



Universidad Hispanoamericana

Faculty of Education

Thesis Project to opt out for the Licentiate Degree
English Teaching

**The effectiveness of using the digital tool ReadWorks Reading Program for
improving the reading comprehension skills of eight-year students at the
Miramar High School in the first quarter of 2025**

Sustentant:

Ana Quesada Alvarado

Tutor: Yanory Arguedas Carballo

January 2025

Content

| | |
|--------------------------------------|-------|
| Content..... | II |
| Table of frames | VIII |
| Table of figures | IX |
| SWORN OF DECLARATION..... | XI |
| LETTER FROM DE READER..... | XII |
| LETTER FROM DE TUTOR..... | XIII |
| CENIT AUTHORIZATION LETTER..... | XIV |
| DEDICATORY | XVI |
| ACKNOWLEDGMENT..... | XVII |
| ABSTRACT..... | XVIII |
| CHAPTER I: RESEARCH PROBLEM..... | 1 |
| 1.1 Introduction..... | 2 |
| 1.1.1 Background information..... | 3 |
| 1.1.2 Justification..... | 9 |
| 1.1.3 Problematization | 12 |
| 1.2 Problem Statement..... | 14 |
| 1.2.1 Research Question:..... | 14 |
| 1.3 Objectives | 15 |

| | |
|---|----|
| 1.3.1 General objective..... | 15 |
| 1.3.2 Specific objectives | 15 |
| 1.3.3 Hypothesis..... | 15 |
| Dependent Variable:..... | 15 |
| Independent Variable: | 15 |
| 1.4 Scope and Limitations..... | 16 |
| 1.4.1 Scope..... | 16 |
| 1.4.2 Limitations | 17 |
| Chapter II: Theoretical Framework..... | 19 |
| 2.1 Historical Context | 20 |
| 2.1.1 Origins of Liceo de Miramar..... | 20 |
| 2.2 Theoretical Framework..... | 21 |
| 2.2.1 Reading Comprehension..... | 21 |
| 2.2.2 Types of literature checked in high school programs | 21 |
| 2.2.3 Levels of reading comprehension skills in students | 22 |
| 2.2.4 Knowledge | 22 |
| 2.3 Computer Assisted Language Learning Method..... | 30 |
| 2.3.1 Definition of the Method | 30 |
| 2.3.2 The uses of the method | 30 |
| 2.3.3 Benefits of Computer-Assisted Language Method..... | 31 |

| | | |
|--|---|----|
| 2.4 | Digital Tools in English Classrooms..... | 32 |
| 2.4.1 | Advantages of using digital tools in English classroom..... | 33 |
| 2.4.2 | Digital app to enhance reading comprehension..... | 34 |
| 2.4.3 | Digital tool ReadWorks..... | 35 |
| 2.5 | Educational programs for eighth graders..... | 36 |
| 2.5.1 | Proficiency in Educational programs for eighth graders worldwide..... | 37 |
| 2.5.2 | Proficiency of Educational programs for eighth graders in Costa Rica..... | 38 |
| 2.5.3 | Relationship between educational programs and reading comprehension skills..... | 44 |
| CHAPTER III: METHODOLOGICAL FRAMEWORK..... | | 46 |
| 3.1 | Type of Investigation..... | 47 |
| 3.1.1 | Purpose (Applied)..... | 47 |
| 3.1.3 | Framework..... | 49 |
| 3.1.4 | Hypothesis..... | 51 |
| 3.1.5 | Nature: Mixed..... | 51 |
| 3.1.6 | Type of the study (Character)..... | 53 |
| 3.2 | Subjects and sources of information..... | 53 |
| 3.2.1 | Firsthand sources used in the research process..... | 54 |
| 3.2.2 | Secondhand sources used in the research process..... | 55 |
| 3.2.3 | Thirdhand sources used in the research process..... | 55 |
| 3.3 | Population and Sampling..... | 61 |

| | | |
|--|---|-----|
| 3.3.1 | Population | 61 |
| 3.3.2 | Non-Probrobability | 61 |
| 3.3.3 | Techniques and instruments | 62 |
| CHAPTER IV: RESULTS AND ANALYSIS OF DATA | | 65 |
| 4.1. | Observation | 66 |
| 4.2. | Pre-test | 67 |
| 4.3. | Checklist 1 | 71 |
| 4.4. | ReadWorks | 85 |
| 4.4.1. | Test #1 in ReadWorks | 85 |
| 4.4.2. | Comparative Analysis of Reading Comprehension Results: Pre-Test vs. Test #1 ReadWorks Assessment | 89 |
| 4.4.3. | Test #2 in ReadWorks | 90 |
| 4.4.4. | Comparative Analysis of Reading Comprehension Results: Pre-Test vs. Test #2 ReadWorks Assessment | 95 |
| 4.5. | Checklist 2 | 96 |
| 4.6. | Post-Test..... | 100 |
| 4.7. | Checklist 3 | 104 |
| 4.7.1. | Comparative Analysis of Reading Comprehension Results: Pre-Test vs. Post-Test 119 | |
| 4.8. | Students' Questionnaire | 122 |

| | |
|--|-----|
| 4.9. Teacher Interview..... | 127 |
| CHAPTER V: CONCLUSIONS AND RECOMMENDATIONS | 131 |
| 5.1 Conclusions..... | 132 |
| 5.2 Recommendations..... | 135 |
| CHAPTER VI: PROPOSAL..... | 137 |
| 6.1. Name of the Proposal..... | 138 |
| 6.1.1 Description..... | 138 |
| 6.1.2 Place to be developed..... | 138 |
| 6.1.3 Organization..... | 139 |
| 6.1.4 Involved Population..... | 139 |
| 6.2 Objectives of the Proposal | 139 |
| 6.2.1 General objective | 139 |
| 6.2.2 Specific objectives | 139 |
| 6.3 Chronogram of activities..... | 140 |
| 6.4 Budget for its implementation | 141 |
| References..... | 142 |
| Annexes..... | 150 |
| 6.5 Instruments..... | 150 |
| 6.5.1 Cover Letter | 150 |
| 6.5.2 Instrument: Checklist 1 | 151 |

| | | |
|-------|---|-----|
| 6.5.3 | Pre-test | 153 |
| 6.5.4 | Checklist 2 | 159 |
| 6.5.5 | Post-test: “Safer Travels for big game Animals” | 161 |
| 6.5.6 | Interview for the teacher in charge of the group..... | 167 |
| 6.5.7 | Questionnaire for the students | 169 |

TABLE OF FRAMES

| | |
|-----------------------|-----|
| Table 1 | 27 |
| Table 2 | 28 |
| Table 3 | 54 |
| Table 4 | 55 |
| Table 5 | 55 |
| Table 6 | 67 |
| Table 7 | 71 |
| Table 8 | 85 |
| Table 9 | 90 |
| Table 10 | 91 |
| Table 11 | 95 |
| Table 12 | 96 |
| Table 13 | 100 |
| Table 14 | 104 |
| Table 15 | 120 |
| Table 16 | 122 |
| Table 17 | 128 |

TABLE OF FIGURES

| | |
|------------------------|-----|
| Figure 1 | 40 |
| Figure 2 | 68 |
| Figure 3 | 70 |
| Figure 4 | 73 |
| Figure 5 | 74 |
| Figure 6 | 76 |
| Figure 7 | 78 |
| Figure 8 | 80 |
| Figure 9 | 82 |
| Figure 10 | 84 |
| Figure 11 | 86 |
| Figure 12 | 87 |
| Figure 13 | 93 |
| Figure 14 | 94 |
| Figure 15 | 97 |
| Figure 16 | 101 |
| Figure 17 | 103 |
| Figure 18 | 106 |
| Figure 19 | 108 |
| Figure 20 | 109 |
| Figure 21 | 111 |
| Figure 22 | 113 |

Figure 23115

Figure 24117

Figure 25 124

Figure 26 126

SWORN OF DECLARATION

SWORN OF DECLARATION

Yo, Ana Quesada Alvarado , mayor de edad, portadora de la cédula de identidad número 118170456, egresada de Licenciatura en Enseñanza del Inglés de la Universidad Hispanoamericana, hago constar por medio de este acto y debidamente apercibido y entendido de las penas y consecuencias con las que se castiga en el Código Penal el delito de perjurio, ante quienes se constituyen en el Tribunal Examinador de mi trabajo de tesis para optar por el título de Licenciatura, juro solemnemente que mi trabajo de investigación titulado: “The effectiveness of using the digital tool ReadWorks Reading Program for improving the reading comprehension skills of eight-year students at the Miramar High School in the first quarter of 2025” es una obra original que ha respetado todo lo preceptuado por las Leyes Penales, así como la Ley de Derecho de Autor y Derecho Conexos número 6683 del 14 de octubre de 1982 y sus reformas, publicada en la Gaceta número 226 del 25 de noviembre de 1982; incluyendo el numeral 70 de dicha ley que advierte; artículo 70. Es permitido citar a un autor, transcribiendo los pasajes pertinentes siempre que éstos no sean tantos y seguidos, que puedan considerarse como una producción simulada y sustancial, que redunde en perjuicio del autor de la obra original. Asimismo, quedo advertido que la Universidad se reserva el derecho de protocolizar este documento ante Notario Público. En fe de lo anterior, firmo en la ciudad de Puntarenas a los 9 días del mes de julio del año dos mil veinticinco.

Firma del estudiante

Ana Quesada A

Ana Quesada Alvarado.

Cédula: 118170456

LETTER FROM DE READER

San José, 14 de julio 2025

Universidad Hispanoamericana

Sede: Heredia

Carrera: Licenciatura en la Enseñanza del inglés

Estimados señores:

El estudiante **Ana de los Angeles Quesada Alvarado**, cédula de identidad **118170456**, me ha presentado para efectos de revisión y aprobación, el trabajo de investigación denominado "**The effectiveness of using the digital tool ReadWorks Reading Program for improving the reading comprehension skills of eight-year students at the Miramar High School in the first quarter of 2025**", el cual se ha elaborado para obtener su grado de Licenciatura en enseñanza del inglés. He revisado y he hecho las observaciones relativas al contenido analizado, particularmente lo relativo a la coherencia entre el marco teórico y análisis de datos, la consistencia de los datos recopilados y la coherencia entre éstos y las conclusiones; asimismo, la aplicabilidad y originalidad de las recomendaciones, en términos de aporte de la investigación. He verificado que se han hecho las modificaciones correspondientes a las observaciones indicadas.

Por consiguiente, este trabajo cuenta con mi aval para ser presentado en la defensa pública.

Atte.

MSc. Ariel Gustavo Vargas Vindas

Cédula:204420300

Firma:



LETTER FROM DE TUTOR

CARTA DEL TUTOR

San José, 08 de julio , 2025

Universidad Hispanoamericana

Licenciatura en la Enseñanza del Inglés

Estimados señores:

La estudiante Ana de Los Angeles Quesada Alvarado, cedula de identidad número 118170456, me ha presentado para efectos de revisión y aprobación, el trabajo de investigación denominado: **The effectiveness of using the digital tool ReadWorks Reading Program for improving the reading comprehension skills of eight-year students at the Miramar High School in the first quarter of 2025**

el cual ha elaborado para optar por el grado académico Licenciatura en la Enseñanza del Inglés.

En mi calidad de tutor, he verificado que se han hecho las correcciones indicadas durante el proceso de tutoría y he evaluado los aspectos relativos a la elaboración del problema, objetivos, justificación, antecedentes, marco teórico, marco metodológico, tabulación, análisis de datos, conclusiones y recomendaciones.

