey helps to understand the students' perspectives, identify areas for improvement, and enhance the effectiveness of future reading skills programs.

3.6 Data Collection Process and Data Analysis

The data will be collected daily, aligning with the objectives and performance tasks of each lesson. This systematic collection process will ensure a thorough evaluation of the students' progress and the effectiveness of the teaching methods. The data collection process will include the following components:

3.6.1 Pre-task Activity: Evaluation Sheet

Before the intervention, an evaluation sheet will be used to assess students' baseline reading skills. This pre-task activity will provide a benchmark for measuring the impact of the subsequent lessons on skimming and scanning techniques.

3.6.2 First Activity - Teaching Skimming: Online Quiz Platform (Google Forms)

During the skimming lesson, students will participate in an online quiz hosted on Google Forms. This quiz will evaluate their ability to identify main ideas and grasp the overall theme of a text through skimming. The results will offer insights into their initial understanding and application of skimming techniques.

3.6.3 Second Activity - Teaching Scanning: Online Quiz Platform (Google Forms)

In the scanning lesson, another online quiz on Google Forms will be administered. This quiz will assess students' proficiency in locating specific details within a text using scanning techniques. The performance on this quiz will help to gauge their progress and mastery of scanning skills.

3.6.4 Third Activity: Understanding of the Students (Evaluation Sheet) and Online Quiz Platform (Google Forms)

To further evaluate students' comprehension and retention, a combination of an evaluation sheet and an online quiz will be used. The evaluation sheet will capture qualitative data on students' understanding and application of both skimming and scanning techniques. The online quiz will provide quantitative data on their performance.

3.6.5 Data Tabulation and Recording

All collected data will be systematically tabulated and recorded in a digital resource, specifically Microsoft Excel. This will allow for efficient data management, enabling easy analysis and visualization of students' progress over time. The use of Excel will facilitate the tracking of individual and group performance, helping to identify trends and areas needing further attention. By employing this structured data collection and recording approach, the study will ensure a comprehensive evaluation of the students' learning outcomes, and the effectiveness of the teaching strategies implemented. This process will provide valuable feedback for refining the instructional methods and enhancing future lessons.

Chapter IV

Data Analysis

This chapter presents a detailed analysis of the data collected throughout the course of this investigation, conducted with the 11-7 section of Instituto Julio Acosta García. The analysis aims to provide insights into the impact of ICT interventions on students' reading proficiency, engagement, and attitudes toward reading. The sections in this chapter include an in-depth analysis of the class observation made during the first lesson, an evaluation of students' access to technology through the Access to Technology Survey, and a comparison of students' reading skills before and after the interventions through pre-task and post-task evaluations. Furthermore, this chapter examines the effectiveness of three key lessons: Lesson 1, which focused on teaching skimming; Lesson 2, which focused on teaching scanning; and Lesson 3, which involved practicing these skills. The Final Opinion Survey will also be analyzed to assess students' perceptions and experiences with the ICT-integrated lessons. By analyzing this data, this chapter will address the research questions posed at the beginning of the project, offering evidence-based conclusions regarding the role of ICT in improving reading strategies and overall student engagement in the classroom.

4.1 Analysis and Interpretation of the Results

This section includes all the instruments used in this investigation. It consists of the class observation from the first lesson, the access-to-technology survey completed by the students, and the pre-task evaluation. Additionally, it covers Lesson 1, which focused on teaching skimming

through timed reading tasks, modeling, and practice; Lesson 2, related to teaching scanning through text-marking activities, both lessons with their respective practice sessions; and Lesson 3, which aimed to practice both techniques using questionnaires and quizzes. Finally, it includes the post-tasks and the final opinion survey.

4.1.1 Class observation

The researcher visited the Instituto Julio Acosta Garcia in order to apply the first instrument. She observed an 11th-grade class, more specifically the 11-7. The group is composed of 25 students, both masculine and feminine. The lesson was only 40 minutes, and the researcher used a checklist to gather the information needed about this particular group. The checklist consisted of 6 categories: student engagement and behavior, the interaction between students and teacher, knowledge and application of reading techniques, use of ICT tools, classroom environment, teacher's instructional strategies, overall observations, and comments. Each category contained two or three sub-criteria and the evaluation criteria to be determined according to each. In line with the general evaluation criteria, aspects will be addressed and explained based on the researcher's observations.

The first criteria evaluated were students' engagement and behavior. The first sub-criteria were related to the students' interest in the topic of the day. The evaluation categories to evaluate the students were: actively engaged, occasionally engaged, rarely engaged, and not engaged. For this one, the researcher chose rarely engaged since the students seemed to be distracted, not paying attention, and very talkative about other topics. For the second sub-criteria, the researcher observed how much the students remained focused throughout the lesson. The evaluation categories were: consistently, occasionally, rarely, and not at all. The researcher chose "not at all," since the students were distracted easily.

For the second criteria evaluated, the objective was to understand the interaction between students and the teacher. This section contained three sub-criteria. The first one was about the students asking relevant questions during the lesson, which the researcher marked as “rarely” on a scale of frequently, occasionally, rarely, and not at all. Just a few questions were asked by the students. The second one was about the encouragement from the teacher to participate and the researcher marked it as “occasionally,” since once the time given to complete the activity was done, the teacher asked students to respond, and even called them by their names. Finally, the last one was about the quality of interactions between students and teacher, and “minimal interactions” was chosen as observed during the class given. The third area assessed was the knowledge and application of reading techniques (in cases where the lesson included reading activities). Within this category, the sub-criteria were students effectively applied skimming techniques and students effectively applied scanning techniques. However, during the observed lesson, reading activities were not conducted. Therefore, the researcher selected 'no students' as not applicable.

Following this, the checklist addressed the use of ICT tools in the classroom, followed by an evaluation of how these tools were used to complete tasks. The evaluation criteria consisted of “all students, most students, few students, and no students.” According to the scale provided, the researcher determined “most students,” since most of them were using tools such as Google translator, or any other app to translate the information from Spanish to English. Similarly, the next sub-criteria were “ICT tools effectively support learning” and the researcher marked it as “no students,” since having translated all the information did not ensure the effective learning of the students.

The following area assessed was the classroom environment. This was followed by the evaluation of classroom environment supports learning sub-criteria. The researcher chose the category of "minimally supported" for the following aspects: The layout and seating arrangement was not organized, the students moved desks where they wanted to be seated, and the classroom looked messy. On the other hand, there was good natural lighting and ventilation. As behavioral norms, even though the teacher called their attention and asked them to stop talking and keep working on their books, the students were not listening nor paying attention. They were always asking to go to the bathroom or to go out, which increased disruptions in the class. The other sub-category evaluated the classroom resources and their availability. The researcher chose "a few available," since there was only a television available. It was a big one, allowing everyone in the classroom to watch the information presented.

Moving on to the next criteria, which focused on teacher's instructional strategies, the researcher observed if the teacher effectively integrated ICT into the lessons. On a scale of "always, sometimes, rarely, and never" the researcher asked the teacher and the students how often the television was used, and they indicated that it was used with listening activities and some readings. This led the researcher to conclude that the use of ICT tools was sometimes implemented in lessons. Besides, the other sub-category was aimed to provide insight into clear instruction on reading techniques, but for this observation lesson, reading activities were not carried out.

Finally, the last checklist addressed the general student performance, which was marked as "poor" on a scale of "excellent, good, average, and poor." As for student engagement and behavior, the students were rarely engaged in the lesson and were easily distracted, talking about unrelated topics. They did not remain focused throughout the class, as the rating for staying on

task was “not at all.” Then, the interaction between students and teacher was minimal, with few students asking relevant questions and the teacher only occasionally encouraging participation. The quality of interaction was low, with limited engagement between the students and the teacher.

Following the use of ICT tools, most students were using tools like Google Translator, but these tools did not effectively support learning. While students were using ICT to translate material, it did not contribute to deeper understanding. As for the classroom environment, it minimally supported learning. The seating arrangement was disorganized, the classroom was messy, and there were frequent disruptions. Despite good lighting and ventilation, the overall environment hindered focus and productivity. Finally, teachers’ instructional strategies, ICT tools, such as the television, were used sometimes for listening and reading activities, but there was no evidence of effective use of ICT during this particular observation. No reading techniques were taught during the observed lesson. Given that students were rarely engaged, there were minimal teacher-student interactions, and the classroom environment was not conducive to learning, the overall performance of the students can be categorized as "poor." Their lack of focus, the minimal use of ICT to enhance understanding and the disorganized classroom setting all point to a low level of performance during the observed lesson.

Table 1 Class observation: Checklist

Criteria	Evaluation Category			
Student Engagement and Behavior				
Students demonstrate interest in the topic.	Actively engaged	Occasionally engaged	Rarely engaged	Not engaged
Students remain focused throughout the lesson	Consistently	Occasionally	Rarely	Not at all
Interaction Between Students and Teacher				
Students ask relevant questions during the lesson	Frequently	Occasionally	Rarely	Not at all
Teacher encourages student participation	Frequently	Occasionally	Rarely	Not at all
Quality of interactions between students and teacher	High-quality exchanges	Moderate-quality exchanges	Minimal interactions	No interactions
Knowledge and Application of Reading Techniques If the lesson for the day contains reading activities)				
Students effectively apply skimming techniques.	All students	Most students	Few students	No students
Students effectively apply scanning techniques	All students	Most students	Few students	No students
Use of ICT Tools				
Students use ICT tools to complete tasks.	All students	Most students	Few students	No students
ICT tools effectively support learning.	All students	Most students	Few students	No students
Classroom Environment				
Classroom environment supports learning.	Highly supportive	Moderate supportive	Minimally supported	Not supported
Classroom resources (including ICT) are readily available.	All available	Some available	A few available	No resources
Teacher's Instructional Strategies				
Teacher effectively integrates ICT into lessons.	Always	Sometimes	Rarely	Never
Teacher provides clear instruction on reading techniques.	Always	Sometimes	Rarely	Never
Overall Observations and comments				
General student performance.	Excellent	Good	Average	Poor

Table 1. Class observation survey. Information taken from a digital survey applied. Researcher's creation

4.1.2 Access to Technology Survey

Performing a survey about students' access to technology was critical for this investigation, as it provided the researcher with a baseline for understanding students' technological resources and proficiency, which was essential for assessing the impact of ICT interventions on their reading skills. The survey consisted of 8 questions and a final comment section. On the day that the survey was applied, there were 21 students, and one of them did not have a cellphone. In addition, only 19 responses were provided, which means that one of the students did not want to participate. The researcher displayed the survey on the screen, reading each question and its response options aloud, allowing sufficient time for students to answer before moving on to the next question, continuing this process until all questions were completed.

The first section was related to the access to ICT devices. The question number one was aimed at identifying which devices the students own or have regular access to. This data provided insight into students' access to technology. The first key observation was that the most common device the students own or have access to is the smartphone. Nearly every respondent has access to a smartphone, with only 1 out of 19 responses lacking one. As for other devices, 8 out of 19 respondents (42%) have access to a laptop, making it the second most common device. Following this, 3 respondents (21.1%) have access to a desktop computer, and finally 3 respondents (16%) have access to a tablet. As for other devices that were not mentioned in the survey, interestingly, one respondent mentioned using an Xbox Series S as a computer. Examining how many devices each student has access to revealed that 7 respondents (37%) have only a smartphone while 12 respondents (63%) have access to more than one device, with combinations of laptops, desktops, tablets, or gaming consoles.

Figure 1 Which of the following devices do you own or have regular access to?

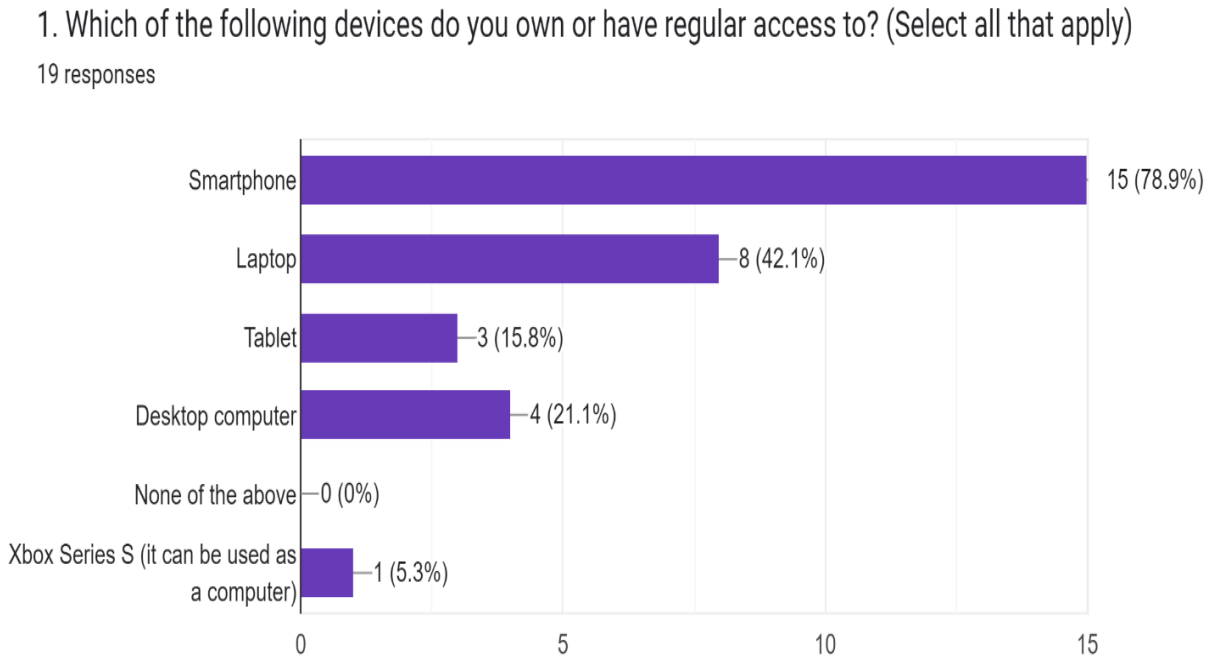


Figure 1. Student ICT Usage Survey. Information taken from a digital survey applied. Researcher's creation.