De los resultados obtenidos por el postulante se obtienen la siguiente calificación:

| | Descripción | % | % Obt |
|---|---|-------------|--------------|
| a | Originalidad del tema | 10% | 10% |
| b | Cumplimiento de entrega de avances | 20% | 20% |
| c | Coherencia entre los objetivos, instrumentos aplicados y los resultados de la investigación | 30% | 30% |
| d | Relevancia de las conclusiones y recomendaciones | 20% | 20% |
| e | Calidad detalle del marco teórico | 20% | 20% |
| | Total | 100% | 100% |

En virtud de la calificación obtenida, se avala el traslado al proceso de lectura

Yanory Arguedas Carballo
108710072

Yanory
Arguedas
Carballo

Firmado
digitalmente por
Yanory Arguedas
Carballo
Fecha: 2025.07.08
14:18:04 -06'00'

CENIT AUTHORIZATION LETTER

UNIVERSIDAD HISPANOAMERICANA
CENTRO DE INFORMACION TECNOLOGICO (CENIT)
CARTA DE AUTORIZACIÓN DE LOS AUTORES PARA LA CONSULTA, LA
REPRODUCCION PARCIAL O TOTAL Y PUBLICACIÓN ELECTRÓNICA
DE LOS TRABAJOS FINALES DE GRADUACION

Miramar, Puntarenas, 15 julio 2025

Señores:
Universidad Hispanoamericana
Centro de Información Tecnológico (CENIT)

Estimados Señores:

El suscrito (a) Ana de los Angeles Quesada Alvarado con número de identificación 118170456 autor (a) del trabajo de graduación titulado The effectiveness of using the digital tool ReadWorks Reading Program for improving the reading comprehension skills of eight-year students at the Miramar High School in the first quarter of 2025 presentado y aprobado en el año 2025 como requisito para optar por el título de Licenciatura en la enseñanza del inglés; (SI / NO) autorizo al Centro de Información Tecnológico (CENIT) para que con fines académicos, muestre a la comunidad universitaria la producción intelectual contenida en este documento.

De conformidad con lo establecido en la Ley sobre Derechos de Autor y Derechos Conexos N° 6683, Asamblea Legislativa de la República de Costa Rica.

Cordialmente,

Ana Quesada A. 118170456
Firma y Documento de Identidad

**ANEXO 1 (Versión en línea dentro del Repositorio)
LICENCIA Y AUTORIZACIÓN DE LOS AUTORES PARA PUBLICAR Y
PERMITIR LA CONSULTA Y USO**

Parte 1. Términos de la licencia general para publicación de obras en el repositorio institucional

Como titular del derecho de autor, confiero al Centro de Información Tecnológico (CENIT) una licencia no exclusiva, limitada y gratuita sobre la obra que se integrará en el Repositorio Institucional, que se ajusta a las siguientes características:

- a) Estará vigente a partir de la fecha de inclusión en el repositorio, el autor podrá dar por terminada la licencia solicitándolo a la Universidad por escrito.
- b) Autoriza al Centro de Información Tecnológico (CENIT) a publicar la obra en digital, los usuarios puedan consultar el contenido de su Trabajo Final de Graduación en la página Web de la Biblioteca Digital de la Universidad Hispanoamericana
- c) Los autores aceptan que la autorización se hace a título gratuito, por lo tanto, renuncian a recibir beneficio alguno por la publicación, distribución, comunicación pública y cualquier otro uso que se haga en los términos de la presente licencia y de la licencia de uso con que se publica.
- d) Los autores manifiestan que se trata de una obra original sobre la que tienen los derechos que autorizan y que son ellos quienes asumen total responsabilidad por el contenido de su obra ante el Centro de Información Tecnológico (CENIT) y ante terceros. En todo caso el Centro de Información Tecnológico (CENIT) se compromete a indicar siempre la autoría incluyendo el nombre del autor y la fecha de publicación.
- e) Autorizo al Centro de Información Tecnológica (CENIT) para incluir la obra en los índices y buscadores que estimen necesarios para promover su difusión.
- f) Acepto que el Centro de Información Tecnológico (CENIT) pueda convertir el documento a cualquier medio o formato para propósitos de preservación digital.
- g) Autorizo que la obra sea puesta a disposición de la comunidad universitaria en los términos autorizados en los literales anteriores bajo los límites definidos por la universidad en las "Condiciones de uso de estricto cumplimiento" de los recursos publicados en Repositorio Institucional.

SI EL DOCUMENTO SE BASA EN UN TRABAJO QUE HA SIDO PATROCINADO O APOYADO POR UNA AGENCIA O UNA ORGANIZACIÓN, CON EXCEPCIÓN DEL CENTRO DE INFORMACIÓN TECNOLÓGICO (CENIT), EL AUTOR GARANTIZA QUE SE HA CUMPLIDO CON LOS DERECHOS Y OBLIGACIONES REQUERIDOS POR EL RESPECTIVO CONTRATO O ACUERDO.

DEDICATORY

This project is dedicated mainly to my family my father, mother and brother who have been an important pillar in the fulfillment of this project, I always be grateful of all of them with the love, support and patience in this process.

I want to emphasis a special thanks to my mother who was the main person who encouraged and accompanied me to conclude this career and project.

Also, I would like to express gratitude to my nephew and niece even though they are children and they do not know the impact and importance they have in my life; they are very important and significant in my life, and they are part of the motivation to conclude this project.

ACKNOWLEDGMENT

I would like to thank my investigation professor Yorleny Gonzales Garcia at Universidad Hispanoamericana for being an excellent guide in this investigation process and guiding very well to understand the investigation process.

Additionally, I want to express my gratitude to my tutor professor Yanory Arguedas Carballo for your patience, for all the tips, guide and piece of advice to make this project the best could be, and also for your motivation and always willingness and availability to help, without doubt you make this tedious process more peaceful to carry out.

ABSTRACT

This study revolves around the effectiveness of using the digital tool ReadWorks Reading Program for improving the reading comprehension skills of eight-year students at the Miramar High School in the first quarter of 2025. This study takes into account 22 eighth graders students at Miramar high school taking into account the Computer Assisted Language Learning Methodology (CALL) and in the same way a mixed of qualitative instruments such as one observation, checklists and teacher interview, and quantitative including students' questionnaire, pre-test and post-test. This research shows the reality of the difficulties that students have with reading comprehension skill; however, in the same way shows that is needed to implement different strategies to in that promotes the practice of this skill and in that way have improvements in this skill. This study ends showing the main results of the investigation which includes that is notice a partial improvement of reading comprehension after students use and practice this skill with the tool, besides that this study yields that student had good acceptance with the use of the tool in classes.

KEY WORDS: Readworks, Reading Comprehension, Digital Tools.

RESUMEN

Este estudio gira en torno a la efectividad del uso de la herramienta digital como programa de lectura Readworks para mejorar la habilidad lectora de los estudiantes de octavo año del Liceo de Miramar. Este estudio toma en cuenta a 22 estudiantes del Liceo de Miramar tomando en cuenta la metodología Aprendizaje de idiomas asistido por computadoras, así mismo una mezcla de instrumentos cualitativos como una observación, listas de verificación y una entrevista docente e instrumentos cuantitativos como cuestionario a los estudiantes y pre-test y post-test. Esta investigación muestra la realidad de las dificultades que tienen los estudiantes con la habilidad de comprensión lectora; sin embargo, de la misma manera muestra que es necesario implementar diferentes estrategias para promover la práctica de esta habilidad y de esa manera tener mejoras en esta habilidad. Este estudio finaliza mostrando los principales resultados de la investigación que incluyen que se nota una mejora parcial de la comprensión lectora después de que los estudiantes usan y practican esta habilidad con la herramienta, además de que este estudio arroja que los estudiantes tuvieron buena aceptación con el uso de la herramienta en clases

CHAPTER I

RESEARCH PROBLEM

1.1 INTRODUCTION

Reading comprehension skills are essential for both academic and personal development. The ability to understand, analyze, and evaluate written texts not only facilitates knowledge acquisition but also strengthens critical and reflective thinking. Reading comprehension goes beyond word decoding; it involves interpreting meanings, inferring implicit information, and connecting ideas to construct a deep understanding of the text (González, 2019).

“Reading has been the closest link between the student and knowledge” (González, 2019, p.34). When you engage in reading, you naturally engage in critical thinking, evaluating criteria, contrasting ideas, and posing questions. Through this process, learning occurs effortlessly. Learning to read is not just about acquiring knowledge; it's about developing the capacity to think and derive enjoyment from the process.

Reading serves as our gateway to accessing information, and actively participating in society, whether it is reading a contract, deciphering a ticket, understanding pricing, or checking the time on a schedule. In our increasingly literate world, reading remains an indispensable skill for navigating the complexities of modern life (González, 2019).

In the digital age, digital tools have transformed how we access and process information. These tools encompass a wide range of resources, such as mobile applications, online platforms, and software programs, which offer unique opportunities to enhance reading comprehension skills. Their versatility allows for adaptation to different learning styles and the customization of the educational process according to the individual needs of students (Cruz et al., 2019).

Digital tools applied to improve reading comprehension skills offer a variety of interactive and adaptive resources that complement traditional teaching. These tools include

guided reading activities, comprehension exercises, instant feedback, and access to a wide selection of texts. By integrating technology in the classroom, educators can provide more dynamic and engaging learning experiences, facilitating the development of reading comprehension skills in a digital environment (Cruz et al., 2019).

The effectiveness of digital tools in improving reading comprehension skills has been demonstrated in numerous studies highlighting their positive impact on student's academic performance. These tools offer increased interactivity, immediate feedback, and the ability to adapt to each student's level of proficiency. Furthermore, they allow educators to track individual progress more closely and adjust teaching based on each student's specific needs (Nuñez, 2019).

Reading comprehension is a fundamental skill in the educational development of students, as it enables not only the acquisition of knowledge but also the ability to interpret and critically analyze information. In the current educational context, where technology plays an increasingly predominant role, it is essential to explore digital tools that can enhance these reading skills.

This study focuses on the digital reading program ReadWorks, a tool designed to improve reading comprehension through adaptive texts and activities.

This research targets eighth-year students at Miramar High School during the first quarter of 2025. The primary objective is to analyze the effectiveness of using the ReadWorks program to enhance the reading comprehension skills of these students.

1.1.1 Background information

The first work related to this topic was developed by Angulo Abarca, Cindy Elena, Chaves Gutiérrez, and Eros Yadid. This research was carried out at Belen High School in Santa

Cruz, this research seeks to show how the Quizlet application can improve the acquisition of vocabulary and the understanding of the tenth grade's students of this institution, who were the participants. Diagnostic tests were used before and after using the application. The tenth years were divided into two 10-A and Ten B, and the 10-B were the ones who were exposed to the Quizlet application.

The researchers used with this investigation an action research and developed by using a mixed qualitative and quantitative analysis. This research was carried out at the Belen High School in Santa Cruz with tenth-year students 10-2 and 10-3, for research 10-A and 10-B. This high school is part of the Ministerio de Educacion Publica (MEP) technological innovation program, since it has a laboratory of English, has tablets and headphones that can be used by the students. As part of the instruments used in this investigation is a questionnaire to ask the students what they know about the app Quizlet. Besides, the researchers used diagnostic tests one at the beginning of the intervention, and another one after the intervention. The first diagnostic test had four different parts consisting of a short answer, multiple choice, reading comprehension, and an identification part. The second test is also composed of four parts: a multiple-choice task, a matching task, and two reading comprehension tasks. Another instrument used was a focus group applied only to 10-B, the group exposure to Quizlet.