Moving on, analyzing the responses to the second question related to access to ICT devices "How often do you use these devices for educational purposes?" provided insight into students' usage patterns for learning-related activities. As the key observations, there are frequent users (daily) with 6 respondents (33%) reported using their devices for educational purposes every day. This suggests a consistent, daily reliance on technology for learning, indicating that a significant portion of students integrate technology into their educational routines regularly. Then, as moderate users, 11 respondents (61%) indicated they use their devices for educational purposes a few times a week. This group represents the majority, showing that while these students are not using technology every day for learning, they still engage with it multiple times

throughout the week. Their usage could be tied to specific assignments, projects, or class-related activities. Finally, the rare users reported 6% with 1 respondent using their devices for educational purposes rarely. This outlier suggests that this particular student may face barriers to using technology for learning, or perhaps prefers more traditional methods of studying. Identifying the reasons for this could be important in understanding access or engagement issues.

With nearly all respondents using their devices at least a few times a week for educational purposes, there is strong potential for ICT tools to enhance learning. This frequent engagement indicates that students are already familiar with using technology in their studies. The data shows that most students are using their devices regularly for educational purposes, with a solid balance between daily and weekly users. These patterns suggest a positive readiness for integrating ICT tools into their learning, though additional attention may be needed for students who engage less frequently with technology.

Figure 2 How often do you use these devices for educational purposes?

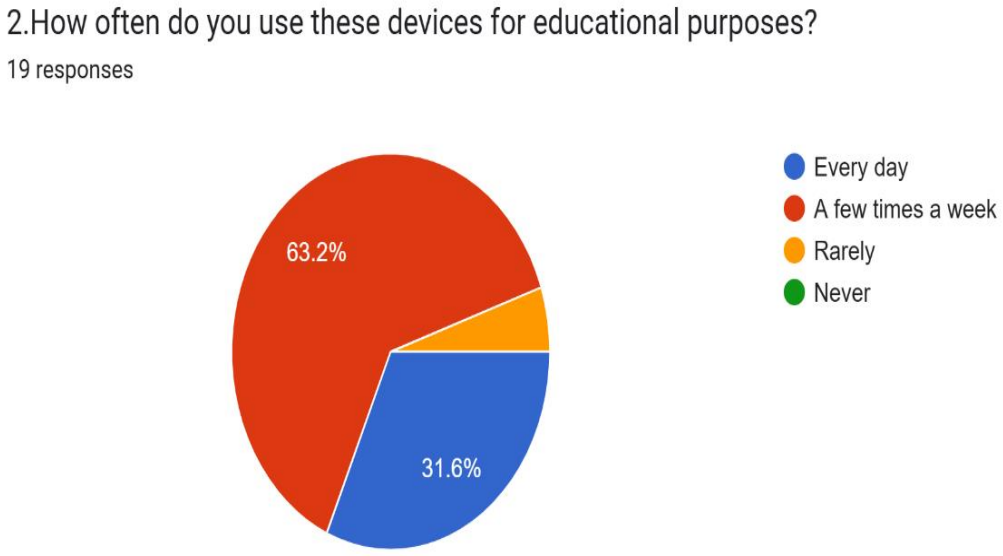


Figure 2. Student ICT Usage Survey. Information taken from a digital survey applied. Researcher's creation.

The second section was about the use of ICT tools in learning. The responses to the first question, "Are ICT tools (computers, tablets, smartboards, educational apps, etc.) integrated into your classroom lessons?" provided insight into the frequency of technology use in the classroom setting. There were two results: Frequent ICT Integration (Yes, in Most Lessons / Every Lesson) with 12 respondents (63%) indicating that ICT tools were used either in most lessons or every lesson. This suggested that the majority of students experienced consistent integration of technology into their classroom lessons. For these students, ICT tools are likely an essential component of their learning environment, shaping how they engage with educational content. On the other hand, occasional ICT Integration with 7 respondents (37%) stated that ICT tools were integrated into their lessons only occasionally. While these students do have exposure to ICT, it is less frequent. This could imply that technology is used sporadically for specific activities or lessons, rather than as a regular part of instruction.

Figure 3 Are ICT tools integrated into your classroom lessons?

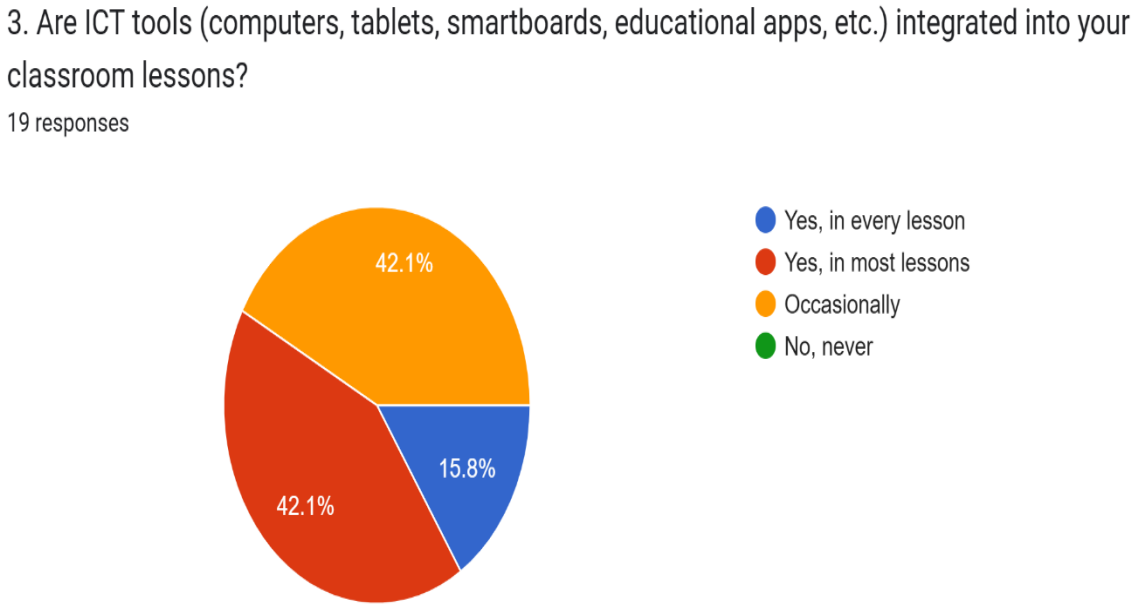


Figure 3. Student ICT Usage Survey. Information taken from a digital survey applied. Researcher's creation.

As the second question, the responses to "Which ICT tools do you use during lessons?" provided insight into the variety of digital tools students regularly engage with during their classes. As a result, the most common ICT tools are internet search for information, online learning platforms, and videos or multimedia. As for internet search, this tool was mentioned in 14 responses (74%), making it the most widely used tool during lessons. Students rely heavily on search engines for accessing information, reflecting the importance of quick access to knowledge in modern classrooms. Then, as online platforms are a major part of the classroom experience, serving as hubs for assignments, materials, and communication between teachers and students. Finally, as for videos or multimedia, this tool was cited by 8 respondents (42%). Videos and multimedia serve as engaging resources for learning, often supplementing traditional teaching methods with visual and auditory content. On the other hand, other common tools mentioned are

the educational apps used by 4 respondents (21%). These apps are less common compared to other ICT tools, but they still play a role in enriching students' learning experiences through interactive platforms.

Lastly, many respondents reported using multiple tools in combination, such as online learning platforms, internet searches, and multimedia resources. This reflects a multi-modal approach to learning, where students engage with different types of ICT tools to meet diverse educational needs. The data shows that students are using a wide range of ICT tools during lessons, with internet searches, online learning platforms, and multimedia being the most prevalent. These tools support a blended learning environment that encourages both independent research and teacher-guided learning. However, there is a variability in tool usage, with some tools like educational apps being less frequently used. This suggests room for further integration of diverse ICT resources to maximize their potential in the classroom.

Figure 4 Which ICT tools do you use during lessons?

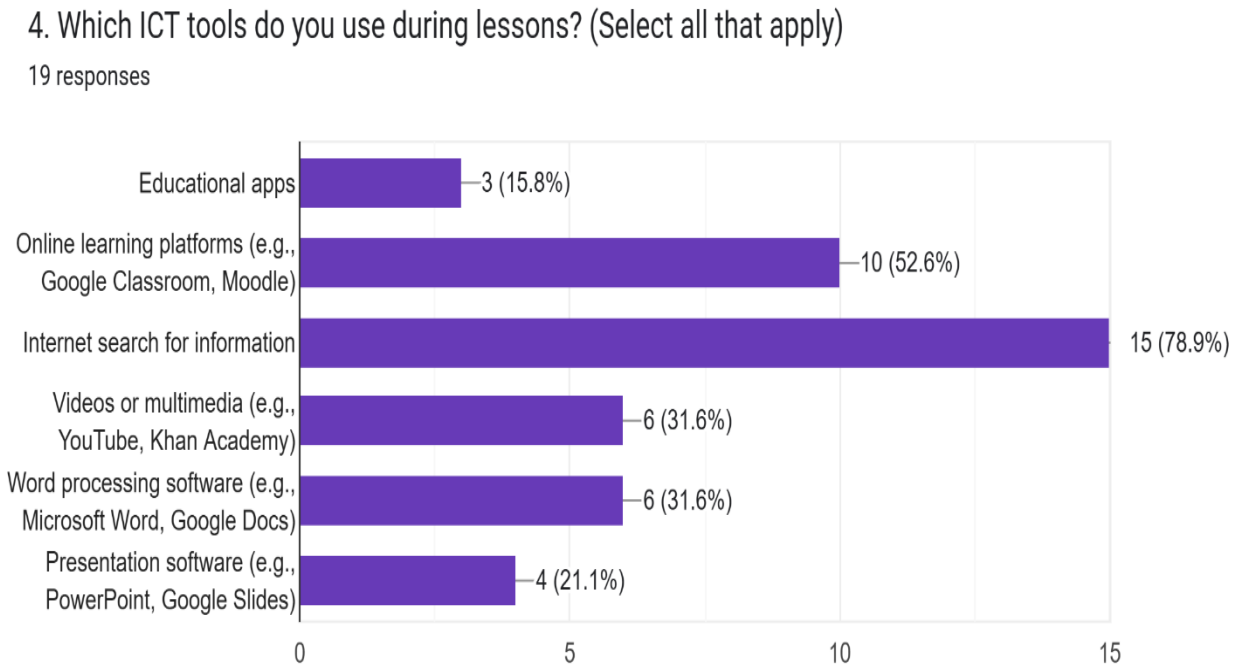


Figure 4. Student ICT Usage Survey. Information taken from a digital survey applied. Researcher's creation

The next section was ICT use outside the classroom and included two questions that provided valuable insights into how students leverage technology for their schoolwork beyond the formal educational setting. The responses to the first question about the frequency of ICT tools use for schoolwork outside of class were divided as follows: daily users with 4 respondents (21%) indicated that they use ICT tools every day for schoolwork. Then, frequent users (a few times a week) with 10 respondents (53%) reported using ICT tools a few times a week, showing a consistent engagement with technology for their studies, and finally, rare users with 3 respondents (16%) indicated they use ICT tools rarely, suggesting that these students may not be fully leveraging available resources for their academic work.

Figure 5 How often do you use ICT tools for schoolwork outside of class?

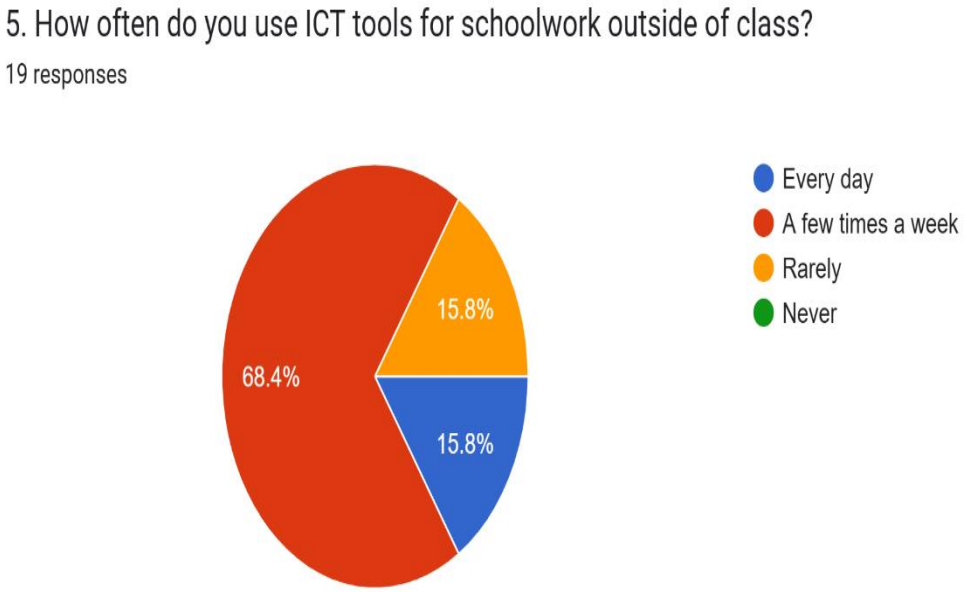


Figure 5 Student ICT Usage Survey. Information taken from a digital survey applied. Researcher's creation

Regarding the second question for this section, which pertained to the types of activities using ICT outside of class, several common activities emerged. First and foremost, research for homework or projects was mentioned in 12 responses (63%). This highlighted that students predominantly use ICT for gathering information; thus, demonstrating the importance of technology in facilitating independent learning. In addition, communicating with classmates or teachers was reported in 9 responses (47%). This activity underscores the role of ICT in enhancing collaboration and communication, which are vital for academic success. Moreover, completing assignments or quizzes was mentioned by 6 respondents (32%), reflecting the necessity of using digital platforms for submitting work and engaging with assessments. Finally, watching educational videos or tutorials was noted in 8 responses (42%). This activity illustrates

that students are supplementing their learning through multimedia resources, which can significantly enhance understanding and retention of complex topics.

Figure 6 What type of activities do you use ICT for outside of class?

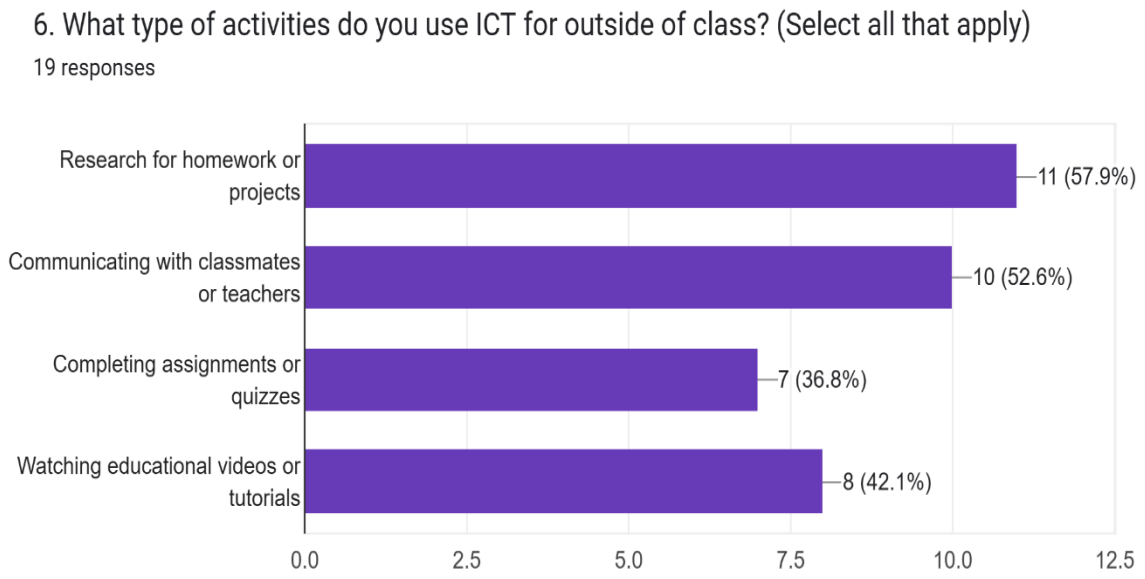


Figure 6 Student ICT Usage Survey. Information taken from a digital survey applied. Researcher's creation

The final section is about familiarity with digital tools. The responses to these questions revealed valuable insights into students' confidence levels and training experiences regarding technology use for learning. The initial question asked about how confident the student felt using digital tools for learning. The results showed two confidence levels. The first one was somewhat confident with a total of 10 respondents (53%) reporting feeling somewhat confident using digital tools for learning. This suggests that while these students possess a basic level of comfort, they may still have areas for improvement or require further support. On the other hand, the second one was very confident with 7 respondents (37%) indicating that they are very confident in their abilities. This group likely feels competent and secure in using various digital tools,

which could positively influence their learning outcomes. The results show that while a majority of students have a reasonable degree of confidence in using digital tools, there is still a notable percentage who may not feel fully empowered. This indicates a potential area for growth in providing additional training or resources to increase students' confidence and proficiency in technology use.

Figure 7 How confident do you feel using digital tools for learning?

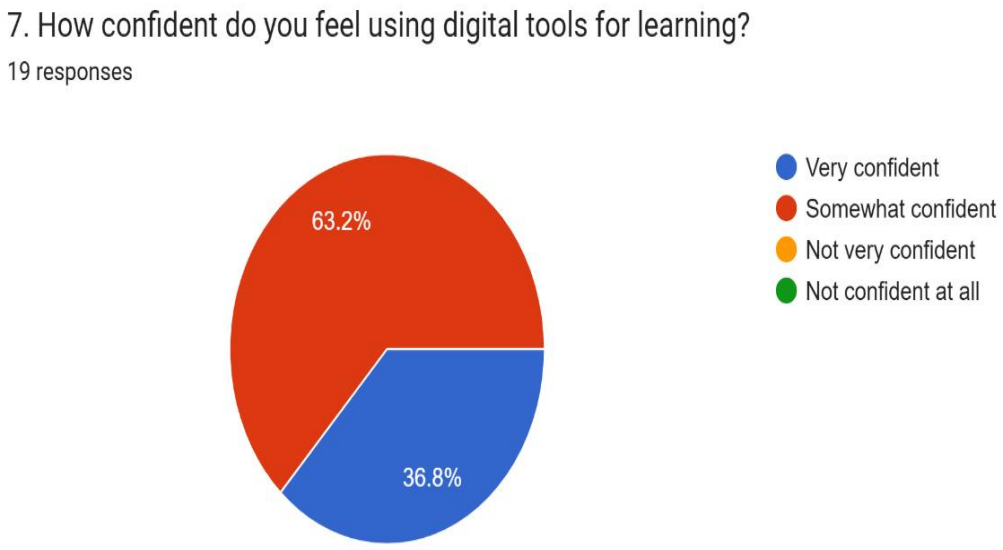


Figure 7 Student ICT Usage Survey. Information taken from a digital survey applied. Researcher's creation

The last question from this section provided insight into the training or guidance received on using digital tools. The experience was divided into 10 respondents (53%) who reported that they have received training or guidance on how to use digital tools for learning. This indicates that over half of the students have had some exposure to structured support in developing their digital skills. While 9 respondents (47%) stated that they have not received any training. This highlights a significant portion of students who may be relying on self-directed learning or trial

and error to navigate digital tools, which can limit their effectiveness and confidence. The responses suggest that students who have received training may be more inclined to feel confident when using digital tools. The correlation between training and confidence could mean that those who lack formal guidance might struggle more with technology, underscoring the importance of providing adequate training opportunities.

Figure 8 Have you ever received training or guidance on how to use digital tools for learning?

Figure 8 Student ICT Usage Survey. Information taken from a digital survey applied. Researcher's creation

To conclude this survey, an additional comment section was opened in case any student wanted to share their experience using ICT tools in education. Only 6 students responded as follows. Two answered "No," indicating they may not have any additional comments or felt that their previous responses were sufficient. One "Yes" might indicate agreement with the positive aspects of ICT tools mentioned earlier, though it lacks elaboration, One comment that is nom-

valid since it does not have any meaning, and finally two comments: “Is very good,” which suggests a positive perception of ICT tools in education, although the lack of detail limits understanding of their specific experiences and "They are very versatile and useful, but require more assistance in the school environment." This comment highlights two key points: versatility and usefulness, as students recognize the potential of ICT tools to enhance learning, indicating they find these resources beneficial in various educational contexts; and need assistance, as they mentioned requiring more assistance, which underscores a concern about the level of support available in the school environment. This suggests that while students appreciate the tools, they may struggle to utilize them effectively without proper guidance or resources

The results of the Access to Technology Survey provided important insights into students' access to, usage patterns of, and familiarity with ICT tools, which are crucial for understanding the potential impact of ICT interventions on reading skills. The majority of students have access to multiple devices, especially smartphones, suggesting they-benefit from technology-based learning activities. Moreover, frequent ICT use in classroom lessons further highlights the significant role of technology in their education. Outside the classroom, most students also engage with ICT tools a few times a week for schoolwork, demonstrating promising involvement. However, confidence in using digital tools remains an area for improvement, as 47% of students reported not receiving formal training, potentially affecting their comfort with technology. Therefore, future interventions should include comprehensive training to ensure all students can effectively use these tools. Additionally, while frequent ICT use in lessons is positive, 37% of students who experience occasional use suggest inconsistencies in access, which may limit the full impact of ICT interventions.

4.1.3 Pre-task evaluation

After implementing the access to technology survey, the researcher conducted the pre-tasks to gather information about their prior knowledge, in addition to identifying students' current skill levels. This information allowed the researcher to tailor the lessons to meet the diverse needs of the students, providing additional support where necessary. For this evaluation, the researcher displayed a Google presentation on the T.V. The first slide contained the instructions for the first activity. This activity was related to the reading technique skimming. The students were asked to read a text within 5 minutes, once the time had passed, the researcher provided them with a link to Google Forms where they were asked to answer question 1, “What main points/ideas did you identify when reading the text?” The results from the question revealed a range of comprehension levels and focus areas from the respondents.

The following is a breakdown of the responses. First, the general comprehension of the text dealing with air pollution and climate change. Most respondents identified the overarching theme of pollution and climate change. Phrases like "the damage of pollution in our planet," "air pollution," and "sobre la contaminación" show that students grasped the central issue; however, some responses were brief and lacked detail. Then, the recognition of specific causes and consequences. Some students pointed out specific contributing factors, such as *"the increased temperature's"* and *"the pollution of the air,"* acknowledging the role of rising temperatures in exacerbating pollution. A few answers, such as *"sobre los cambios climaticos, los riesgos y cambiar por energías renovables"* and *"energy to help reduce both air pollution and climate change,"* highlighted an understanding of the need for a shift toward cleaner energy as a solution. However, there were also misunderstandings and off-topic responses. A couple of unclear or irrelevant responses, such as *"Yed," "Rdtftdrygtrdtftx,"* and *"de accidentes."* These may reflect

either a misunderstanding of the task or issues with engagement or focus. On the other hand, some respondents provided more specific insights regarding the broader environmental impacts, such as *"the pollution and use the plastic," "sobre la naturaleza, el clima, los animales,"* and *"la contaminación de la flora,"* showing that students were thinking beyond air pollution to include its effects on ecosystems and wildlife.

Following the pre-tasks, the researcher displayed the instructions for the second activity on the TV. The students were asked to read three questions and then, to read the text and try to look for the answers. They were given 10 minutes to complete it. This activity was aimed at evaluating the scanning reading technique. The first question was “What is one of the main sources of air pollution mentioned in the reports?” The answers were analyzed in various factors. The first one was the identification of key sources of air pollution. Many students successfully identified specific sources of air pollution mentioned in the text. Responses such as *"Small particles from wildfires," "The cars,"* and *"pequeñas partículas procedentes de los incendios forestales, las centrales de carbón y los automóviles son especialmente peligrosas"* indicate that students understood the main contributors to air pollution, particularly harmful particulates from various sources. Moreover, some students mentioned *"Climate change"* and *"Increasing temperatures,"* which reflected an understanding that these factors are interconnected with air pollution, although they are not direct sources by themselves. This showed a level of comprehension regarding the broader context of the issue. There were also a variety of responses that indicated vague or unclear answers such as *"Sustancias"* (substances) and *"yes,"* which indicated a lack of specificity or clarity. These answers suggested that some students either did not engage deeply with the question or struggled to articulate their understanding. In addition to irrelevant or off-topic responses. The response *"Que nació primero el huevo o la gallina"* (which

came first, the chicken or the egg) is clearly unrelated to the question and indicated a potential disengagement from the task or difficulty in focusing on relevant content.

Regarding the second question, “Which organization revealed the harmful effects of rising temperatures on air quality?” its objective was to identify how students used the scanning technique to find the literal answer in the text. The expected answer was "The World Meteorological Organization" (WMO). Here is an analysis of the students' responses. Several students provided the exact answer, either in full form ("The World Meteorological Organization") or as the abbreviation ("WMO") as seen in responses like: "The World Meteorological Organization, WMO The World Meteorological Organization, The world meteorological organization (WMO)". However, some students provided irrelevant answers, such as: "The UN": This reflects confusion between organizations, "OMG" and "Mwo." This might indicate a misunderstanding of acronyms. In addition, responses such as "Yes" and "Afecta a la gallina con huevos" (It affects the chicken with eggs), suggested a lack of engagement or focus on the task. For example, "Heart sabes and wildfires worse" is an incomplete idea taken from the text but is not a relevant answer to the question, and finally "Plastic pollution, affecting ocean life and natural habits." This student highlighted another aspect of the text unrelated to the specific question.

The third and final question was “What type of pollution continues to be a major issue for marine life and ecosystems?” This question aimed to assess whether students could efficiently locate specific information, or, in other words, apply scanning techniques effectively. The correct answer, based on the text, was "plastic pollution." In relation to the responses, several students provided the correct and almost literal answer, such as: *plástico pollution, plastic pollution and plastic*. These students demonstrated their ability to use scanning to locate the specific phrase

"plastic pollution" from the text, which directly answered the question. Then, there were the partially correct answers like: the air pollution and the water pollution, that of the sea and the air, contamination, contaminación marina, basura. While these responses acknowledged pollution, they did not specifically mention plastic pollution, which was the focus of the question. This suggested that these students understood the general concept of pollution, but did not pinpoint the exact detail required. Furthermore, there were irrelevant or incorrect responses. A few students provided answers that were either incorrect or irrelevant to the specific type of pollution affecting marine life and ecosystems. Answers such as "fossil fuels," reflected confusion with a different environmental issue mentioned in the text but not related to marine ecosystems. Moreover, "muertes de animales y desbalanze en la naturaleza" (deaths of animals and imbalance in nature), was not a direct answer to the question; "cleaner energy to help reduce both air pollution and climate change" made references to a different issue from the text; "small particles from wildfires" although relevant to air pollution, was not the answer to the question on marine life and ecosystems; and finally "*ygtfy*," which appears to be a random or distracted response, indicated a lack of engagement. Furthermore, some students gave responses related to general environmental issues, such as *"La basura q las personas suele botar en rios o mares, al igual que desechos"*, which means "the trash that people usually throw into rivers or seas, as well as waste." While this is relevant to marine pollution, the question specifically required identifying "plastic pollution." These students seemed to understand the broader issue but did not focus on the specific type of pollution asked for.

During the pre-task exercises, it was observed that a few students responded in Spanish, despite the instructions and the provided text were in English. This suggested that several possible factors are affecting students' language usage and response behavior, which are worth

noting in the context of both their language proficiency and their interaction with the assigned tasks. Students may have used online translators or other translation tools to help them understand parts of the text or translate their answers. Some students may have been using translators to better comprehend what was being asked. After processing the information, students may have found it easier to respond in Spanish, even if they had understood the original text in English.

In conclusion, the pre-task evaluation revealed important insights into the students' prior knowledge and abilities in skimming and scanning techniques. Most students were able to grasp general themes like air pollution and climate change; however, their ability to extract detailed information varied, with some demonstrating clarity and others providing brief or off-topic responses. Similarly, the scanning exercises showed that while many students could correctly identify specific information, there were also instances of confusion and irrelevant answers, suggesting varying skill levels. Moreover, the fact that some students responded in Spanish, despite the instructions were in English, points to potential language barriers that may have affected their performance. This indicates the need for addressing language proficiency in future lessons. Therefore, moving forward, it will be essential to implement differentiated instruction and to offer more support to students who struggle with comprehension and language issues. This approach will help to ensure that all students can fully engage with the tasks and improve their reading skills.