About the results, the researchers explain that the application Quizlet is used in one group and not in the other to see and compare the results. In the first diagnostic tests, group 10-A has better grades understanding, and facilities to complete the diagnostic test than Group 10-B. Considering the above information mentioned; In the first instance group 10-A who was the group that was not exposed to the Quizlet app showed a 50% of the students that did the test had a score of 60 or less.

On the other hand, there are 25% of them, which makes for 2 students with a score of 80-90 and the other 25% of 90-100, also 2 of the students, leaving 50% that had a great score and a total of 4 students, what clearly shows low levels of reading comprehension. Then comparing both groups, group 10-A from the first test seemed to have a better performance both, individually and as a group. As for group 10-B, they seem to improve in a greater way from test one to the second test. In the end, which leads to thinking that being exposed to Quizlet helps them to improve their understanding and proficiency level.

To group B, which was the one with whom the Quizlet application was used, a questionnaire of open questions was applied in which the students concluded that the use of the application does have a good impact on the teaching-learning process and if it is useful for learning. About the questionnaire, one of the questions was about whether they like to read or not and even though the difference is very small there are more percentages of students that say that they do not like to read. Students mentioned that it is important to read; however, they did not do it. They also mentioned that it is necessary to know the vocabulary to comprehend and have a clear idea of the reading. They think that most of them have low levels of vocabulary with 71%, and just 21% thought that they have good levels. Most of the participants do not know about Quizlet. half of the participants said that they would like to study English by using applications.

As part of the conclusions of this research, it is mentioned that students are motivated to learn when different technological applications are used that they are not used to seeing, and they liked it because the students who used the app felt that they did learn.

The second investigation project checked was written by Ximena Becerra Cortés. This one is carried out in Colombia with ninth-grade students, where a teacher seeks to help students improve their reading comprehension through the use of small scientific texts and the use of

physical dictionaries so that students can help themselves search for vocabulary, in that way, they can have a better understanding of the general scientific text. The teacher conducts workshops and questionnaires to collect information.

As part of the methodology and instruments used in this research, questionnaires, and workshops were used as data collection methods. The workshops were about short scientific texts (a text about evolution for Workshop 1 and another text about taxonomy for Workshop 2) followed by activities to promote the use of prior knowledge and the dictionary.

The first activity consisted of reading the text carefully to recognize and classify the unknown words into scientific words and other words. The second activity included multiple-choice questions that implied establishing relationships between prior knowledge presented on these issues in Spanish and the text presented in the workshop. The third activity focused on the use of the dictionary to ask for the meaning of selected words from the text using the dictionary or the context. The fourth activity tapped into students' prior knowledge to ask for definitions of scientific words promoting the use of prior knowledge or context. At the end of the two workshops, a questionnaire was applied to know the opinions, feelings, and likes or dislikes of this technique.

For the findings of this research, the information was divided into three categories: the use of the dictionary, the search for information to clarify situations, and reading comprehension. In the first stage of using the dictionary, the students had to write down whether they had used the dictionary or not and whether the word was scientific or not. However, they had problems searching for the meaning because it sometimes did not adapt to the context of the reading.

It is shown that the students had an easier time finding the meaning of scientific words such as theory, hypothesis, and others, although with non-scientific words they chose words that

identified the meaning by context; However, the students expressed difficulty in searching for the meaning of compound words and expressed complaints that some definitions given by the dictionary did not adapt to the context of reading.

About the search for information by context, the students expressed that they understood and understood many of them because they had already read or listened to some topics or authors in their native language, so it was easier to read in the English language.

According to the percentages of correct answers, students improved in Activities 1, 2, and 5: in Activity 1: classifying unknown words, from 50% to 69%; in Activity 2: activating prior knowledge, from 52% to 69%; and in Activity 5: reading comprehension, from 42% to 63%. Activity 3, using the dictionary, was almost the same (81% and 79%) as the results of reading comprehension.

When students were asked about their whole understanding, 50% of them considered that they understood science in Spanish. According to the review of the other percentages, English understanding reached 12%, and science in English under-63 standing reached 26%. It could be argued that science in English has a lower degree of difficulty for students than in regular English, which would be contradictory. However, this result could be explained by the satisfaction of some of the students with the positive results achieved in the development of the workshops, which made them feel empowered to take on challenges.

The researcher concluded that the students were more inclined to understand words by prior knowledge, or by context because some scientific words look similar in English and Spanish. However, they discovered that with the use of the dictionary, although they sometimes had problems searching for meaning or contextualizing the meaning given by the dictionary to

the reading, they realized that with the support of the dictionary they were able to understand the meaning widely and clearly. text so they could understand the questions more easily.

The third investigation was written by Fithriyah in 2021 seeks to show the opinion, results, and perception that the tenth-level secondary school students of the LA Al-Ma'arif Singosari school have with the use of the digital tool ReadWorks. The researcher used a questionnaire to find out about the students' position regarding this digital tool. This study was carried out to improve reading comprehension in times of pandemic.

The design for this study was a descriptive quantitative research, and the participants were 38 tenth-grade students of LA Al-Ma'arif Singosari High School who used this application at home to practice reading comprehension, which was very useful at that time since the research was developed during the time of the Covid 19 pandemic, so the teacher assigned the reading and homework and the students met via Zoom to discuss the reading and how they had done with the reading comprehension questions that the application gives them.

The results of this investigation show that the use of the ReadWorks application had good results in this research since they perceived it as an application that had a good impact on improving their reading comprehension. The results also show that this digital tool, according to the students' responses, improved their reading comprehension skills by 86.8%. The students also showed positive opinions towards the use of this digital tool since they could use it from home, which enabled them to have the option of reading and practicing before class, allowing them to prepare and study the reading before class to be able to discuss it. in class. Another positive opinion of the students regarding the use of this digital tool was that they had the chance to review the text while answering the questions to support their answers. The disadvantages found were that some students did not like reading from technological devices and that they felt bored

when they finished with the activities. However, the vast majority of students point out that this application even improved their perspective and improved their motivation towards reading.

In conclusion, the use of this app did include improvements in reading comprehension, since the students perceived it positively to improve their reading skills. It also improved motivation towards the perception that students had about reading.

1.1.2 Justification

The ability to read and extract meaning from text is a fundamental skill necessary in all areas, but, especially in scholarship. In reading, the ultimate measure of proficiency is being able to comprehend a broad array of different types of texts. For this reason, understanding the written word is one of the most essential of all academic skills. It is an ability as vital to the student in first grade as to the high school senior.

Also, teachers have the responsibility to provide, innovate, and design strategies in the development of reading to lead their students to improve this skill. For these reasons, it is necessary to implement different strategies to promote this skill because it is essential to develop it with dynamic strategies where students are the main elements.

Teachers must understand that the reading process has to be centered on the students. It is possible if they pay attention to things that are interesting or exciting to students; in other words, likes and dislikes. The increasingly diverse students require the application of a wide variety of teaching methods and materials; for this reason, it is important to know their competencies and necessities.

Besides, the technology resources are tools of support in the creation of a learning environment. First, because technology resources are part of the livelihood of the students, they

know what to use such as tablets, cellular, and the internet, and software can give many tools in the reading skill. Second, they engage in didactic activities to make connections to students prior knowledge to select activities that a meaningful.

Taking into account the thesis above mentioned and the paragraphs, the present researcher would like to focus on the effectiveness of the use of the ReadWorks Digital Reading Program to improve the reading comprehension skills of eighth-year students at the Miramar High School in the first quarter of 2025. This theme is chosen considering that students can feel frustrated when they do not read books, novels, or big texts; however, this digital program ReadWorks has small passages and at the same time includes some questions focused on the reading to check the reading comprehension that the students have.

Due to the lack of reading comprehension in English, students need to develop positive attitudes towards aspects such as vocabulary and grammar. This technology support facilitates increasing these abilities efficiently.

It is useful for students because they can use it from their cell phones and electronic devices and most of them like and enjoy using technology. As mentioned by Angulo and Chavez (2023) “Most of the students replied that they like to use applications in classes because it is a manner of learning new vocabulary by using technology” (p.105). Also, the use of technology can increase their motivation and help them to put into practice reading so, they will improve their reading comprehension skills because in the present time, students can access their electronic devices, such as cellphones, tablets, and computers, or in high school, they have a laboratory classroom with different web pages and technology resources to improve this competence.

For this reason, the method to focus on this research is CALL (Computer Assisted-Language Integrated Learning). This approach is useful for this investigation mentioned by Wiące (2024)

The idea is that learners interact with computer-generated stimuli, which can include text, images, sound, and video. Learners respond by typing, clicking, touching the screen, or even speaking into a microphone. The computer then provides feedback on the learner's responses, often including analysis and suggestions for improvement.

This method is functional because the digital tool ReadWorks adheres to this teaching method since it adheres to the use of technology and the internet to improve the reading comprehension skills of eighth year students at Miramar High School.

This digital tool is useful for improving reading comprehension skills since it has different types of texts and includes some questions about each reading, which makes it more interactive and useful for reading comprehension, since students test whether they retained or understood something of what they read and it is functional since it has all types of texts and questions included in the same place, since the students cannot see the grade just the person who logs in as a teacher, the ideas is after the reading and the questions the ideas is give them feedback, to support that Edwards mention (2023)

ReadWorks is a reading comprehension tool that is web-based and offers research texts for students to work with. Crucially, it goes beyond just offering reading and also includes assessments. ReadWorks features lots of different text types, from passages to articles to full-on eBooks. The website is designed to help support reading progress and, as such, has filters to make distributing work correctly very easy.

The use of this online digital tool ReadWorks is effective and convenient because it has different types of texts, the professor can use filters to choose the level, the content and the topic, as supported by Edwards(2023) “When assigning work, there is a selection of filters that allow teachers to search for texts by grade level, topic, content type, activity type, lexile level, and more”.

Another important characteristic of this digital reading tool is that includes different types of questions so that students can find the answers easily sometimes, other times they have to think and analyze a little bit more as reinforced by Edwards(2023) “Question Sets are helpful as these are text-based questions with explicit and inferential types to help build a deeper level of understanding”

It is a free digital tool that can be accessed easily from a cellphone, tablet, or computer which makes it very useful for both parts, for teachers because with must be conscious that not all students have the same social economics status, so it's necessary to look for apps or tools that can be functional and applicable for all students Edwards(2023) “ReadWorks is free to use and doesn't feature any adverts or tracking”

1.1.3 Problematization

Reading is one of the four skills teaching the English language as part of the curricula of the Ministry of Education. It allows students to access information, gain knowledge, explore new ideas, and understand the texts, in other words, in reading comprehension. In this aspect, Wigfield (2016) expresses: “Reading comprehension plays a vital role in two main learning perspectives—knowledge acquisition and cognition” (p. 191).

On the other hand, it is one of the skills that is taught, must be learned, and is evaluated in the Costa Rican educational system as part of national evaluation. As is supported in National Standardized Foreign Language Test: English (2024)

The critical construct of PNELE (Prueba Nacional Estandarizada de lenguas Extranjeras) is the mastery of the semantico-grammatical and pragmatic knowledge of English as a foreign language in the socio-interpersonal, socio-transactional, and academic target use domains upon completion of Diversified Education in two language modalities: Listening and Reading. (p. 31).

It means that students have to face a variety of texts during the years of scholarship and national evaluation. A good reading comprehension is possible when students know the meaning of the words and for this reason, vocabulary knowledge plays an important role in the learning of a foreign language. However, many students have problems with this aspect and a lack of vocabulary knowledge might cause serious problems in this area and it limits the understanding by students.

Thus, students struggle with reading especially because they do not have a large vocabulary and it is difficult to grasp the texts. It all has a negative impact in the learning process in this skill and of course, in their grades when they have to encounter this competence. As proof of this, the results of the PISA tests are presented.