4.1.4 Lesson 1: Teaching Skimming (Timed Reading Tasks/ Using Modeling and Practice)

Starting the first lesson with only 20 students present, the researcher gave an introduction to the skim technique. The researcher began the lesson with a warm-up activity. The students needed to analyze the news displayed on the TV and once it was removed, questions were made to identify if students were able to recall what they just saw. Following this activity, the researcher introduced the concept of skimming, explaining its purpose and practical applications, along with a demonstration of how to do it. After practicing one more time with another example, the students were asked to work alone or in pairs (in case anyone did not have internet access). The researcher provided the students with a digital text and an online quiz. For the quiz, 19 responses were received, since the student who did not have a cellphone worked with another student. The quiz was divided into two questions, the first one asked the students “What is the news about?” The responses were analyzed as 14 out of 18 responses (77.78%) included all key elements: air pollution, health effects, and Kolkata. Then, there were partially accurate responses mentioning air pollution and health, but no mention of Kolkata with 4 responses (22.22%). Responses such as "The news talks about the impact of air pollution on health," were received. Following, some vague or incomplete responses with 2 students (11.11%) only mentioning "air pollution." Finally, 1 response (5.55%) was irrelevant or nonsensical, since it was answered as "dgrevrev"

Figure 9 What is the news about?

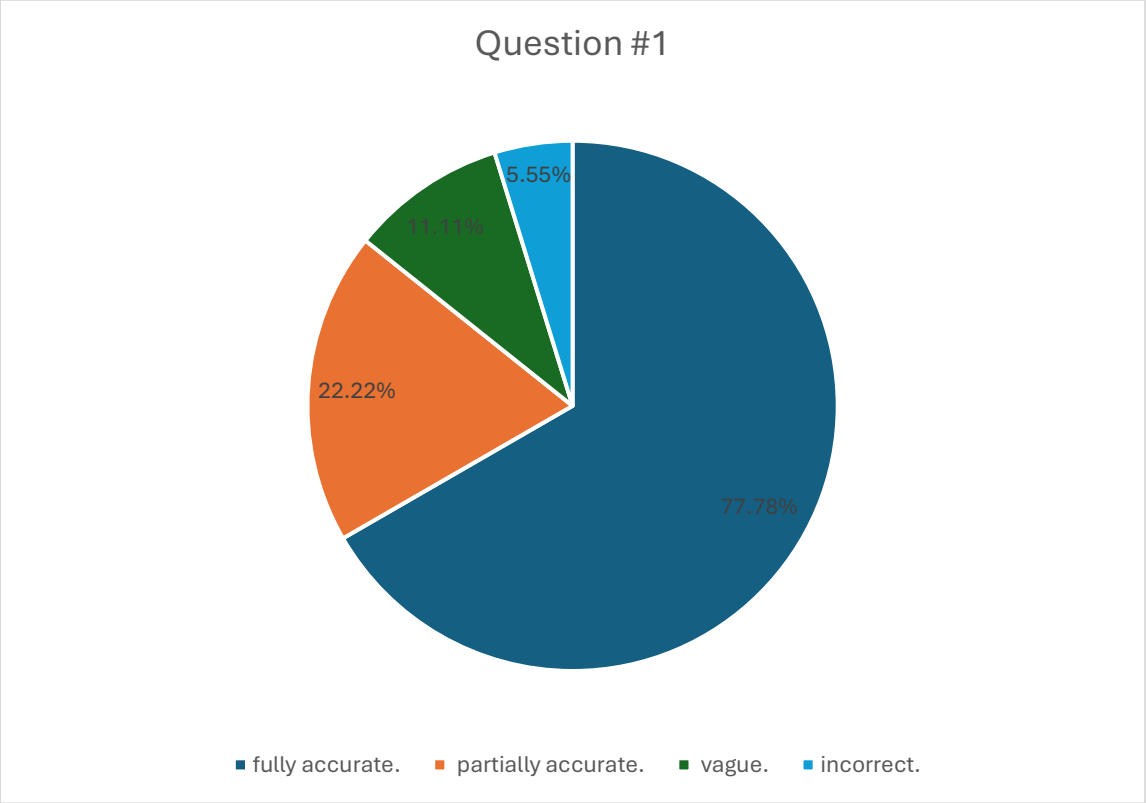


Figure 9. Pre-tasks skimming technique. Information taken from a digital survey applied. Researcher's creation.

Moving on with the second question, it asked the students to describe at least two ideas presented in the news. Students who provided accurate and complete responses, including the two requested ideas, mentioned both health problems (such as respiratory issues) and specific details related to Kolkata (e.g., 70% of the population being affected, with children being more vulnerable). These students make up 72% of the total, as they included both main ideas in their responses. Then, partially accurate responses, which included only one idea, accounted for 22% of the total, as students provided one valid main idea. Finally, vague or incorrect responses (with no clear ideas) accounted for 6%, as these students gave vague or irrelevant answers.

Figure 10 Describe the main ideas of the news presented

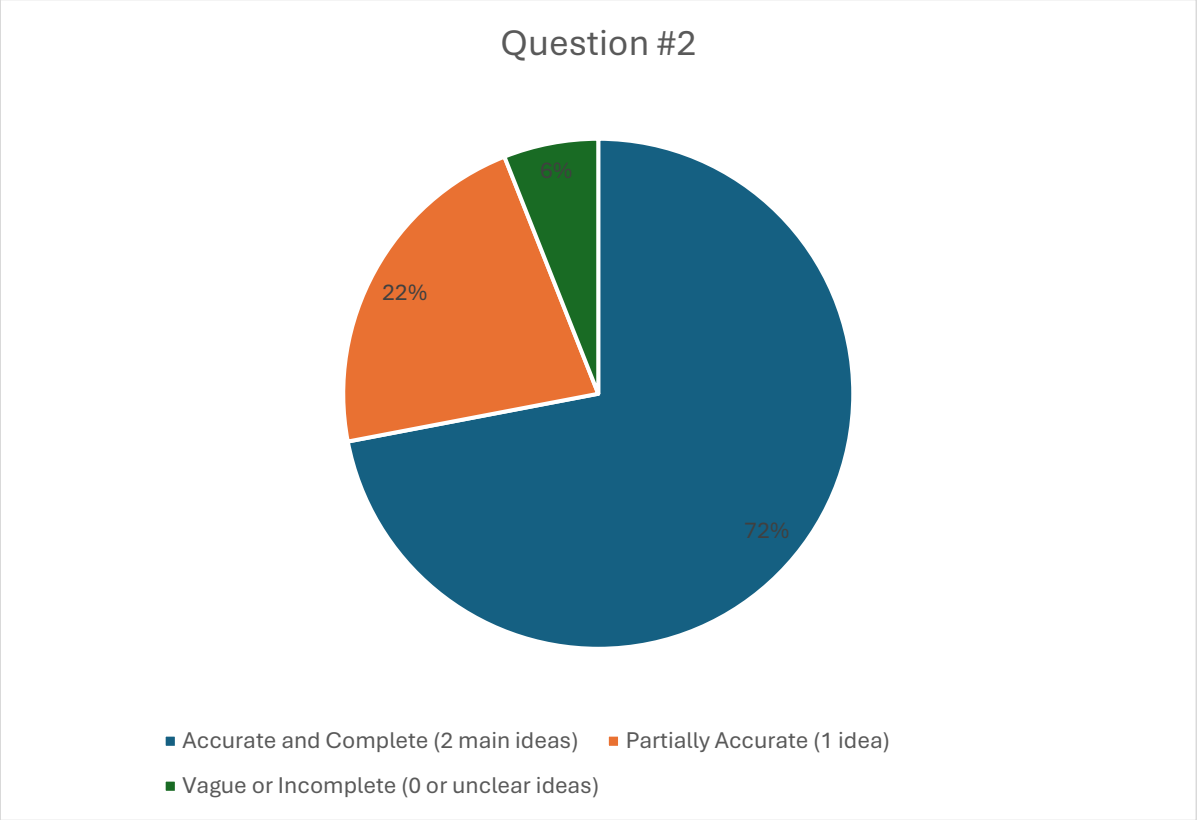


Figure 9. Pre-tasks skimming technique. Information taken from a digital survey applied. Researcher's creation

In conclusion, the results from Lesson 1 showed that the introduction of the skimming technique was largely successful. Most students were able to identify the key elements of the news text, indicating a solid understanding of the technique. Many also correctly identified two main ideas, demonstrating their ability to apply skimming in practice. However, some students missed important details, such as the specific location mentioned in the text, suggesting there is room for improvement in mastering the technique. A few students gave vague or irrelevant answers, indicating some difficulties or a lack of engagement. Overall, the lesson was effective, but future instruction could benefit from a more tailored approach to support students who struggled with the task.

4.1.5 Lesson 2: Teaching Scanning (Text Marking Activities)

Following the second lesson planned, the researcher started with the warm-up activity and then moved on to the introduction of the lesson. For this lesson, only 16 students were present. The concept of scanning, its purpose, and its practical applications were explained. Once this was clear, the students practiced along with the researcher with an example presented. The students were required to locate specific details by applying the text-marking technique explained before. Once they had finished, the researcher provided the students with a digital text shared online via Google Docs. The students needed to read the text and then answer the questions from the online quiz previously shared via Google Forms. The quiz had three questions. Regarding the analysis of the responses to the first question "What do self-driving cars use to navigate roads?," after teaching a lesson on scanning techniques, the results indicated that most students applied the technique successfully. First, 12 out of 16 responses (75%) correctly identified the main elements of the text with only two students mentioning "artificial intelligence," which was partially correct, as AI is indeed one of the components but not the full answer. On the other hand, 4 responses (25%) were either nonsensical ("svrv fve," "VVVV") or incomplete ("no se"), which were unsuccessful responses.

Figure 11 What do self-driving cars use to navigate roads?

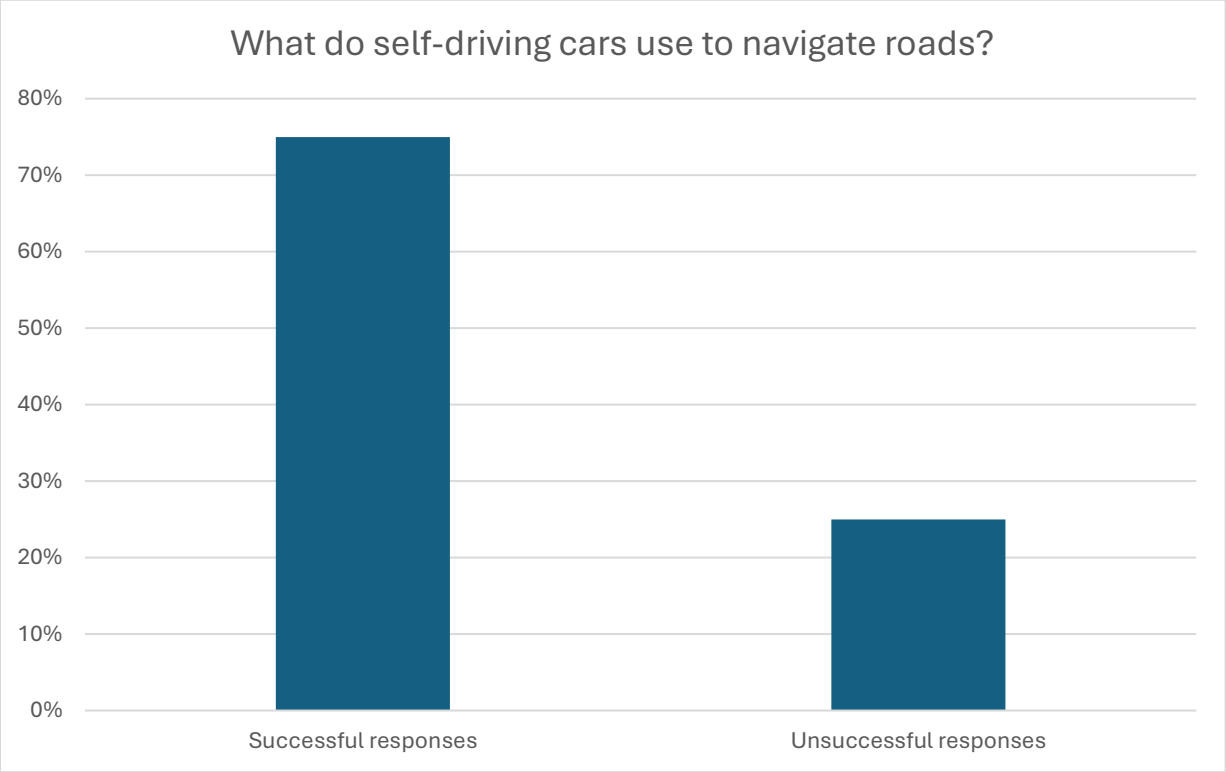


Figure 11. Scanning practice. Information taken from a digital survey applied. Researcher's creation.

In the analysis of -responses to the second question, "How could self-driving cars improve safety?" the results revealed a high level of success. 13 out of 16 responses (81%) were successful, as they were correct or mostly correct, either stating, "AI can react faster than humans" or providing the full explanation, "Since AI can react faster than humans, these vehicles could reduce the number of accidents caused by human error." While 3 responses (19%) were either nonsensical ("evwvv," "EEEE") or indicated uncertainty ("no se"); therefore, they were unsuccessful responses.

Figure 12 How could self-driving cars improve safety?