Tests from the OECD Program for International Student Assessment, or PISA, showed that 74% of Costa Rican students that year had reading skills at levels one or two, the lowest of six. That means that after reading a text of moderate length, the most they could achieve was to identify the main idea, show partial understanding of the text, and follow specific directions to find information in the text. Adding data on the same issue, according to Cordero, M. (2023).

In Costa Rica, only 7% showed skills at this level (4 and 5), with none at level six. According to the 2018 PISA Results Report for all OECD countries around the world, approximately 28% of students achieved level 4 or higher on the reading test. Only 1.3% of students worldwide managed to reach level 6.

All these statistical results show the low level of reading by students and it is necessary to take into account because highlights the problem that exists with the reading ability of students, although this is a skill that is proposed in the study programs of the Ministry of Public Education (MEP), there are many deficiencies in being able to understand a text, which It is necessary to look for some alternative to help solve these deficiencies in reading skills.

Students need to increase their vocabulary knowledge, and it is necessary for teachers to strengthen it to do so, they can use technology as pedagogical resource that contributes to the learning of new words and therefore, the improvement of reading comprehension.

1.2 PROBLEM STATEMENT

The difficulties and low levels of Reading comprehension Skills of eight graders at Miramar High School.

1.2.1 Research Question

What is the impact of using ReadWorks digital tool to improve reading comprehension Skills with eight-year students of Miramar High School in the first quarter of 2025?

1.3 OBJECTIVES

1.3.1 General Objective

- a) **To determine the effectiveness of using the ReadWorks digital tool for improving reading comprehension skills with eight -year students of Miramar High School, Puntarenas, in the first Quarter of 2025.**

1.3.2 Specific objectives

- a) To identify the specific challenges students, face in reading comprehension through a diagnostic assessment in order to develop targeted intervention strategies.
- b) To implement the ReadWorks digital tool in classroom activities to promote strategies that enhance students' reading comprehension skills.
- c) To determine the improvement in students' reading comprehension skills through a post-test assessment following the use of the digital tool.

1.3.3 HYPOTHESIS

Students who use the digital tool ReadWorks through CALL (Computer Assisted-Language Integrated Learning). will enhance their reading comprehension skills since they will practice reading comprehension skills daily and can complete practices to check their reading comprehension levels.

Dependent Variable: The improvement or not changes in their reading comprehension skills.

Independent Variable: Digital tool ReadWorks

1.4 SCOPE AND LIMITATIONS

1.4.1 Scope

This study seeks to assess the efficacy of the ReadWorks Reading Program in bolstering the reading comprehension skills of eighth -grade students at Miramar High School during the first quarter of 2025. It will concentrate on a carefully chosen group of students to ensure a comprehensive representation of varying reading abilities and backgrounds within the school community. Throughout the quarter, an array of assessment tools, including pre-tests, post-tests, and continuous formative assessments, will be employed to track students' progress effectively.

The integration of the ReadWorks program into the standard English curriculum will enable a seamless blending of digital reading activities with conventional instructional methods. Students will interact with a diverse selection of texts curated by ReadWorks, spanning fiction, non-fiction, poetry, and informational texts, allowing for a comprehensive assessment of improvements across different genres and text formats. Complementing quantitative data, qualitative observations will be conducted to glean insights into students' engagement levels, motivation, and interactions with the digital tool.

To ensure the program's effective implementation, teachers will undergo training sessions focused on maximizing the utility of the ReadWorks program. This will guarantee uniformity and fidelity in its application across classrooms. Furthermore, ongoing feedback loops will be established, soliciting input from both students and teachers, to iteratively refine and adapt the implementation process. This proactive approach will address any emerging challenges and capitalize on opportunities for enhancement.

By incorporating these multifaceted elements, the study aims to offer a comprehensive evaluation of the ReadWorks Reading Program's impact on the reading comprehension skills of eight grade students at Miramar High School. This holistic approach not only underscores the study's commitment to methodological rigor but also underscores its dedication to providing actionable insights for educational practitioners and policymakers alike.

1.4.2 Limitations

The study's scope is confined to a specific group of eighth grade students at Miramar High School, potentially limiting its generalizability to the broader student population. By focusing solely on this cohort, the research may overlook variations in reading comprehension abilities across different age groups, educational backgrounds, and learning environments. Consequently, any conclusions drawn from the study should be interpreted within the context of this specific demographic.

Furthermore, the study's duration, spanning only a single quarter, raises concerns about its ability to capture long-term effects and improvements in reading comprehension skills. Since learning outcomes often develop gradually over extended periods, a shorter timeframe may not adequately reflect the sustained impact of interventions like the ReadWorks program. To address this limitation, future research could consider implementing longitudinal designs to track students' progress over multiple academic terms.

Additionally, the study acknowledges the presence of external factors, such as students' prior knowledge, motivation levels, and home environments, which can significantly influence reading comprehension. However, these variables will not be systematically controlled or accounted for in the research design. Failure to address these potential confounding factors may

introduce bias into the study's findings and limit its ability to isolate the effects of the ReadWorks program on student outcomes.

Moreover, the effectiveness of any educational intervention, including the ReadWorks program, depends on various factors beyond its mere availability. Factors such as the quality of program implementation, teacher support, and student engagement play crucial roles in determining its impact on learning outcomes. Therefore, future studies should consider incorporating measures to assess the fidelity of program implementation and students' level of engagement to provide a more comprehensive evaluation of its effectiveness.

Additionally, as part of the limitations the researcher has difficulties applying the instruments and put into practice the online tool, since first the holy week was in the middle of April month. Besides students have test week, and the test was applied in the hour that English lessons was, since all the students take the test at the same hour. Another week there was a parent meeting as part of the conduct and different situations of the group, so the professor in charge of the group told me that I cannot attend that week. Another week students receive the class in the library because in the English class there were workers making some fixes in the fans of the classroom.

As part of the limitations with the students was that even though they have their cellphones and internet connection, sometimes they said do not have it to work it with printed material, that was the second option that the researcher has in case the internet someday was not working or some student does not have cellphone.

Chapter II

Theoretical Framework

2.1 HISTORICAL CONTEXT

2.1.1 Origins of Liceo de Miramar

Liceo de Miramar High School opened its doors in February 1971 after many efforts that inhabitants made to ask for help and in that way established the creation of the high school to avoid students having to travel to Esparza or Puntarenas to end their studies, as mentioned by Desarrollo Educativo 2021 “ The Operation of New Institution was authorized of February 14 1971 and that same year it began its functions and 15 days later.

When the High school began its educational work, it did not have a building to teach classes, so the lessons were taught in a school in the community that was known and is known as Jose Maria Zeledon Brenes School, it was not until 1974 that Liceo de Miramar High School it has its building to deliver the lessons and thus be able to receive more students, as supported by Desarrollo Educativo 2021 “ Three years later, in July 1974 Liceo de Miramar High School acquired its premises to accommodate students from all over the Canton, for which it also constituted a staff of teachers from different parts of the country”

The High School is currently located in the Province of Puntarenas, in the canton of Montes de Oro and in the district of Miramar, specifically on the west side of the Municipal Cemetery of Miramar, it belongs to Puntarenas educational regional and 04 circuits, currently the headmaster is MSc Lizbeth Fernandez Chaves. Additionally, this High school was chosen to teach the International Baccalaureate modality since 2016.

2.2 THEORETICAL FRAMEWORK

2.2.1 Reading Comprehension

According to Jiménez (2014), reading comprehension is a capacity or skill similar to written expression, since both are skills that correspond to the two codes of communication and cannot be understood separately. Additionally, García and Cain (2014) indicate that reading comprehension “is the product of a reader’s decoding (or word reading) skill and linguistic (or listening) comprehension” (p. 75).

In relation to the above, it can be said that reading comprehension is a fundamental skill in the academic development of students, as it not only allows them to understand and retain the information presented in texts but also facilitates the capacity for critical analysis and reflection. Reading comprehension involves a series of cognitive processes that allow the reader to construct the meaning of a text through interaction with it (Smith et al., 2021).

2.2.2 Types of literature checked in high school programs

According to the English program of the Ministry of Public Education (MEP), the reading skill is in which there is an interaction between the reader and the text to construct implicit or literal meaning (MEP, 2016). This program describes the types of literature that are used in programs in Costa Rica.

This skill is intended to expose students to different types of texts and genres such as fiction, non-fiction, autobiographies, fables and fairytales, academic and non-academic texts by experiencing different reading techniques and developing different reading strategies. As it was defined in the listening section, there are several types of reading techniques that can be used in teaching reading (MEP, 2016, p. 43).

2.2.3 Levels of reading comprehension skills in students

Reading comprehension skills can be categorized into different levels, each of which is essential for the complete development of students. These levels include knowledge, vocabulary, and comprehension skills, all of which contribute to a holistic understanding of texts.

2.2.4 Knowledge

The first level focuses on students' ability to recall and recognize specific information from the text read; this foundational level involves basic understanding and memory of textual details (Smith et al., 2021).

Knowledge is broadly defined as the total accumulation of facts and information a person has gained from previous experiences, also referred to as general knowledge. It consists of concepts, ideas, and factual information, which together contribute to understanding various situations. While facts, concepts, and ideas are necessary to perform specific tasks (Murray, 2016).

The review by Smith et al (2021) indicates that the effects of greater knowledge depend on the child's reading ability; readers with low skills and high knowledge are able to compensate for their worse reading skills in building foundations. of text. Likewise, the comprehension of a text is moderated by an interaction between prior knowledge and the coherence and cohesion of the text. In each of the studies reviewed by Smith et al (2021), cohesion had differential effects on the reader depending on their level of prior knowledge.

Additionally, the study found that children with high knowledge developed a more complete situation model and, therefore, had greater understanding of the text, when the text had less cohesion (Smith et al., 2021).

2.2.4.1 Vocabulary

Vocabulary can be defined as the knowledge of the meaning of the words in a text, this contributes significantly to the construction of the meaning of the texts. Vocabulary knowledge is a prominent predictor of reading comprehension and is described as a common thread in the language comprehension component of the Simple View of Reading due to its connections to prior knowledge and language structures (Murray, 2016).

Having a wide vocabulary not only allows individuals to communicate more effectively but also facilitates the understanding of complex texts. A rich vocabulary includes not only the knowledge of individual words but also an understanding of their nuances, contexts, and appropriate uses.

Vocabulary mastery is essential for effective comprehension. It includes both knowledge of the meanings of words and the ability to infer meanings from the context, for this it is important to consider:

Word Meaning: Understanding the meanings of the words used in a text is essential for comprehension. A large vocabulary allows readers to better grasp content without having to constantly consult dictionaries (Stevani et al., 2022).

Contextual Deduction: The ability to infer the meaning of unknown words from the context in which they are found is a vital skill. This ability allows readers to take on more

challenging texts and understand them without needing to know every word beforehand (Stevani et al., 2022).

Vocabulary development can be achieved through various educational strategies, such as the use of word maps, vocabulary games, and extensive reading. Additionally, regular practice and exposure to new terms in varied contexts are fundamental to enriching students vocabulary.

2.2.4.2 Comprehension skills

This level encompasses a series of more advanced skills that allow the reader to understand and analyze the text deeply. Advanced comprehension skills are essential for higher-level thinking and academic success. These skills include:

Inference: The ability to read between the lines and grasp implicit meanings not explicitly stated in the text. Inferencing is crucial for understanding nuances, underlying themes, and unstated assumptions. It involves making connections between different parts of the text and using background knowledge to fill in gaps. This skill helps readers interpret figurative language, recognize symbolism, and understand complex narratives (Burke, 2023).

Evaluation: The capacity to judge and assess the content of the text, its arguments, and the way it is written. Evaluative reading involves critical thinking and the ability to discern the quality and validity of the information presented. Readers must evaluate the author's purpose, the strength of the evidence provided, and the logical consistency of the arguments. This skill is particularly important for academic reading and for navigating persuasive texts, as it enables readers to form their own opinions and engage critically with the material (Murray, 2016).

Synthesis: The ability to summarize and combine information from the text coherently, integrating different ideas and concepts presented. Synthesis helps in forming a holistic view and

understanding complex interrelations within the text. It involves identifying key points, organizing information logically, and combining ideas to create new insights. This skill is essential for writing summaries, research papers, and for understanding multifaceted issues presented in various texts (Murray, 2016).

2.2.4.3 Difficulties that students have to read

Despite educational efforts, many students face significant difficulties in developing their reading comprehension skills. These difficulties can stem from various sources, including motivational, cognitive, and linguistic challenges (Al-Rimawi & Al Masri, 2022).

Lack of Interest or Motivation: Students may not be motivated to read if they do not find the material relevant or interesting. This lack of engagement can negatively affect their ability to concentrate and understand the text (McGeown et al., 2015). When students are not interested in what they are reading, they are less likely to put in the effort needed to fully engage with the text, which can result in poor comprehension. To address this, educators can incorporate topics that align with students' interests and backgrounds, making the reading material more relatable and engaging.

Attention Problems: The inability to maintain concentration during reading can significantly interfere with comprehension. Students with attention difficulties often struggle to follow longer texts or complex arguments, leading to gaps in understanding (Al-Rimawi & Al Masri, 2022).

Vocabulary Deficits: Limited vocabulary knowledge can make more complex texts difficult to understand. A restricted vocabulary limits the ability to comprehend and enjoy a wide range of texts (Murray, 2016; Al-Rimawi & Al Masri, 2022).

Cognitive Problems: Some difficulties may be related to specific cognitive problems, such as dyslexia, which affect the ability to process and understand written information. Dyslexia and other learning disabilities require tailored instructional strategies to help affected students improve their reading skills (Al-Rimawi & Al Masri, 2022).

2.2.4.4 Strategies to enhance reading comprehension skills

To enhance reading comprehension skills, educators employ various strategies aimed at fostering deeper understanding and engagement with texts. Dougherty & Earnest (2015) indicates that:

If you are interested in improving your student's reading comprehension, one of the best things that you can do as a classroom teacher is to ensure that your students know how to use metacognitive and cognitive strategies flexibly as they interact with texts (p. 79).

Dougherty & Earnest (2015) suggests that metacognitive and cognitive strategies are mental approaches or tools that readers consciously employ to monitor, repair, and enhance their understanding of narrative and informational texts. According to Dougherty & Earnest (2015), metacognition refers to the awareness and regulation of one's own thinking processes. Metacognitive strategies involve consciously planning, monitoring, and evaluating comprehension during reading:

- *Planning*: Setting goals for reading, activating background knowledge, and previewing text structure.
- *Monitoring*: Being aware of comprehension while reading, identifying difficulties, and making adjustments.
- *Evaluation*: Reflecting on understanding after reading, assessing comprehension effectiveness, and identifying areas for improvement.

In addition, Dougherty & Earnest (2015) indicates cognitive strategies focus on the mental processes used to construct meaning from text. These strategies involve specific techniques for engaging with and understanding textual information. Some key cognitive strategies include:

- *Activating Prior Knowledge*: Making connections between prior knowledge and new information.
- *Predicting*: Making educated guesses about the content or outcomes of the text.
- *Visualizing*: Creating mental images or sensory representations of text descriptions.
- *Summarizing*: Synthesizing key information and main ideas from the text.

Effective instructional approaches integrate both metacognitive and cognitive strategies within a supportive learning environment. According to Mohamed (2023): “Reading involves both cognitive and metacognitive processes as it is inextricably tied to thinking as a problem-solving activity that includes both absorption and development of ideas” (p. 1).

The reciprocal teaching model effective comprehension instruction includes:

Table 1

Model effective comprehension instruction

| | |
|-------------|---|
| Questioning | Generating and answering questions to foster critical thinking and engagement. |
| Clarifying | Resolving confusion and addressing misunderstandings through discussion and reflection. |
| Predicting | Anticipating upcoming information based on context clues and textual evidence. |
| Summarizing | Synthesizing and restating main ideas to reinforce understanding. |

Note: according to Dougherty & Earnest (2015) and Mohamed (2023).

These approaches promote active engagement with text and collaborative learning, enhancing comprehension skills across diverse learner populations (Dougherty & Earnest, 2015; Mohamed, 2023).

Besides Santi & Reed (2015) indicates that key elements of a supportive classroom environment include spending extensive time reading various genres for real purposes, developing vocabulary and conceptual knowledge through diverse experiences, and engaging in meaningful discussions about texts. The proposed instructional model presents five components: explaining strategies, modeling them, collaborative practice, guided practice with increasing student responsibility, and independent application. Teachers should ensure that students use a combination of strategies to improve their comprehension skills. In relation to the above, these components are explained in Table 2.

Table 2

The proposed instructional model

| | |
|-----------------------|---|
| Explaining Strategies | The first component involves providing students with an explicit description of the comprehension strategy, including when and how it should be used. This step ensures that students understand the purpose of the strategy and the specific circumstances in which it can be applied. Teachers should clearly articulate the strategy's goals and offer examples to illustrate its use. |
|-----------------------|---|

| | |
|--|---|
| Modeling Strategies | In this phase, the teacher demonstrates the strategy in action. This involves thinking aloud while reading a text, showing students how to apply the strategy effectively. Modeling helps students see the practical application of the strategy and understand its relevance to real reading situations. |
| Collaborative Practice | After modeling, students engage in collaborative practice where they apply the strategy together with the teacher and their peers. This collaborative effort allows students to receive immediate feedback and refine their use of the strategy. It also encourages discussion and deeper understanding through shared experiences. |
| Guided Practice with Increasing Responsibility | In this stage, students practice the strategy under the teacher's guidance, but with increasing independence. The teacher gradually reduces support, allowing students to take more responsibility for their learning. This gradual release of responsibility helps students build confidence and autonomy in using the strategy. |
| Independent Application | Finally, students use the strategy independently during their reading activities. This stage is crucial for solidifying their understanding and ability to apply the strategy without teacher support. Independent practice helps students integrate the strategy into their regular reading habits, making it a natural part of their comprehension process. |

Note: according to Santi & Reed (2015).

2.3 COMPUTER ASSISTED LANGUAGE LEARNING METHOD

2.3.1 Definition of the Method

The Computer Assisted Language Learning (CALL) method is defined as the utilization of digital tools and resources to enhance language education. This approach involves the integration of educational software, interactive applications, and online resources to create a more engaging and personalized learning experience. By leveraging technology, CALL aims to support the development of language skills in a more efficient and effective manner compared to traditional methods (Chaudhary & Devi, 2019; Widiastuti et al., 2021).

CALL encompasses a wide range of digital tools, including language learning apps, online dictionaries, interactive grammar exercises, and multimedia content such as videos and audio recordings. These tools provide learners with immediate feedback, enabling them to correct errors and reinforce their learning in real-time. Moreover, CALL facilitates access to authentic language materials and cultural content, which are essential for developing a deeper understanding of the language being studied (Chaudhary & Devi, 2019).

2.3.2 The uses of the method

According to Kumari et al (2023) “The computer technology can be combined with communication and education to provide education of language with the help of the computers. This process is called Computer -Assisted Language Learning” (p. 1). With CALL (Computer -Assisted Language Learning), teachers can support students in acquiring more vocabulary and grammar through activities such as watching videos and conducting internet searches in the target language.

This approach also encourages students to employ the target language more effectively, fostering a more natural learning experience beyond mere memorization. By contextualizing language rules and vocabulary, learners find them more practical and memorable. Visual learners, in particular, benefit from seeing images or examples of terms discussed in class. Therefore, computer-assisted learning can significantly enhance learning outcomes (Kumari et al., 2023).

The CALL method has multiple applications in language learning. One of its main advantages is the ability to offer vocabulary practice through interactive games and exercises designed to improve retention and use of new words. Additionally, CALL tools can provide immediate feedback on pronunciation, allowing students to correct errors and improve their accent (Chaudhary & Devi, 2019).

Another important use of CALL is in improving listening and reading comprehension. Digital resources offer exercises and activities that adjust to the skill level of each student, helping them to develop these skills progressively. Additionally, CALL also includes tools to improve writing and grammar, providing automatic corrections and suggestions that help students improve their writing skills (Chaudhary & Devi, 2019).

2.3.3 Benefits of Computer-Assisted Language Method

The benefits of the CALL method are numerous and significant for both students and educators. One of the primary advantages is the ability to provide personalized learning experience. Technology allows materials and activities to be tailored to the individual needs of each student, enhancing the effectiveness of the learning process. This personalized approach helps address specific areas of difficulty and promotes a more efficient learning progression (Chaudhary & Devi, 2019; Kumari et al., 2023).

Another key benefit is the increased motivation and engagement among students. Digital resources, with their interactive and multimedia elements, tend to be more appealing and stimulating, which can lead to higher levels of student participation and interest in the learning material. Additionally, CALL provides immediate feedback, which is crucial for helping students identify and correct mistakes quickly, thus accelerating their learning process (Chaudhary & Devi, 2019).

Finally, CALL offers access to a wide variety of educational resources and online tools. These resources include videos, audios, interactive games and online exercises that enrich the learning process and make it more dynamic and varied. This diversity of materials not only keeps students interested but also allows them to experiment with different ways of learning and find those that best suit their needs and preferences (Kumari et al., 2023).

2.4 DIGITAL TOOLS IN ENGLISH CLASSROOMS

Bharathi (2023) indicated that “language teaching primarily relied on traditional methods, including textbooks, chalkboards, and oral drills” (p.95). However, advancements in educational technology provide additional opportunities to enhance reading comprehension through digital tools and resources, for example interactive multimedia platforms, digital texts with embedded supports (e.g., annotations, hyperlinks), and adaptive learning technologies can personalize instruction and provide immediate feedback to learners (Bui, 2022; Bharathi, 2023).

Additionally, Bharathi (2023) indicates that “Digital tools have the inherent ability to captivate the attention of learners through gamification, multimedia content, and interactive features. Platforms like Duolingo employ gamified elements to make language teaching enjoyable, motivating students to consistently engage with the material” (p. 95).

On the other hand, Rice (2003) cited in Bui (2022) defines digital technologies “as those that use different kinds of software and hardware to create, store, deliver and display information” (p.2.), therefore, it should be understood that there are different types of software or hardware with which you can create, save, or view information regarding the teaching of the English language in this case.

2.4.1 Advantages of using digital tools in English classroom

The integration of digital tools in English classrooms offers numerous advantages that significantly enhance the learning experience. First and foremost, digital tools cater to diverse learning styles by providing interactive and engaging content. Visual learners benefit from multimedia elements such as videos, infographics, and interactive simulations that reinforce comprehension and retention of English language concepts. Auditory learners can access audio resources, including podcasts and pronunciation guides, which aid in language acquisition and listening skills development (Bui, 2022; Fernández-Sánchez et al., 2022).

Secondly, digital tools promote personalized learning experiences. Adaptive learning platforms and applications tailor content and exercises based on individual student performance, allowing educators to differentiate instruction effectively. This customization fosters student autonomy and self-paced learning, empowering learners to progress at their own speed while addressing specific language proficiency goals (Bui, 2022).