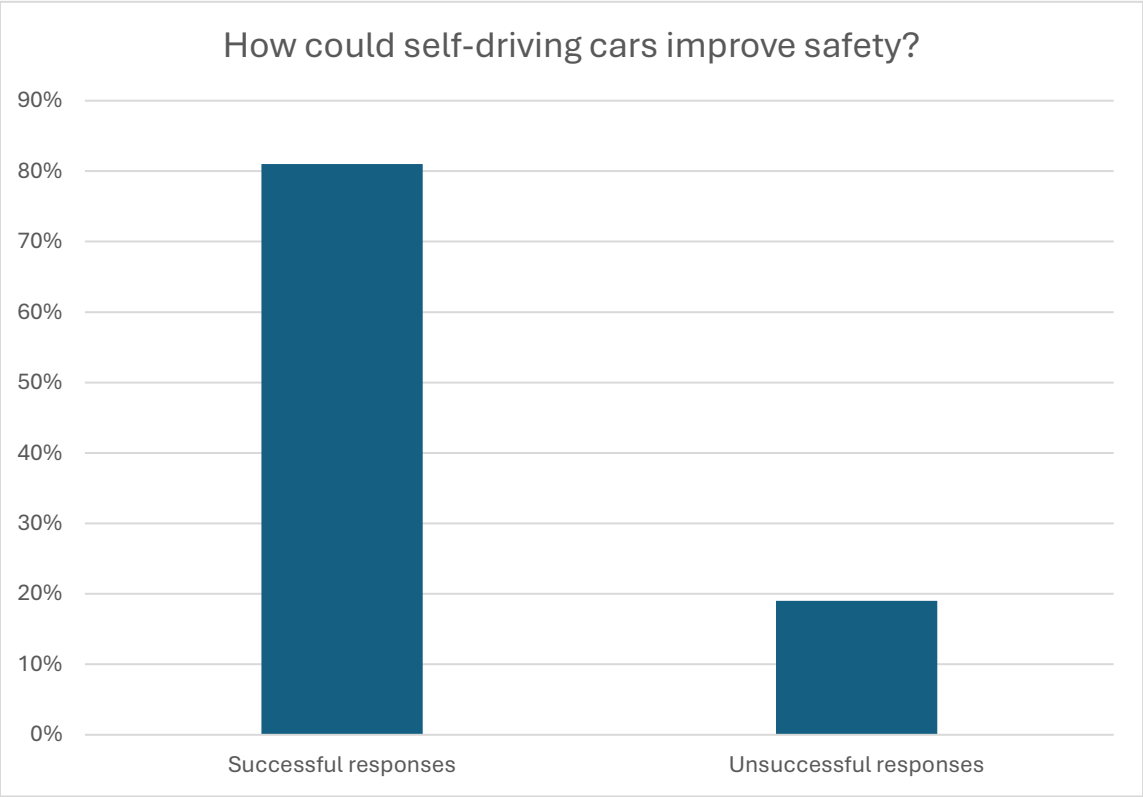


Figure 12. Scanning practice. Information taken from a digital survey applied. Researcher's creation.

The majority of students (81%) successfully applied scanning techniques, demonstrating a strong ability to extract relevant details from the text. However, a small group (19%) showed difficulty in either understanding or effectively using the technique. This indicated that while the majority of students were on track, reinforcing scanning skills for the outliers may help to further improve class performance. For the third question, **"**What is one convenience offered by self-driving cars?", students were expected to identify that self-driving cars allow passengers to relax or focus on other tasks during the ride. The analysis of the responses is as follows: 13 out of 16 responses (81%) were accurate, either fully stating "allowing passengers to relax or focus on other tasks during the ride" or providing part of the key information, such as "allowing passengers to relax." Therefore, they were-successful responses. On the other hand, 3 responses

(19%) were either nonsensical ("evev v," "FFFF") or expressed uncertainty ("no se"); consequently, they were categorized as unsuccessful responses.

Figure 13 What is one convenience offered by self-driving cars?

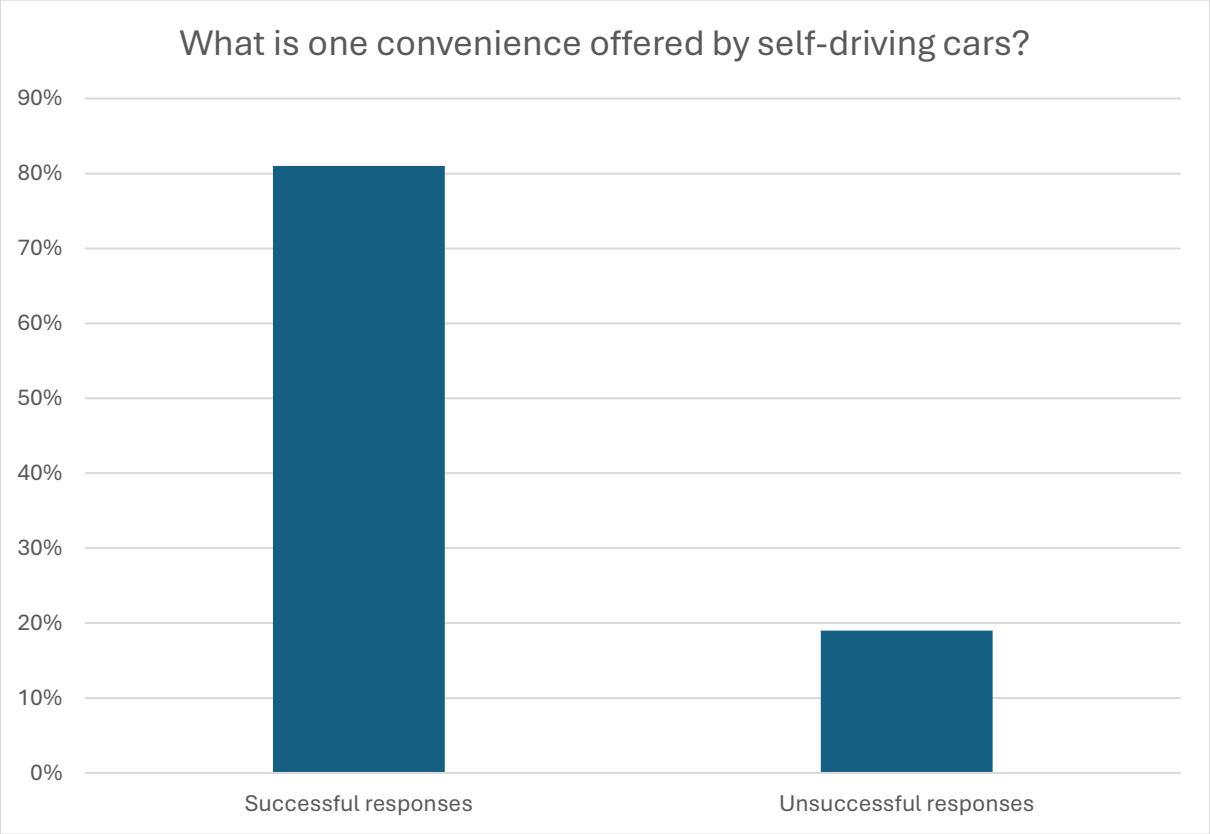


Figure 13. Scanning practice. Information taken from a digital survey applied. Researcher's creation.

Overall, the scanning technique was successfully applied by the majority of students (81%) at the time of identifying the convenience offered by self-driving cars. While a small portion (19%) of students struggled with either comprehension or using the scanning technique, the majority demonstrated effective use of this skill in locating specific information.

4.1.6 Lesson 3: Practicing (Questionnaires and Quizzes)

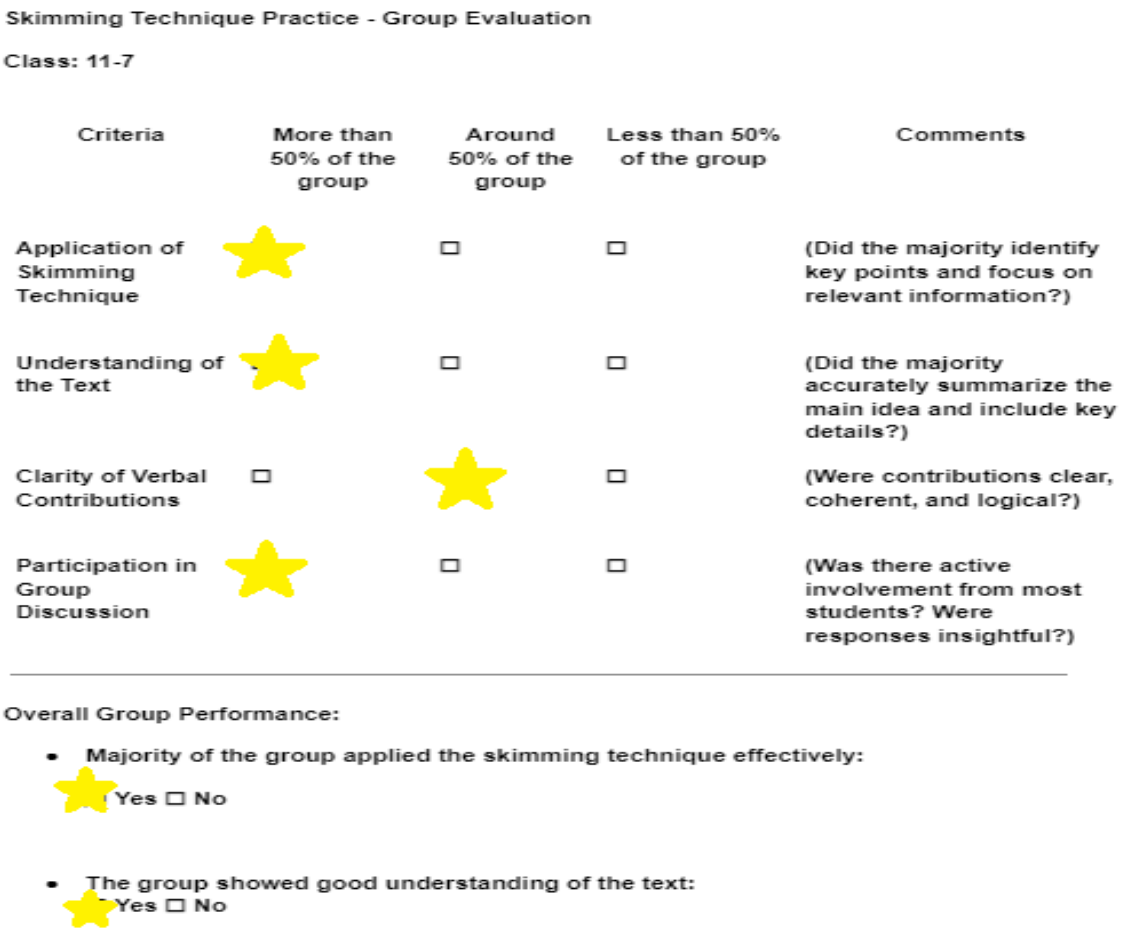
Once the researcher finished the first two classes planned, where students were taught about skimming and scanning techniques, the third lesson was applied to practice the techniques. The lesson started with a recap of the differences and purposes of the techniques. After that, in the first practice session, the researcher displayed an article on the TV and provided the students with the link to the article, as well. The students were instructed to skim through the text to capture the main ideas quickly within 5 minutes. Following that, they were asked to verbally summarize what they understood from the text based on their quick reading.

While the conversation was going on, the researcher evaluated the students with a group evaluation sheet that consisted of four criteria: application of the skimming technique, understanding of the text, clarity of verbal contributions, and participation in group discussion. Since this was a group conversation, they were measured as more than 50% of the group, around 50% of the group, and less than 50% of the group. For the first criterion, the researcher was looking to determine if the majority of students identified key points and focused on relevant information, and as a result, it was selected as more than 50% of the group in the evaluation sheet. This suggests that the majority of students grasped the basic concept of skimming. Moving to the second-criterion, more than 50% of students demonstrated a good understanding of the text after skimming. The third criterion showed that around 50% of students were able to express their thoughts clearly, though many used a mix of English and Spanish as they were not fully confident or could respond fully in English. Finally, the fourth criterion indicated that more than 50% of students participated actively in group discussions showing high participation and engagement with the activity.

The results of the skimming practice demonstrated that the majority of students were able to successfully apply the skimming technique, effectively identifying key points and focusing on

relevant information. This suggests a strong grasp of the technique among most students, though further reinforcement could benefit those who struggled. The students also displayed a solid understanding of the text, with more than 50% showing comprehension of the main ideas. However, verbal expression presented a challenge, as around 50% of the students were able to clearly articulate their thoughts, often resorting to a mix of English and Spanish. This highlighted the need for additional support in fostering English fluency and confidence during verbal tasks. Despite these language barriers, more than 50% of the students participated actively in group discussions, reflecting a high level of engagement and collaborative effort in applying the skimming technique.

Figure 14 Skimming technique practice-Group evaluation



Skimming Technique Practice - Group Evaluation

Class: 11-7

Criteria	More than 50% of the group	Around 50% of the group	Less than 50% of the group	Comments
Application of Skimming Technique	★	☐	☐	(Did the majority identify key points and focus on relevant information?)
Understanding of the Text	★	☐	☐	(Did the majority accurately summarize the main idea and include key details?)
Clarity of Verbal Contributions	☐	★	☐	(Were contributions clear, coherent, and logical?)
Participation in Group Discussion	★	☐	☐	(Was there active involvement from most students? Were responses insightful?)

Overall Group Performance:

- Majority of the group applied the skimming technique effectively:
  ★ Yes ☐ No
- The group showed good understanding of the text:
  ★ Yes ☐ No

Figure 14. Skimming technique practice-Group evaluation. Information taken from a digital survey applied. Researcher's creation.

Regarding the second practice session, the objective was to practice scanning. The researcher provided the students with a different reading through a link, as well as being presented on the TV. Along with the reading, they were provided with three questions. The students needed to scan the text and look for the responses to those questions. 23 students participated in the activity. The first question was: What is the minimum recommended amount of vigorous exercise per week? Most students answered "75 minutes" in response to the question, which matched the correct information from the text. However, about a quarter of the students responded "150 minutes," likely because both numbers appeared in the text, and they may have confused moderate with vigorous activity. The majority of students (around 75%) answered "75

minutes," which was the correct minimum for vigorous activity. This suggested that most students were able to correctly scan the text and identify the relevant number. On the other hand, about 25% of the students gave "150 minutes" as their answer. This indicated a misunderstanding of the distinction between moderate and vigorous exercise. These students may have scanned the text for a number and selected the wrong one without fully processing the context.

All things considered; most students seemed to have effectively used the scanning technique to find the relevant number in the text. However, the confusion among the 25% who chose "150 minutes" suggests that some students were not fully processing the details surrounding the scanned information, particularly when multiple figures were mentioned. To improve, students could benefit from more targeted practice that requires them to not only locate the information quickly but also differentiate between related details

Figure 15 What is the minimum recommended amount of vigorous exercise per week?