Moreover, digital tools facilitate collaborative learning opportunities. Virtual classrooms, discussion forums, and collaborative editing tools enable students to engage in peer-to-peer interactions, collaborative projects, and real-time feedback exchange. These collaborative activities not only enhance language fluency but also promote critical thinking, communication skills, and teamwork (Bui, 2022; Bharathi, 2023).

Finally, Bharathi (2023) indicated that: Digital tools offer a unique and innovative approach to teaching English, providing a platform for immersive, collaborative, and creative language learning experiences. By integrating these tools thoughtfully into the curriculum, teachers can inspire a new level of enthusiasm and effectiveness in English language education (p. 101)

2.4.2 Digital app to enhance reading comprehension

Digital apps dedicated to enhancing reading comprehension leverage technology to provide targeted support and practice opportunities for students. These apps typically offer a range of features designed to improve various aspects of reading comprehension, including vocabulary development, text analysis, and inferential reasoning (Fernández-Sánchez et al., 2022; Bharathi, 2023).

One of the key functionalities of these apps is their ability to provide interactive exercises that engage students actively with texts. They often include activities such as multiple-choice quizzes, fill-in-the-blank exercises, and interactive annotations that encourage close reading and critical analysis. By offering immediate feedback and explanations, these apps help students identify and correct comprehension gaps in real-time, thereby reinforcing understanding and retention of textual content (Bui, 2022; Fernández-Sánchez et al., 2022; Bharathi, 2023).

Furthermore, digital apps to enhance reading comprehension often incorporate adaptive learning technologies. These technologies adjust the difficulty level of tasks based on individual performance, ensuring that students are appropriately challenged without feeling overwhelmed. Adaptive learning also allows educators to track student progress systematically, identify areas of improvement, and tailor instructional interventions accordingly (Bui, 2022; Fernández-Sánchez et al., 2022).

In addition to fostering individualized learning experiences, digital apps promote accessibility to a wide range of literary genres and informational texts. They provide students with opportunities to explore diverse topics and perspectives through curated reading materials, thereby broadening their knowledge base and enriching their overall learning experience in English language arts (Bui, 2022; Fernández-Sánchez et al., 2022; Bharathi, 2023).

2.4.3 Digital tool ReadWorks

ReadWorks is a versatile digital tool widely recognized for its comprehensive features designed to support reading comprehension instruction across different educational settings (Nobles, 2023).

2.4.3.1 Characteristics

ReadWorks offers a repository of curated texts spanning various genres and reading levels, catering to the diverse needs and interests of students. These texts are carefully selected to align with academic standards and promote literacy skills development, including vocabulary acquisition, fluency, and comprehension strategies (Calder & Nobles, 2023).

The platform also integrates multimedia elements such as audio recordings and interactive visuals, enhancing engagement and accessibility for students with different learning preferences. Furthermore, ReadWorks provides tools for educators to customize assignments, track student progress, and differentiate instruction based on individualized learning profiles (Calder & Nobles, 2023; Raman et al., 2023).

2.4.3.2 Uses

Educators utilize ReadWorks to assign reading passages aligned with instructional objectives and curriculum standards. The platform supports a range of instructional practices,

including guided reading, independent practice, and differentiated small-group instruction. Teachers can leverage ReadWorks' extensive library to scaffold learning experiences, provide opportunities for close reading and analysis, and foster discussions around literary themes and textual interpretations (Calder & Nobles, 2023; Raman et al., 2023).

2.4.3.3 Benefits

The benefits of integrating ReadWorks into English classrooms are manifold. Firstly, the platform promotes literacy engagement by offering high-quality, age-appropriate texts that spark curiosity and foster a love for reading among students. Secondly, ReadWorks' interactive features and adaptive learning functionalities support differentiated instruction, allowing educators to address varying skill levels and learning needs effectively. Thirdly, the platform facilitates formative assessment through comprehension quizzes and performance analytics, enabling educators to monitor student progress, identify areas for intervention, and provide timely feedback to promote continuous improvement in reading comprehension skills (Bradshaw et al., 2022).

In the exploratory case study of Bradshaw et al (2022), the authors indicated that: “we set out to understand the impact of one school’s all-school Article-A-Day implementation, and we saw clear success and benefits”, highlighting the benefit of this application.

2.5 EDUCATIONAL PROGRAMS FOR EIGHTH GRADERS

Educational programs for eighth graders are designed to provide a solid foundation in core subjects such as language arts, mathematics, science, and social studies. These programs aim to develop critical thinking, problem-solving skills, and foster social development as students transition from elementary to middle school. Across different countries, educational programs

vary significantly, influenced by factors like curriculum standards, teaching methods, and resources. High-performing countries tend to focus on rigorous, well-rounded curricula that emphasize both academic and vocational skills, while areas with lower proficiency levels often face challenges related to resource availability and educational equity (UNESCO, 2021).

In Costa Rica, the Ministry of Public Education (MEP) oversees the curriculum for eighth graders, ensuring it aligns with national educational standards. The program includes subjects like language arts, mathematics, and science, with an emphasis on fostering competencies such as critical thinking, communication, and citizenship. Costa Rica has implemented reforms to improve instructional quality and integrate technology into classrooms, aiming to reduce educational disparities across regions and socio-economic groups. Additionally, the country focuses on providing students with the skills needed for future educational and vocational opportunities, preparing them for the next steps in their academic journey.

2.5.1 Proficiency in Educational programs for eighth graders worldwide

Proficiency in educational programs for eighth graders varies significantly across different countries and educational systems globally (UNESCO, 2021). This variation is influenced by several factors, including curriculum standards, teaching methodologies, educational resources, and socioeconomic conditions. International assessments such as the Programme for International Student Assessment (PISA) provide valuable insights into the proficiency levels and academic performance of eighth graders in reading, mathematics, and science across participating countries (OECD, 2019).

According to PISA data, countries with high proficiency levels often emphasize a rigorous curriculum that emphasizes critical thinking, problem-solving skills, and application of

knowledge in real-world contexts (OECD, 2019). These educational programs typically prioritize a balanced approach to academic and vocational education, preparing students for both further education and entry into the workforce.

Conversely, regions with lower proficiency levels may face challenges related to resource allocation, teacher training, and educational equity (UNESCO, 2021). Addressing these challenges requires targeted interventions that enhance educational quality, improve access to learning resources, and promote inclusive educational practices that cater to the diverse needs of all students.

2.5.2 Proficiency of Educational programs for eighth graders in Costa Rica

In Costa Rica, educational programs for eighth graders are designed to provide students with a solid foundation in core subjects such as language arts, mathematics, science, and social studies (MEP, 2016). The Costa Rican Ministry of Education oversees the development and implementation of curriculum standards aimed at fostering holistic development and academic excellence among students.

Educational reforms in Costa Rica have focused on enhancing instructional quality, promoting teacher professional development, and integrating technology into classroom instruction to enrich learning experiences (MEP, 2016). Efforts to improve educational equity and access to quality education have also been prioritized, aiming to reduce disparities in academic achievement across different regions and socio-economic backgrounds.

According to Campbell (2023) in “Teacher Toolkit for Receptive Skills: Listening and Reading guide for eighth graders”:

The CEFR (Common European Framework of Reference) Companion Volume (2018), there are five types of reading activities that we must keep in mind when we plan instruction. It is important to provide opportunities for developing proficiency in all five different types of reading (p.7).

Campbell (2023) states that when teaching different reading activities, it is important to consider both the challenges students may face and the value each activity brings. For instance, reading emails and letters involves learning the accepted format, which may include abbreviations and emoticons. One of the main benefits of this type of reading is exposure to cultural content, as these texts are usually shorter and follow familiar patterns.

Reading for orientation, such as skimming and scanning, presents challenges like dense content, complex graphics and layouts, and challenging vocabulary. However, it offers valuable real-world applications, such as searching for specific data or previewing texts to grasp the main idea. When reading for information, students may encounter topic-specific vocabulary, academic language, formal expressions, and the use of tables or graphs. Despite these challenges, this type of reading prepares learners for academic study and helps them transfer skills to other content areas.

Reading instructions can be difficult due to technical vocabulary, dense language, and the need for sequential comprehension. Nevertheless, this activity has clear real-world applications, making it highly practical for learners.

Finally, reading for fun may present difficulties in finding material that matches the correct reading level or captures students' interest. Additionally, it can be hard for learners to engage with

reading as an independent activity. Still, reading for enjoyment is highly beneficial, as it helps develop vocabulary, language fluency, and familiarity with natural sentence structures.

Figure 1

Types of reading activities

| Reading Activity | Teaching considerations |
|---|--|
| Reading emails and letters | <ul style="list-style-type: none"> Challenges include: learning the accepted format, may include abbreviations and emoticons Value added: include cultural content, generally shorter and recycle patterns |
| Reading for orientation: skimming and scanning | <ul style="list-style-type: none"> Challenges include: dense content, graphics and layout, challenging vocabulary Value added: Real-world applications like searching for specific data or previewing for the gist |
| Reading for information | <ul style="list-style-type: none"> Challenges include: topic specific vocabulary, academic language, formal language, use of tables, graphs, etc. Value added: preparation for academic study, transfer skills to other content areas |
| Reading instructions | <ul style="list-style-type: none"> Challenges include: topic specific vocabulary, dense language, need for sequential comprehension Value added: real-world applications |
| Reading for fun | <ul style="list-style-type: none"> Challenges include: difficulty in matching correct reading level, independent activity, difficulty in finding engaging content Value added: develops vocabulary, language fluency and natural sentence structures |

Note: Taken from Campbell (2023).

According to Campbell (2023) to help students develop proficiency in reading, teachers should incorporate a variety of activities that address different stages of the reading process:

2.5.2.1 Pre-reading Activities

Before reading, it is important to build or activate students' background knowledge. Teachers can help students make connections with the topic and pre-teach any new cultural or thematic content. Additionally, previewing the text—using elements like pictures, titles,

subheadings, and other text features—helps set the context. Another key step is pre-teaching vocabulary by focusing on the most essential words or phrases necessary for understanding the reading task.

2.5.2.2 Reading Activities

While reading, teachers should check comprehension informally to ensure students understand the material. It is helpful to include questions that assess three levels of understanding: literal (basic facts), interpretive (inferences and deeper meanings), and applied (connecting the content to real-life situations). Activities that focus on discourse markers and linguistic clues, such as linking words, clarifying terms, prefixes, and word roots, should also be integrated to improve understanding of the text.

2.5.2.3 Post-reading Activities

After reading, activities should encourage students to react to the content or analyze the language. Tasks like summarizing, sequencing events, making inferences, comparing and contrasting, and solving problems extend learning and deepen understanding. Teachers can follow up with discussions, games, or reflective activities that help solidify what students have learned and promote further exploration of the material.

2.5.2.4 The Reading Process

When planning reading activities, a structured approach is recommended:

- **Pre-reading:** Explain the task goal, identify potential difficulties, and introduce strategies to tackle these challenges.
- **First reading:** Encourage students to read for the general meaning (the gist).

- **Pair/group feedback:** Allow students to interact, exchange ideas, and share their interpretations of the text.
- **Second reading:** Focus on extracting the main ideas, specific details, and drawing conclusions.
- **Post-reading:** React to the content, discuss language features, and promote both spoken and written fluency.

2.5.2.5 Techniques to Develop Reading Skills

Reading Aloud

Have students taken turns reading a passage aloud? This helps them improve pronunciation, intonation, and fluency while also enhancing word recognition and comprehension.

Shared Reading

Engage students in reading a text together as a class or in small groups. Pause at intervals to discuss the content, ask questions, and clarify difficult vocabulary or concepts. This method promotes comprehension, vocabulary expansion, and critical thinking.

Text Annotation

Teach students to annotate texts by highlighting important points, underlining key information, or making notes in the margins. This strategy encourages active reading and helps students focus on significant details, improving comprehension and critical thinking.

Reading Response Journals

Ask students to write brief reflections or summaries of what they have read, express their opinions, pose questions, or connect the text to their own experiences. This activity boosts engagement with the text and develops both critical thinking and written expression skills.

Reading Circles or Book Clubs

Divide students into small groups and assign each group a reading passage or book. After reading independently, students gather to discuss their insights, share ideas, and ask questions. This fosters collaborative learning, enhances discussion skills, and encourages deeper analysis of the text.

Authentic Reading Materials

Incorporate real-world reading materials, such as newspapers, magazines, blogs, or websites, which relate to topics students find interesting. Encouraging independent reading outside of the classroom exposes students to diverse writing styles, genres, and perspectives.

Extensive Reading

Set aside time for silent, independent reading where students select materials that match their reading level and interests. This practice enhances reading fluency, expands vocabulary, and improves overall comprehension.

Text Reconstruction

Provide students with scrambled or jumbled texts. They must work individually or in groups to reorder the text correctly. This activity helps develop comprehension, sequencing abilities, and an understanding of how cohesive devices function in texts.

Graphic Organizers

Use graphic organizers, such as story maps, Venn diagrams, or concept maps, to help students visualize key ideas, relationships, and connections within a text. These tools support comprehension, organize information, and foster critical thinking.

2.5.3 Relationship between educational programs and reading comprehension skills

The relationship between educational programs and reading comprehension skills among eighth graders is multifaceted and influenced by various educational factors. Reading comprehension is a foundational skill essential for academic success across all subjects and disciplines (Rochanaphapayon, 2024). Effective educational programs integrate explicit instruction in reading strategies, vocabulary development, and textual analysis to support students' comprehension abilities.

Curriculum design plays a crucial role in shaping students' reading comprehension skills by incorporating diverse literary genres, informational texts, and complex narratives that challenge students to engage critically with content. Educational programs that prioritize literacy development often implement evidence-based instructional practices such as guided reading, reciprocal teaching, and collaborative learning strategies to enhance students' ability to comprehend and interpret texts effectively (Fernández-Sánchez et al., 2022).

Furthermore, the quality of teaching and teacher-student interactions within educational programs significantly influences reading comprehension outcomes. Educators who employ differentiated instruction, provide targeted interventions, and create supportive learning environments are better equipped to address individual learning needs and foster a deeper understanding of textual content among eighth graders (Rochanaphapayon, 2024).

Additionally, the integration of digital tools and technology-enhanced learning resources can enhance reading comprehension instruction by offering interactive exercises, multimedia texts, and adaptive feedback mechanisms that cater to diverse learning preferences and abilities. These technological innovations provide students with opportunities to practice reading comprehension skills independently, receive immediate feedback, and track their progress over time (Rochanaphapayon, 2024).

CHAPTER III

METHODOLOGICAL FRAMEWORK

In this chapter, the researcher includes certain concepts that help and guide the reader to understand the methodological part of the research. It means the way and how the researcher does to achieve their objectives. It includes the purpose, the time in which the research must be achieved, the nature, the type of research, the main subjects, and sources of information. besides the population, the sampling, and the instruments used to achieve the specific objectives.

The researcher starts defining the purpose of the investigation whether it is applied or theoretical. Then, the author points out that the temporal dimension focuses on establishing the time in which the data was collected. The researcher specifies the nature of the study in which the distinct types of qualitative, quantitative, and mixed are defined. Finally, the type of the character of the research is explained and defined.

Then, it is necessary to focus on the basic subjects and sources of information which represent the main sources that help the researcher to complete chapter II related to the theoretical information of the research. Also, this chapter includes the population on which the research is focused, but also, most specifically on the sample the author will be using to try the application and the participants who will help with the instruments.

Finally, the techniques and instruments are briefly described to guide and help the reader understand how the researcher collects data.

3.1 TYPE OF INVESTIGATION

3.1.1 Purpose (Applied)

It is necessary and important to define and give characteristics of every research project, that's why DiscoverPhDs (2020) defined to clarify the concept:

Therefore, research aims to find out what is known, what is not, and what we can develop further...Research aims to understand the world further and learn how this knowledge can be applied to better everyday life. It is an integral part of problem-solving.

It means that the author finds a problem and he/ she is looking for a way to solve or help to solve the problem, using different strategies or methods.

Continuing with the purpose of investigation, this investigation is classified as applied research since it is defined as: Applied research addresses specific problems to find practical solutions. Distinguishing it from basic research, which primarily seeks to expand theoretical knowledge, applied research focuses on resolving real-world issues. It serves as a follow-up to basic or pure research, aiming to identify solutions to specific issues at individual, group, or societal levels. (Charlesworth Author Services, 2024)

It specifies clearly that the purpose of this investigation is applied since the author finds a situation in reading comprehension skills that will be studied in depth through diagnostic assessments, after that the author uses a digital tool named ReadWorks to observe the changes and see whatever change (positive or negative) after using and practicing reading comprehension constantly with the online tool, after gathering the information related to the applied research the ideas is to bring ideas, planning, guidelines, recommendations, or advice to improve the gap in reading comprehension skills of the population.

3.1.2 Temporal Dimension (Transversal/ longitudinal)

This investigation has limitations with the time in terms of application which places this investigation in a transversal temporal dimension. “transversal studies where data are collected

from the study population at a single point in time. These studies are easy to conduct, involve no follow-up, and need limited resources” (Ranganathan, P. 2019) As mentioned above transversal investigations do not have follow up as in this research the application is limited a certain short period time, that’s why this research is considered transversal temporal dimension.

However, it is needed to specify the characteristics of longitudinal studies, which refers to investigations that involve large periods. “In longitudinal studies, participants are followed over time to determine the association between exposure and outcome (or outcome and exposure).” (Ranganathan, P. 2019). This temporal dimension is used in investigations when is needed to observe the results of medical treatment, and changes in agriculture using some type of insecticide to observe the changes in the plants; it is used when obtaining the results needed more than six months or more than a year to get the results of the research.

3.1.3 Framework

Every investigation has an implied range to cover depending on all the factors that it takes into consideration to make possible the idea to obtain relevant results and conclusions in the research process. However, this range is specifically divided into four terms that explain in the best way how far research could go. Taking this into consideration, it is important to highlight that when a person or organization researches a topic, many factors from the largest, as a country situation, to the most delimited one, as inside a classroom, could affect or benefit the process. But, to who or what is targeted to receive the effects or benefits is an opposite event.

Because of that, it is necessary to elaborate more about these levels of framework. Simmons (2020) in her investigation focuses on the framework of her investigation. She divided the different levels of the impact using the 4M levels (micro, meso, macro, and mega), in which

she explained that “4M framework, where *micro* refers to the individual researcher, *meso* to department level factors, *macro* to the institutional level, and *mega* to disciplinary and interdisciplinary impact” (p.2). This explanation is based on her investigation context, despite this, it is an advantageous starting point.

Thence, related to the mega level, refers to the maximum level that the research could reach. It is not as simple as say the whole Costa Rica Country, but all its educational system in this country, naturally, private as well as public. Eaton (2020) elaborates that “The mega level includes stakeholders who relate to the school... This includes government bodies, alumni, parents, and others.”. (p.4). Therefore, you decided what the maximum level could be.

The macro level is going to be defined as the one that still covers a broad range, but in a more specific size. This is well explained by Saylor Academy (2012) that “at the macro level, sociologists examine social structures and institutions.” (p .2). The most immediate institution that this current research will reach is the Ministerio de Educación Pública of Costa Rica.

The meso level responds to “academic departments and support units, such as the library or the student affairs office, provide resources and learning opportunities that allow academic integrity to be operationalized.” (Eaton, 2020, p.3). In addition, “When investigating groups, their inquiry is at the meso level.” (Saylor Academy, 2012, p.2). Contextualizing the level of this research, the immediate meso is the students in the Miramar High School. Consequently, the micro level responds to the students who study in eighth grade that will use the application ReadWorks. The reason is that this level responds to individuals, the most basic unit of the universe compromised in this paperwork.

3.1.4 Hypothesis

Students who use the digital tool ReadWorks through CALL (Computer Assisted-Language Integrated Learning). will enhance their reading comprehension skills since they will practice reading comprehension skills daily and can complete practices to check their reading comprehension levels. **Dependent Variable:** The improvement or not changes in their reading comprehension skills. **Independent Variable:** Digital tool ReadWorks

3.1.5 Nature: Mixed

The nature of an investigation revolves around the way the information is collected; considering mentioned above, there are three types qualitative, quantitative, and mixed.

Divine Mercy University (2020) defines qualitative research as “Where researchers collect non-numerical information, such as descriptions of behavioral phenomena, how people experience or interpret events, and/or answers to participants' open-ended responses”

It means that qualitative research includes interviews, checklists, and observations, since in the case of the interviews people express their opinion or their experience with some issue, place, or event, and in the case of checklists and observations, the researcher sees behaviors. In this case, with this investigation the researcher will use a checklist to know the difficulties in reading comprehension skills by eighth -year students at Liceo de Miramar High School. After that, the investigator, with help from another checklist, will measure the comprehension and well use of the digital tool ReadWorks. This instrument is applied after the researcher explains the use of the digital tool. Besides, an interview is applied for the students to know the effectiveness that ReadWorks has for them as a digital tool used to improve reading comprehension.

On the other hand, Divine Mercy University (2020) states quantitative research is research that “Collects numerical data, such as frequencies or scores to focus on cause-and-effect relationships among variables.”

In this case, quantitative research is used a little bit to make graphics of the opinions of the students about the use of ReadWorks to improve reading comprehension.

For this specific investigation, the nature of the research is mixed (Qualitative and Quantitative) defined by Divine Mercy University (2020):

Involves both quantitative and qualitative components. The researcher specifies in advance the types of information necessary to accomplish the study's goals. The researcher needs to carefully consider the order in which the data types will be collected and the selection criteria for participants in the various parts of the study (e.g., which people will take part in the qualitative assessment if a sub-selection of participants is involved). Involves development (where the researcher uses one method to inform data collection or analysis with another method) initiation (where unexpected results change protocol in the other method), corroboration (where consistency is evaluated and compared between methods), and elaboration (where one method is used to expand on the results of the other method).

This is, what the researcher will do in the investigation is collect the information with the qualitative methods mentioned above; however, the researcher will need the numerical part or quantitative research to accommodate, quantify responses, and make graphs about students' experiences and opinions. Nevertheless, this investigation is considered qualitative predominant.

3.1.6 Type of the study (Character)

The character of research or type of research refers to the approach that the investigation has depending on issues related to the research. It can affect if the topic has been studied before, if it is completely new, or if there is a combination of two or more.

This research can be considered exploratory since it's a new problem presented and an issue that should be studied, researched, and followed to observe the changes during the research process, the meaning of exploratory research Physiopedia (2024) mentions that "This type of research will be conducted for a problem that has not been clearly defined. It helps to figure out the best research design, data collection method, and selection of subjects." (pár.9). This places the investigation in this type of study since it was needed to look for information to support the ideas and it is a new problem that is looking for an improvement or solution.

Besides descriptive research is defined as "This research provides an accurate portrayal of characteristics of a particular individual, situation, or group. Also known as statistical research. It deals with everything that can be counted and studied which has an impact on the lives of people." (Physiopedia, 2024, pár.11) In this case, this research is descriptive because when the data is collected, it is necessary to use graphs and tables to represent the information through examples from the interviews and checklists. Although the research focuses more on the qualitative approach, a bit of the quantitative part is necessary, which is why it is also placed as a type of descriptive research.