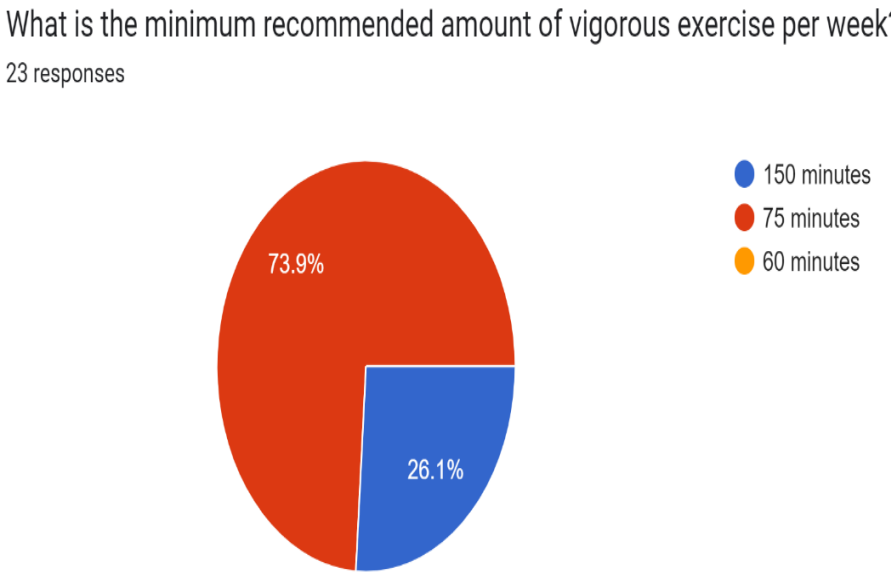


Figure 15. Scanning technique practice. Information taken from a digital survey applied. Researcher's creation.

In the second question, “When was the study by the American Psychological Association about exercise and mood published?” every student provided the correct year for when the study was published. This indicated that the students were highly successful in using scanning techniques to quickly locate relevant information from the text. The question was straightforward, with the relevant detail (2021) being explicitly stated in the text. This likely contributed to the students’ success.

Figure 16 When was the study by the American Psychological Association about exercise and mood published?

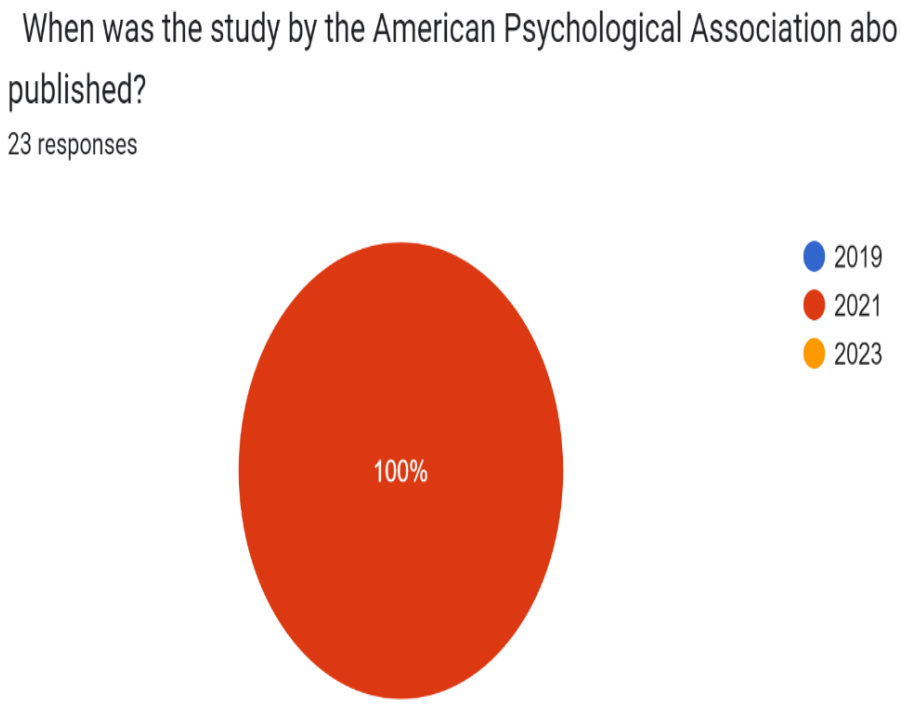


Figure 16. Scanning technique practice. Information taken from a digital survey applied. Researcher’s creation.

For the final question, “Which of the following chronic diseases can exercise help prevent?” most students answered correctly, but a few provided incorrect responses. The majority of students (around 87%) provided the correct answer, indicating that they were able to effectively scan the text and identify the relevant chronic diseases (heart disease, type 2 diabetes, and cancer). On the other hand, a small portion of students (around 13%) gave incorrect responses, mentioning “Type 1 Diabetes” and “Pancreatic Cancer” instead of “Type 2 Diabetes” and the more general term "Cancer." This likely occurred due to scanning errors or confusion between similar terms like Type 1 and Type 2 diabetes or specific vs. general references to cancer. As a result, the majority of students successfully used scanning to find the correct information, showing a good understanding of how to locate specific details. Meanwhile, the incorrect answers suggested that some students might have focused too much on key terms like "Diabetes" and "Cancer" without paying attention to whether they matched the specific information in the text. This points to a need for additional practice in distinguishing between similar terms.

Figure 17 Which of the following chronic diseases can exercise help prevent?

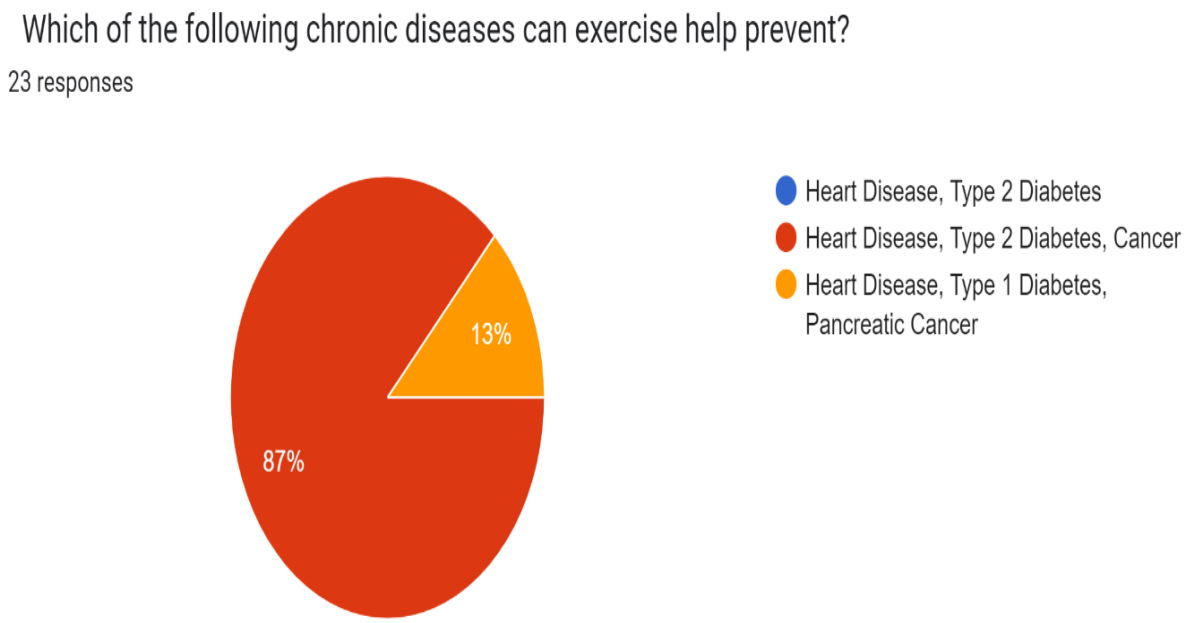


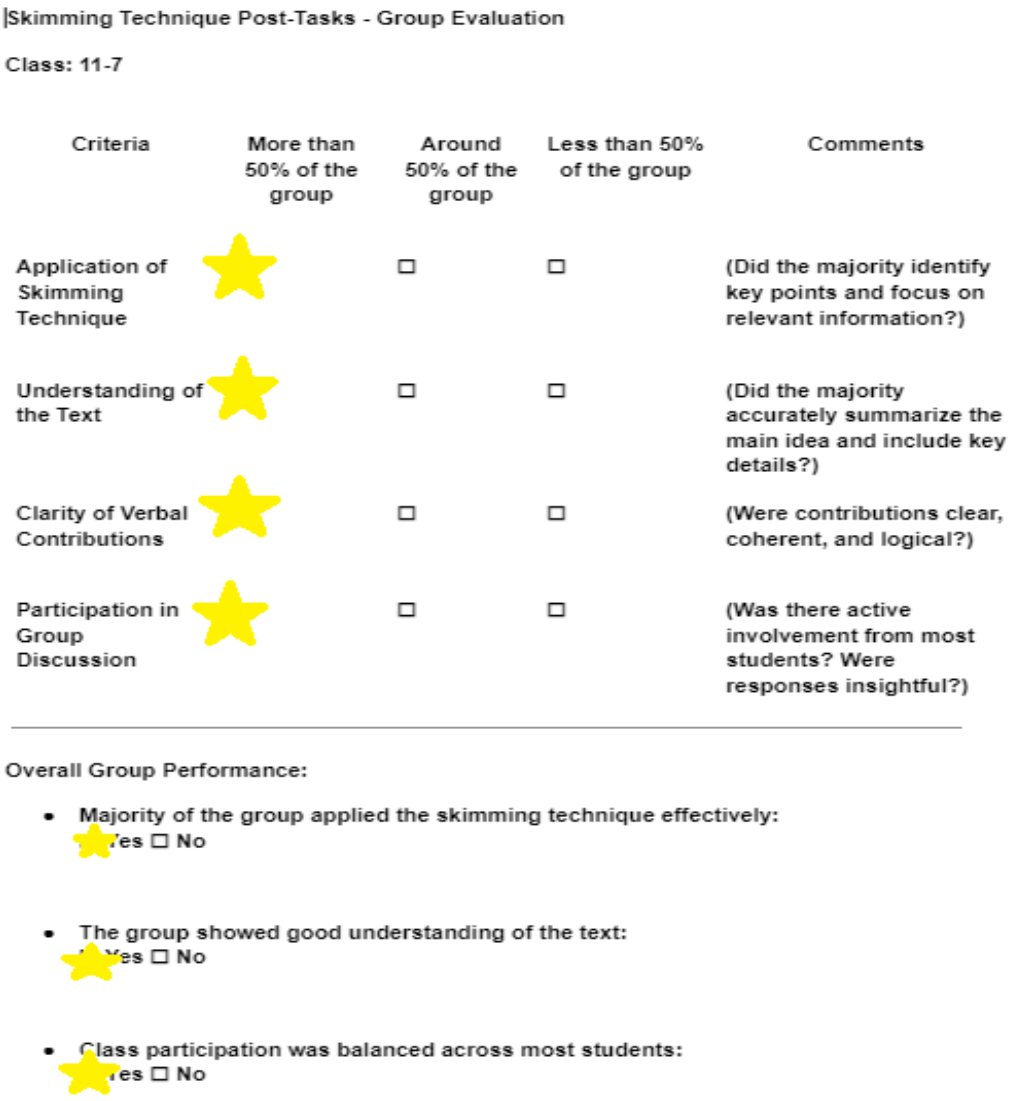
Figure 17. Scanning technique practice. Information taken from a digital survey applied. Researcher's creation.

4.1.7 Post-tasks

Once the previous lessons and practices were completed, the researcher carried out two post-task activities similar to the pre-tasks. This helped to gather the corresponding information to compare students' progress during the lessons and the practices. For the first task, the researcher presented an article on TV and shared the link with them as well. Moreover, the researcher instructed the students to skim it within 5 minutes. After the time had passed, the researcher removed the article and asked the students to write down what they remembered about the article, such as the main idea, headings, subheadings, what the images in the article represented, and anything else they needed to, in English. Once they all finished, a conversation was open to discuss what the article was about. While this was happening, the researcher evaluated the group responses with the evaluation sheet. The evaluation was based on four criteria: the use of the skimming technique, text comprehension, clarity of verbal contributions,

and participation in group discussions. Given that this was a group activity, the results were categorized as "more than 50% of the group," "around 50% of the group," and "less than 50% of the group."

Figure 18 Skimming Technique Post-Tasks- Group Evaluation



Skimming Technique Post-Tasks - Group Evaluation

Class: 11-7

Criteria	More than 50% of the group	Around 50% of the group	Less than 50% of the group	Comments
Application of Skimming Technique	★	☐	☐	(Did the majority identify key points and focus on relevant information?)
Understanding of the Text	★	☐	☐	(Did the majority accurately summarize the main idea and include key details?)
Clarity of Verbal Contributions	★	☐	☐	(Were contributions clear, coherent, and logical?)
Participation in Group Discussion	★	☐	☐	(Was there active involvement from most students? Were responses insightful?)

Overall Group Performance:

- Majority of the group applied the skimming technique effectively: ★ Yes ☐ No
- The group showed good understanding of the text: ★ Yes ☐ No
- Class participation was balanced across most students: ★ Yes ☐ No

Figure 18. Skimming technique practice-Group evaluation. Information taken from a digital survey applied. Researcher's creation.

For the first criterion, the goal was to assess whether most students could identify key points and focus on relevant information. Consequently, more than 50% of the group met this expectation, indicating that the majority understood the basics of skimming. Regarding text comprehension, over 50% of students showed a solid understanding of the material after skimming. The third criterion revealed that more than 50% of the group met this expectation, which could indicate that the improvement in the students' ability to express their thoughts clearly, as seen in the post-tasks, could be attributed to the change in the task's structure. The key difference in the post-task was that students were asked to write down, in English, specific information about the article: the main idea, headings, subheadings, and the meanings of images. This structured approach likely provided students with a clear framework, as by focusing on specific aspects of the article (main ideas, headings, images), students had more guidance on what to look for and what to express. Moreover, it was considered the use of written reinforcement, since writing down their thoughts may have given students more time to think through their responses and organize their ideas in English before discussing them. This likely helped to build their confidence and language skills, as well as more engagement with English, since they had to write everything in English. In addition, it encouraged them to practice and focus more on language use, limiting the opportunity to fall back on Spanish for expression. Lastly, the fourth criterion showed that over 50% of students participated actively in group discussions, reflecting strong engagement with the activity.

Continuing with the second task, which was to evaluate the scanning technique, the researcher shared another link with a reading and three related questions. The results were the following. For the first question, “what is one of the major benefits of social media according to the text?” 15 students (75%) successfully identified and located relevant information in the text,

which indicated a strong application of the scanning technique. These students demonstrated their ability to quickly navigate the text and extract the necessary details, showing proficiency in scanning specific information. On the other hand, 5 students (25%) provided different answers, which suggested they either misinterpreted the question or did not fully apply scanning effectively. These students may need further guidance in staying focused on the exact question being asked and using the scanning technique to locate answers precisely.

Moving to the second question, "What is one negative effect of social media mentioned in the text?" 18 out of the 21 responders (85.7%) correctly identified the negative effects of anxiety and depression as mentioned in the text. These students successfully used their scanning skills to locate and extract the relevant information. Due to the effectiveness of the scanning application, the large majority of students were able to focus on the section of the text that described the negative effects of social media and extract the correct details. This suggested that most students were proficient in using scanning to find negative outcomes. However, there were incorrect responses such as "It increases global communication." This response highlighted a positive effect rather than a negative one, which indicated the student either misread or misunderstood the question. Moreover, the answer-"It allows people to share news instantly" was another positive effect of social media mentioned in the text, but it did not address the negative aspect the question asked for. Like the previous incorrect response, these two students likely overlooked the specific word "negative" in the question. This could indicate an issue with fully processing the question before scanning for the answer.

Finally, for the third question, "What do experts believe about the future of social media?" 19 out of 21 students (90.5%) provided the correct response, indicating a very high success rate. These students successfully applied scanning techniques to locate the specific

information from the text. The majority of students demonstrated effective scanning skills by quickly identifying the future outlook of social media as described in the text. This showed their proficiency in identifying and extracting key information. Nevertheless, the other 2 students (9.5%) provided the incorrect answer and may have skimmed too quickly or misinterpreted the focus on communication. This suggested a minor issue with differentiating between general ideas and those specifically addressed in the text.

The results of the post-tasks after teaching skimming and scanning techniques showed that the majority of students successfully applied these strategies to extract relevant information from the text. For each question analyzed, over 75% of students provided correct responses, demonstrating proficiency in locating key details, including the benefits and negative effects of social media, as well as expert predictions about its future. However, a small percentage of students (between 10-25%) provided incorrect or off-target answers, often due to misinterpreting the question or focusing on unrelated parts of the text. This suggested that while most students grasped the scanning technique well, a few still needed further guidance on fully understanding the question before scanning for the answer. Overall, the post-task results indicate a successful outcome from the lessons, with room for improvement in refining the scanning skills of a minority of students.

4.1.8 Final Opinion Survey

The Final Opinion Survey was conducted to gather students' reflections on the Reading Skills Improvement Program. The survey aimed to evaluate the effectiveness of the lessons, the use of Information and Communication Technology (ICT) as a pedagogical tool, and the overall impact on the students' reading skills, particularly skimming and scanning. By collecting student feedback, this survey provided valuable insights into their experiences, the challenges they

encountered, and suggestions for improving future lessons. The results from this survey offered a comprehensive understanding of the program's strengths and areas for enhancement, which is critical for refining instructional strategies and ensuring better student engagement and skill development in future iterations of the program. The survey contained 5 questions, each one with options to choose from. The day that the survey was applied only 16 students participated.

Starting with the first question "How would you rate your overall experience with the reading skills program? The responses to this question were highly positive, as 87% of students (13 out of 16) rated the program as "Excellent," indicating that the program met or exceeded their expectations. This suggested a strong satisfaction with the content, delivery, and outcomes of the lessons; on the other hand, the remaining 13% (3 students) rated their experience as "Good," which still reflected a positive perception but may point to areas for minor improvements. The overall satisfaction level of the students highlighted the success of the program in terms of engagement, instructional strategies, and its impact on their reading skills. The fact that any of the students rated the program as "Fair" or "Poor," further reinforced the effectiveness of the teaching methods used, particularly in fostering essential reading techniques like skimming and scanning. This overwhelmingly positive feedback suggested that the program not only met its objectives, but it also resonated well with the students, which is crucial for future replication or scaling of similar initiatives. It also reflected the appropriateness of the instructional approach and content design in addressing the students' needs.

Continuing with the second question, "How effective were the activities for improving your skimming and scanning techniques?" the majority of students found the activities designed to improve their skimming and scanning techniques to be highly effective. Specifically, 13 students (81%) rated the activities as "Very effective," indicating that the tasks were successful

in helping them to enhance these critical reading techniques, and 3 students (19%) rated the activities as "Somewhat effective," suggesting that while they found the activities useful, there may have been areas where the exercises could have been more engaging or tailored to their needs. The positive responses (81% "Very effective") suggested that the activities were well-designed to meet the students' needs for developing skimming and scanning skills and the feedback indicated that the majority of students benefited from the program's focus on these areas. However, the 19% of students who found the activities only "Somewhat effective" may have faced challenges such as difficulty understanding the instructions, needing more practice with the techniques, or requiring more diverse activity formats. This feedback provided an opportunity to fine-tune future lessons, perhaps by incorporating a wider range of activities or more examples to cater to different learning styles.

The third question to analyze was "How comfortable do you now feel using the skimming and scanning techniques in your reading tasks?" The responses showed that a significant majority of students felt confident when using skimming and scanning techniques, though a small portion remained less certain. 12 students (75%) indicated they felt "Very comfortable," suggesting that the program was highly effective in helping most students to gain confidence in using these reading techniques. This level of comfort demonstrated that the students were likely able to independently apply skimming and scanning in their reading tasks without difficulty. Moreover, 4 students (25%) responded with "Somewhat comfortable," meaning they grasped the techniques but may not yet feel fully proficient or confident when applying them. While they did not select "Not very comfortable" or "Not comfortable at all," their responses implied a need for more practice, particularly with more complex or unfamiliar texts. The absence of negative responses ("Not comfortable at all") suggested that the program

successfully taught the foundational skills of skimming and scanning, but the 25% who felt only "Somewhat comfortable" may benefit from additional reinforcement, such as follow-up activities or further guidance on when and how to apply these strategies effectively.

Moving to the fourth question, “Did the ICT tools (like online platforms or videos) make the lessons more engaging and effective for you?” The responses to this question were unanimous, with all 16 students responding, "Yes, they were very helpful. This result clearly indicated that the integration of Information and Communication Technology (ICT) tools, such as online platforms and videos, significantly enhanced both the engagement and effectiveness of the lessons for the students.

Finally, the fifth question. “Were there any challenges you faced, or is there anything you would suggest to improve future lessons?” The responses to this question revealed a mix of positive feedback and constructive criticism, highlighting both strengths and areas for improvement. The first one was positive feedback, a significant number of students, 10 out of 16 (62.5%), responded with "Everything was great." This indicated a strong level of satisfaction with the program, suggesting that the majority of students felt that the lessons were effective, engaging, and met their learning needs. Then, identified challenges, three students (18.75%) mentioned that "The readings were too long, and it was hard to finish them on time." This feedback suggested that while the content was valuable, the length of the readings may have posed a challenge for some students, potentially hindering their ability to fully engage with the material. Finally, there was a desire for variety, two students (12.5%) noted that "The activities were a bit repetitive; I would prefer more variety in tasks." This response pointed to a need for diversification in the instructional methods used, indicating that varying the types of activities could enhance engagement and learning outcomes. Overall, while the majority of students had a

very positive experience with the program, the constructive feedback regarding reading length and activity variety provided valuable insights for future lessons. Addressing these challenges could further enhance the program's effectiveness and engagement, ensuring that all students feel supported in their learning journey.

Chapter V

Conclusions and Recommendations

5.1 Purpose of the Conclusion

The purpose of this conclusion is to integrate and reflect upon the findings gathered throughout the study, linking them directly to the specific objectives and central aim of this investigation. This research sought to explore the role of Information and Communication Technology (ICT) as a tool to enhance skimming and scanning skills among 11th-grade students at Instituto Julio Acosta García, assessing the impact of digitally based interventions on students' reading proficiency, engagement, and attitudes. By presenting the key outcomes in relation to each objective—developing ICT-driven activities, implementing these within a structured educational framework, and evaluating their effectiveness—this section synthesizes the data collected from pre- and post-intervention assessments, class observations, and student feedback.

The conclusions underscore both the achievements and limitations observed in this ICT-based approach, providing insight into how technology can facilitate skill development in reading comprehension, while also identifying areas for improvement when integrating these tools. Additionally, this section will discuss the broader implications of the findings for literacy education, particularly in a context where digital literacy is increasingly essential. The analysis serves as a foundation for recommendations aimed at educators and institutions seeking to adopt ICT as a means to foster reading skills, ensuring that future instructional practices are informed by effective, evidence-based strategies. Through this comprehensive review, the conclusion aims to support ongoing advancements in literacy education and contribute to a better understanding of how digital tools can be leveraged for meaningful academic growth.

5.2 Conclusions

The purpose of this study was to examine the role of Information and Communication Technology (ICT) in enhancing the reading skills of skimming and scanning among 11th-grade students at Instituto Julio Acosta García. The research was structured around three key objectives: first, to develop ICT-based reading activities aimed at improving skimming and scanning techniques; second, to implement these activities within the educational context of the institution, integrating ICT tools and resources; and third, to evaluate the effectiveness of these activities through pre- and post-intervention assessments. In the following conclusions, findings are presented in relation to each objective, shedding light on the outcomes of ICT integration in teaching reading skills. This analysis offers insights into the potential of ICT to support literacy development, addressing both the progress in students' reading abilities and the observed impact on engagement and comprehension. These conclusions provide a foundation for recommending effective strategies for incorporating technology into literacy instruction.

5.2.1 To develop reading activities utilizing Information and Communication Technology (ICT) to improve skimming and scanning techniques

The development of reading activities that utilize Information and Communication Technology (ICT) reflects a significant shift from traditional paper-based reading to a more interactive, engaging, and personalized approach. In today's digital age, students are increasingly engaged with technology, and integrating ICT into reading instruction aligns with their interests and daily interactions with digital media. This adaptation not only captures students' attention, but it also leverages their familiarity with technology to enhance motivation and engagement in reading tasks. By transitioning to ICT-based activities, educators can offer interactive

experiences that support skimming and scanning techniques through customizable exercises, visual aids, and timed tasks that traditional methods may lack. The use of ICT provides flexibility in presenting material, allowing students to interact directly with texts in ways that can be more dynamic and accessible, ultimately fostering both skill development and greater enthusiasm for reading.

The integration of ICT-based reading activities designed to teach skimming and scanning techniques demonstrated a positive impact on enhancing students' reading comprehension skills. Through structured lessons, students received guided practice that allowed them to better identify main ideas and locate specific information, leading to measurable improvements in comprehension. These interactive exercises promoted active engagement and hands-on learning, making the reading techniques more accessible and easier to apply in a structured context. However, the study revealed that while most students responded positively to these ICT-based activities, a subset encountered challenges, particularly in accurately interpreting questions. This sometimes led these students to focus on irrelevant information or to overlook essential details in the text. Such challenges underscore the diversity in comprehension abilities within the classroom and point to the need for adaptable instructional approaches that cater to various learning needs.

To address these difficulties, integrating immediate feedback mechanisms within ICT activities could prove beneficial. For instance, embedding hints or guiding questions in the ICT tools could prompt students to reassess their reading approach whenever they miss critical details or misunderstand a question. This immediate feedback would encourage self-correction and reinforce independent problem-solving, enabling students to build confidence in their ability to apply skimming and scanning techniques effectively. This supportive element would further

enhance the efficacy of ICT interventions, allowing them to accommodate a broader range of students' needs and ultimately contribute to a more inclusive and effective learning experience.

5.2.2 To implement the developed reading activities within the educational framework of Instituto Julio Acosta Garcia, leveraging Information and Communication Technology (ICT) tools and resources when reading

The implementation of ICT-based reading activities within the educational framework of Instituto Julio Acosta García underscores both the potential benefits and the challenges of integrating technology into reading instruction. This approach enriched traditional reading lessons by engaging students with digital tools that introduced dynamic ways to practice skimming and scanning techniques. By incorporating ICT into the classroom, students accessed resources beyond printed materials, including digital texts, multimedia aids, and real-time feedback, which made reading tasks more engaging and accessible.

The initial class observation, conducted by the researcher to assess the current teacher's instructional approach, highlighted several key challenges that affected ICT integration in reading lessons. Limited teacher-student interaction reduced opportunities for students to engage meaningfully or seek clarification on reading tasks. This lack of interaction, along with minimal guidance on applying skimming and scanning strategies, may have restricted students' ability to fully understand and apply the techniques. When the researcher introduced targeted lessons on skimming and scanning, ICT tools were utilized as interactive components, marking a shift from traditional methods and engaging students with digital aids designed to support comprehension and critical reading skills. This integration of technology as an interactive tool was largely new to the students, moving them beyond passive reading tasks to more actively engaging with

content that strengthened their reading strategies. Additionally, the Access to Technology Survey showed that while students were familiar with digital tools and frequently used them outside school for academic purposes, their experience with ICT, as an active learning aid within the classroom, was limited. This combination of familiarity and new exposure highlights the potential for further ICT integration, offering increased engagement and opportunities for students to enhance reading skills through consistent, purpose-driven digital interactions.

Based on the results from the final opinion survey, ICT-based reading activities were effective in meeting this objective by improving skimming and scanning skills. The majority of students (81%) rated the activities as "Very effective" for developing these techniques, demonstrating that structured ICT tools and interactive elements meaningfully supported their reading skill acquisition. This positive reception indicates that the design of ICT enhanced tasks successfully met students' learning needs, effectively reinforcing skimming and scanning abilities. The 19% of students who rated the activities as "Somewhat effective," provided valuable insights for refinement. These students may have encountered challenges, such as unclear instructions, a need for varied examples, or additional practice opportunities to solidify their understanding. Addressing these aspects could enhance the program's accessibility for all learners, accommodating diverse learning styles through a range of activity formats and additional scaffolding.

Moreover, unanimous student’s feedback stated that ICT tools, like online platforms and videos, made lessons more engaging and effective, highlighted the motivational power of technology. This reinforces the value of ICT integration in boosting not only skill acquisition, but also student’s motivation and engagement. With thoughtful refinements based on student feedback, future lessons can better leverage ICT’s interactive capabilities, offering even more

targeted support for essential reading skills. To fully realize the educational benefits of ICT, consistent training for both students and teachers in the purposeful use of digital tools is essential. Improvements in classroom management and organization, alongside structured ICT training, could foster a more supportive environment for learning and engagement, making future implementations of ICT-based activities even more effective.

5.2.3 To evaluate the effectiveness of the implemented reading activities in improving students' skimming and scanning skills by conducting pre- and post-intervention assessments

Based on the third objective, "To evaluate the effectiveness of the implemented reading activities in improving students' skimming and scanning skills by conducting pre- and post-intervention assessments," the findings from both the pre-task and post-task evaluations revealed notable progress in students' reading skills, particularly in skimming and scanning techniques. The pre-task evaluations provided a baseline, illustrating a mixed level of comprehension and application of skimming and scanning. During the initial skimming activity, many students demonstrated a basic understanding of the main ideas in a text related to environmental issues. However, responses varied widely in specificity, indicating that while students generally recognized overarching themes, many struggled to pinpoint detailed information. Similarly, in the pre-task scanning exercise, some students accurately identified specific data points, while others provided vague or irrelevant answers, indicating a need for further guidance in effectively locating and articulating details within a text.

Following the intervention, the post-task results demonstrated marked improvements across the group. Over 50% of students displayed proficiency in skimming by quickly

identifying and summarizing main ideas with increased clarity. This improvement suggests that the structured approach of teaching skimming through targeted prompts and practice exercises helped students to focus on the relevant aspects of a text, such as main ideas and key details, enhancing their comprehension and verbal expression. Moreover, the post-task results for scanning similarly showed progress. In each scanning activity, over 75% of students correctly identified and extracted specific details from the text, reflecting their growing ability to apply this technique effectively. The high success rate, especially in recognizing detailed information about social media's benefits, drawbacks, and future predictions, underscores the success of the implemented strategies. This proficiency demonstrates that students developed greater accuracy in isolating relevant information by focusing on keywords and navigating the text with precision, suggesting that the scanning exercises effectively met the objective of improving students' skills in this area.

Additionally, the contrast between pre- and post-task responses highlights that structured, consistent practice was integral to the students' progress. Students who initially provided off-topic or incomplete answers displayed more engagement and accuracy in the post-tasks, which can be attributed to their increased familiarity with skimming and scanning as specific techniques rather than general reading approaches. The minor percentage of incorrect responses in the post-tasks indicates that while most students achieved proficiency, a few may require additional support to reinforce question comprehension before applying these techniques.

In conclusion, the pre-and post-task assessments provided strong evidence that the reading activities developed and implemented throughout this investigation were effective in enhancing the students' skimming and scanning skills. These findings support the objective of evaluating the impact of targeted reading activities on reading proficiency, affirming that

structured practice and explicit instruction significantly contribute to students' mastery of essential reading techniques. Moving forward, minor adjustments, such as additional focused practice for a small group of students, may be beneficial in ensuring consistent comprehension and accuracy across the class.

5.3 Restatement of the Research Question

The central research question guiding this investigation was: How effective is the integration of Information and Communication Technology (ICT) in enhancing the skimming and scanning reading skills of 11th-grade students at Instituto Julio Acosta Garcia? This question aimed to delve into the role that ICT plays in developing essential reading strategies—specifically skimming and scanning—within the context of a high school English language curriculum. By framing the research around this question, the study sought to explore several critical dimensions of reading skills enhancement. Firstly, it aimed to assess the baseline proficiency levels of students in skimming and scanning before the intervention; thereby, establishing a clear starting point from which to measure progress. Secondly, the investigation focused on specific ICT tools and resources utilized during the instructional interventions, examining how these technologies could facilitate more effective reading practices and engagement.

Furthermore, this research not only sought to evaluate the effectiveness of the implemented ICT interventions, but it also aimed to identify any potential barriers to student engagement and comprehension in using these technologies. By analyzing students' performance in pre- and post-task evaluations, the study aimed to uncover patterns in skill development, areas of misunderstanding, and the overall impact of technology on their reading strategies. Through

this inquiry, the study endeavored to provide actionable insights into effective pedagogical practices that leverage ICT to enhance literacy skills among high school students. The ultimate goal was to contribute to the growing body of research advocating for the integration of technology in education, particularly in literacy development, and to offer practical recommendations for educators aiming to improve reading proficiency in diverse learning environments.

5.4 Recommendations

As the integration of Information and Communication Technology (ICT) continues to shape educational practices, it is essential to explore its potential beyond specific reading techniques. To fully harness the power of ICT in literacy instruction, future investigations should focus on expanding its use to target a broader range of reading skills and subskills, while also prioritizing the professional development of educators. By examining the impact of ICT on skills such as inference, summarization, and vocabulary acquisition, and assessing the effectiveness of teacher training programs, we can better understand how to optimize ICT interventions for diverse learning needs. These recommendations aim to provide a roadmap for further research, ensuring that ICT can be used effectively to enhance both students' literacy development and educators' instructional practices.

5.4.1 Methodological recommendations

Embedding immediate feedback mechanisms within ICT activities can significantly enhance students' learning experience. By incorporating hints or guiding questions, ICT tools can provide students with real-time prompts that encourage them to reassess their reading approach whenever they miss critical details or misunderstand a question. This type of immediate feedback

supports students in self-correcting and promotes a more accurate application of skimming and scanning techniques. Such timely guidance can help students to identify and address comprehension gaps on the spot, allowing them to engage more deeply with the reading material and build confidence in their ability to independently refine their reading strategies.

Additionally, incorporating qualitative research methods, such as interviews and focus groups, is essential for gaining a deeper understanding of students' experiences, attitudes, and perceptions regarding the use of ICT in reading instruction. These methods provide valuable insights into how students interact with technology, capturing the nuances of their academic behaviors and motivations. For example, interviews can uncover specific challenges that students face while using ICT tools and reveal individual preferences for learning modalities, which quantitative data alone may overlook. Focus groups facilitate discussions that highlight shared experiences and diverse perspectives, adding context to quantitative findings. By understanding students' voices and lived experiences, educators and researchers can design more tailored and effective interventions that align with students' needs, ultimately enhancing the overall learning experience and outcomes.

Research could also delve into the implementation of feedback mechanisms within ICT tools designed for reading instruction. Providing immediate feedback to students, as they practice skimming and scanning techniques, can significantly enhance learning outcomes and bolster self-efficacy. Studies might explore various feedback formats, such as automated prompts, peer feedback features, and teacher comments, to assess their effectiveness in helping students to identify areas for improvement and celebrate their successes. Additionally, investigating how students respond to different types of feedback can offer insights into their learning processes and preferences. By establishing robust feedback systems within ICT tools, educators can create

a more supportive learning environment that encourages students to engage actively with their reading strategies and foster a growth mindset toward their literacy development.

5.4.2 Future investigations

Expanding ICT use to target additional reading skills and subskills offers promising avenues for future research. By building on the success observed with skimming and scanning, researchers should explore ICT's potential to support other critical reading skills, such as inference and summarization, as well as broader literacy skills, including vocabulary acquisition and critical thinking. Investigating the ICT's role in these areas could reveal its broader applicability and effectiveness across various aspects of literacy education, providing educators with a range of tools to support students' comprehensive reading development. By examining how ICT can enhance diverse skills, future research can contribute to a more holistic understanding of technology's impact on literacy and uncover strategies for fostering digital literacy in increasingly complex educational settings.

Professional development for educators will be pivotal in the successful integration of ICT into literacy instruction, and future studies should prioritize examining the effects of teacher training on effective ICT implementation. As technology continues to play a central role in educational practices, understanding how professional development equips teachers with the skills and knowledge needed to utilize ICT effectively, is critical. Future researchers could investigate various training models, such as workshops, ongoing coaching, and collaborative planning sessions, to determine which approaches yield the most substantial improvements in instructional practices. Additionally, exploring how training impacts teachers' confidence and proficiency in using technology to support reading strategies could provide valuable insights into

effective ICT integration. By examining the link between professional development and ICT use in classrooms, researchers can identify the best practices for preparing educators to facilitate meaningful learning experiences that leverage technology to enhance literacy skills.

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ANNEXES

Lesson plan #1 Teaching Skimming

Instructor's name:	**Paula Montero**	**Region:**	**Alajuela San Ramon**
Subject:	**English**	**School Term:**	**II Period**
Level:	**11 th grade**	**Weeks:**	**1**
Date:	**October 3rd, 2024**	**Plan Number:**	**1**

Linguistic objectives	*Mediation Strategies*	*Evaluation of learning outcomes*
At the end of the class, ss will be able to 1. **Reading (Skimming)** Apply skimming technique to any given text. **Content source:**	**WU:** The lesson will begin with a warm-up activity. The teacher will display a newspaper on the TV screen and allow students 5 minutes to examine the information independently. After this time, the newspaper will be removed, and students will be asked to recall and discuss what they observed without receiving direct answers. **PRS:** The teacher will introduce the concept of skimming, explaining its purpose and practical applications. The teacher will then demonstrate how to skim effectively using an article displayed on the TV screen.	**Ss will be assessed through...** 1. The correct answers provided on the online form.

Presentation: https://shorturl.at/X53fE YouTube video: https://www.youtube.com/watch?v=t3F8pQLtY_Q Practice news: https://docs.google.com/document/d/1MaxTGcLl2BuolZFa-cle7Z_JFCLilgb4n4S0Vq_1e_0/edit?usp=sharing Google forms (Answers): https://forms.gle/H56MekVDNSoTQttH6	1. Then, the initial newspaper used in the warm-up will be presented again, and students will be given 5 minutes to practice skimming it. After the skimming exercise, the teacher will engage students in a discussion by asking questions about the content of the newspaper. **PRT:** The students will collaborate in groups of three, depending on their internet access capabilities. The teacher will distribute a digital text via a shared online platform such as Google Docs. A timer displayed on the TV will prompt students to skim the text independently, focusing on identifying the main ideas and key points. Following the skimming activity, the teacher will provide a link to an online quiz platform like Google Forms. This quiz will assess students' comprehension by posing questions related to the main ideas and key points identified in the text. **CLOS:** The teacher will review the answers with the students. She will offer feedback on their responses and address any questions or concerns they may have regarding the quiz content or their understanding of the text.	

Lesson plan #2 Teaching Scanning

Instructor's name:	**Paula Montero**	**Region:**	**Alajuela San Ramon**
Subject:	**English**	**School Term:**	**II Period**
Level:	**11 th grade**	**Weeks:**	**1**
Date:	**October 4th, 2024**	**Plan Number:**	**2**

Linguistic objectives	*Mediation Strategies*	*Evaluation of learning outcomes*
At the end of the class ss will be able to **2. Reading (Scanning)** Apply the scanning technique to any given text. **Content source:** Presentation: https://shorturl.at/aS67I YouTube video: https://www.youtube.com/watch?v=t3F8pQLtY_Q	**WU:** The teacher will display a reading text on the TV screen and instruct students to read it individually. Once all students have completed reading, the text will be removed, and the teacher will prompt students to recall specific details from the reading without providing answers **PRS:** The teacher will introduce the concept of scanning, explaining its purpose and practical applications in reading comprehension. Next, the teacher will demonstrate effective scanning techniques using a different reading displayed on the TV. 1. The initial reading text from the warm-up activity will be presented again. Students will be tasked with scanning the text to locate specific details mentioned earlier. **PRT:**	**Ss will be assessed through…** 2. The correct answers provided on the online form.

Reading practice: https://shorturl.at/hzh0K Google forms (Answers): https://forms.gle/w1oxF52D6x1NBoQDA	Students will collaborate in groups of three, depending on their internet access availability. The teacher will distribute a digital text via a shared online platform like Google Docs. Students will then be given time to scan the text for specific details as indicated on the TV screen. Following the scanning activity, the teacher will provide a link to an online quiz platform such as Google Forms. This quiz will assess students' understanding by asking questions related to the main ideas and key points identified during the scanning exercise. **CLOS:** The teacher will conduct a collective review of the marked texts using a screen-sharing tool. Following a discussion that will ensue regarding the effectiveness of the scanning strategies employed, with additional tips offered for improvement. Finally, students will be encouraged to apply these newly acquired techniques in their future reading tasks.	

Lesson plan #3 Practicing

Instructor's name:	**Paula Montero**	**Region:**	**Alajuela San Ramon**
Subject:	**English**	**School Term:**	**II Period**
Level:	**11 th grade**	**Weeks:**	**1**
Date:	**October 17th, 2024**	**Plan Number:**	**3**

Linguistic objectives	***Mediation Strategies***	***Evaluation of learning outcomes***
At the end of the class ss will be able to **3. Reading (Skimming and Scanning)** Apply the scanning and skimming technique to any given text. **Content source:** Presentation: https://shorturl.at/PuPSA Skimming readings: https://shorturl.at/QQWIY	**WU:** The teacher will ask the students to recap the differences and purposes of the techniques they have been studying (skimming and scanning) **PRS:** The teacher will present a quick review of the techniques. **PRT:** **Skimming:** In the first practice session, the teacher displays a reading on the TV screen. Students are instructed to skim through the first text to capture its main ideas quickly. After completing the skimming exercise, students are asked to verbally summarize what they understood from the text based on their quick reading.	**Ss will be assessed through…** 3. Skimming: An evaluation sheet 4. Scanning: The responses provided in the online quiz

Evaluation sheet: https://shorturl.at/vtqoL Scanning reading: https://shorturl.at/OxXwo Online quiz: https://forms.gle/YN2cB7NavmRT1EHj8	**Scanning:** Moving to the second practice session, the teacher provides another reading. Here, the teacher presents questions related to the text and highlights keywords within these questions. Students are then guided to scan the text to locate and underline these keywords, preparing them to answer the questions using an online quiz platform like Google Forms. **CLOS:** To conclude the lesson, the teacher uses a presentation created in Canva or a similar tool to recap skimming and scanning techniques, reinforcing the lesson's learning outcomes.	