3.2 SUBJECTS AND SOURCES OF INFORMATION

The researcher attached the main sources used in the research to support the theoretical framework and the methodological framework

3.2.1 Firsthand sources used in the research process

Table 3

Firsthand sources used in the research process

| Author | Organization/University | Country | Year |
|--|---------------------------------------|----------------|-------------|
| Bradshaw, S., Nobles, S., & Xiao, W. | ReadWorks | EE. UU. | 2022 |
| Bui, T. | University of Western Australia | Australia | 2022 |
| Burke, A. | Study.com | EE. UU. | 2023 |
| Calder, M., & Nobles, S. | ReadWorks | EE. UU. | 2023 |
| Chaudhary, S., & Devi, V. | Vellore Institute of Technology (VIT) | India | 2019 |
| Cordero, M. Q. | El Colectivo 506 | Costa Rica | 2023 |
| Cortés, X. B. | Colegio Saludcoop Norte | Colombia | 2013 |
| Dina, A., & Ciornei, S. | University of Pitești | Rumanía | 2013 |
| Edwards, L. | ReadWorks | EE. UU. | 2023 |
| Fernández-Sánchez, M., Garrido-Arroyo, M., & Porrás-Masero, I. | University of Extremadura | España | 2022 |
| Fithriyah, N. L. | ReadWorks | EE. UU. | 2021 |
| García, J., & Cain, K. | — | — | 2014 |
| Rochanaphapayon | Chulalongkorn University | Tailandia | 2024 |

3.2.2 Secondhand sources used in the research process

Table 4

Secondhand sources used in the research process

| Authors | Title | Year |
|---|---|-------------|
| Ministerio de Educación Pública (MEP) | <i>National Standardized Foreign Language Test: English</i> | 2024 |
| Angulo-Abarca, C., & Chaves-Gutiérrez, E. | <i>Implementing Quizlet Tool to Improve Reading Skills of 10th Grader Students at Belén High School</i> | 2022 |
| Dougherty, K., & Earnest, G. | <i>Developing Reading Comprehension</i> | 2015 |
| Wiącek, M. | <i>Computer Assisted Language Learning (CALL)</i> | 2024 |

3.2.3 Thirdhand sources used in the research process

Table 5

Thirdhand sources used in the research process

| Author/Authors | Articles | Year |
|-----------------------|--|-------------|
| Alvi, M | A manual for selecting Sampling Techniques in research | 2016 |

Variable Charts

General Objective: To determine the effectiveness of using the digital tool ReadWorks to improve reading comprehension skills of eight graders from Liceo the Miramar through Computer Assisted Language method in the first Quarter of 2025.

| Specific Objectives | Variable | Conceptual Definition | Instrumental Definition | Operational Definition |
|---|---|--|--|---|
| <p>1. To identify the specific challenges students, face in reading comprehension through a diagnostic assessment, to develop targeted intervention strategies.</p> | <p>The specific challenges students face in reading comprehension</p> | <p>The difficulties or challenges that the students have when they have exercises of reading comprehension</p> | <p>Instruments: Observation An observation of the class was made before starting the application of the different instruments as a way to know the group and observe the necessities or facilities the class or the group have to work with in the classroom. Checklist 1 and a pretest. Checklist 1: includes statements related to tasks that students can</p> | <p>Checklist 1 is valid if the researcher observes and notes that more than 70% percent of the students can achieve what is specified in the checklist.</p> |

| | | | | |
|--|--|--|--|--|
| | | | <p>achieve or not and includes statements related to the number of good answers they have.</p> <p>The pre-test: It is taken from the digital tool ReadWorks which is the digital that will be applied.</p> <p>The checklist will be applied when students are taking the pre-test test and after that, the researcher will fill up the spaces related to the knowledge and reading comprehension</p> | |
|--|--|--|--|--|

| | | | | |
|--|--|--|---|---|
| | | | <p>skills of the students.</p> <p>A teacher interview is applied to the teacher in charge of the group to know the management he/she gives to reading comprehension skill.</p> | |
| <p>To implement the ReadWorks digital tool in classroom activities to promote strategies that enhance students' reading comprehension skills</p> | <p>The implementation of the digital tool ReadWorks in the classroom</p> | <p>The researcher explains how to register and use the digital tool ReadWorks for the students and explains to them that it is an online tool that includes practices of</p> | <p>Instruments:</p> <p>Checklist 2 will be used after the researcher explains to the students the way the digital tool is used and the way to create the account or be registered</p> | <p>Checklist 2 is valid if the researcher observes and notes that more than 70% percent of the students can achieve what is specified in the checklist.</p> |

| | | | | |
|--|---|---|---|--|
| | | reading comprehension. | | |
| To determine the improvement in students' reading comprehension skills through a post-test assessment following the use of the digital tool. | The improvement in students' reading comprehension skills through a post-test assessment following the use of the digital tool. | The improvements, progress, and achievements that students will have after practicing reading comprehension with the help of the digital tool ReadWorks | Instruments Post-test The first post-test will be applied after some different practices using the digital tool ReadWorks Checklist1 The first checklist will be applied to observe if the students easily handle the online tool, as well as to observe the progress based on the post-test they will take. The researcher will fill | Checklist 1 is valid if the researcher observes and notes that more than 70% percent of the students can achieve what is specified in the checklist. The post-test is valid if the students can achieve more good answers than in the pre-test. |

| | | | | |
|--|--|--|---|--|
| | | | <p>up the spaces related to knowledge after checking the answers to the post-test.</p> <p>Students' Questionnaire</p> <p>A questionnaire will be applied for the students after they complete the last activity, which is the post test. This questionnaire as a guide for the researcher to know the students' perspective of the use or like or dislike of the students to practice</p> | |
|--|--|--|---|--|

| | | | | |
|--|--|--|---------------------------|--|
| | | | reading comprehension. | |
|--|--|--|---------------------------|--|

3.3 POPULATION AND SAMPLING

3.3.1 Population

In this part of the document, the researchers specify the population to be studied. However, it is needed to make a distinction between the population of the study and the participants or sampling of the research. The first concept of population is defined by Alvi (2016) as “Population refers to all the members who meet the particular criterion specified for a research investigation.” (p.10). The quote refers to all the members from whom the researcher is going to conclude, in this case, the population of this research is eighth-year students at Miramar High School. On the other hand, the concept of sampling is understood as “a group of relatively smaller number of people selected from a population for investigation purposes. The members of the sample are called participants” (Alvi, 2016, p.11). The quote means that the sample group is the group with the researcher who works and applies instruments to conclusions because it is impossible to work with all groups since at Miramar High School there are seven groups in the eighth year, which represents approximately one hundred eighty-four students.

3.3.2 Non-Probability

This study used the non-probability sample method because the researcher had no option to choose groups, although the researcher received permission at the High School, the response

he got was that he spoke to a teacher and the teacher told him that he wanted him to work with group 8-3 since they were very active and participatory. The non-probability simple method refers to “Every unit of population does not get an equal chance of participation in the investigation. → no random selection is made → The selection of the sample is made based on the subjective judgment of the investigator.” (Alvi, 2016, p.13).

This study is non-probability by convenience, which is defined by Alvi (2016) as “accidental sampling or opportunity sampling. The researcher includes those participants who are easy or convenient to approach. The technique is useful where the target population is defined in terms of a broad category.” (p.16). In this case, the researcher did not choose the sample the teacher in charge of the group as this type is known as an opportunity sample can be placed inside this category, since it is the group with the professor who decided to help the researcher.

3.3.3 Techniques and instruments

The investigator creates some relevant instruments that help to collect data for the results and conclusion of the investigation. Most of the instruments are checklists in which the researcher observes the progress and improvement or not of the students and interviews for the students to know their opinions about the utility of the online tool to improve reading comprehension skills.

The first instrument is an observation of the group; this observation works as a guide to the researcher to know or be prepared for any circumstance with the group. As part of the first part of the instruments checklist is included about the first objective that is focused on the specific challenges students face in reading comprehension; for this first objective, the

investigator used as well a pre-test that goes hand in hand with the checklist to observe if the students can solve the pre-test.

The second instrument is another checklist that helps the researcher evaluate the use of and how students use the digital tool. This was after the researcher explained the correct use and way to enter the ReadWorks digital tool.

The third instrument is a checklist and a post-test that is related to the third objective which is about the improvement in students' reading comprehension skills through the use of the digital tool, in this case, the researcher applies the post-test and the checklist that is the same as the first ones that help the researcher to observe the progress, improvement or not after practicing reading comprehension skills through the use of the digital tool.

The fourth instrument is a structured questionnaire that was developed and administered to a group of eighth-grade students to assess their perceptions of the ReadWorks digital tool. The instrument consisted of 11 closed-ended questions, of which seven (questions 1, 2, 3, 4, 5, 9, and 11) employed a 5-point Likert scale ranging from Very Satisfied to Very Dissatisfied. These items aimed to evaluate levels of satisfaction, perceived usefulness, and the impact of the tool on reading comprehension and related skills.

The remaining four questions (questions 6, 7, 8, and 10) used a dichotomous Yes/No format to gather direct feedback on the continued use of the tool and the inclusion of technology in English learning. The questionnaire was applied to a total of 20 students from Liceo de Miramar in April 2025, and the results were used to analyze overall student attitudes toward the implementation of digital educational resources in the classroom.

These instruments were checked and valid by four different people before being applied with the students. One of the professors who valid the instruments is an English teacher with a master's degree in administrative education with twelve-year experience working as UCR professor and four years' experience at Ministerio de Educación Pública (MEP). Another person who checks the instruments is an English Teacher with twenty-three years' experience in university teaching. Another English teacher who valid the instruments was a teacher with a Baccalaureate degree in English teaching and with three years' experience at Ministerio de Educación Pública. The last person who valid the instrument was the professor in charge of the group with the researcher was apply who has a bachelor's degree in English teaching and three years' experience as Professor at Ministerio de Educación Pública(MEP).

CHAPTER IV

RESULTS AND ANALYSIS OF DATA

This chapter presents the data collected from the implementation of different instruments: an observation, a pre-test, a checklist, a post test, and an interview. These instruments (pre-test and checklist) were applied to twenty-two, eighth grade students at the Miramar High School, while the interview was applied to the English teacher of the group.

4.1. OBSERVATION

The group used for the purpose of this investigation was an eighth grade at Liceo de Miramar, the first approach with was unusual, since normally is hoped that the group act in silence with nervousness or anxiety; this group shows contrary characteristics, since the first day they looked very talkative and disorganized; that is perceived due to the way they were accommodated within the classroom. That first day the group was completed with twenty-four students, and a curious fact was they were the half women and the other half men. That day I observed that all the students have cellphones, even though I asked them if there was someone that do not have one, and just one student told me that she/he does not have it, but it was occasionally because it was due to a negative consequence of a punishment, so that next class the entire class had cellphones. Another situation addressed that day was the access to internet connection and the entire group mentioned that they had access to internet connection (Wi-Fi) in the institution, so it was an advantage to use the online tool. In the classroom there are a desk, two boards, a locker used only by the teacher to store materials, there were two ceiling fans and an air conditioner, but the teacher in charge of the group told me that was not working; however, that he wants to repair it.

That day in the second lesson I applied the pre-test with sheets, it means no using the online tool, and they show little interest and little effort answering the questions of the reading, they constantly during the development of the lesson told me “Help us with the answer” and they

do not want to write what they really know, and they do not want underline what they do not know. Besides that, they asked for permission to leave the classroom and go out to drink water and go to the bathroom and the teacher in charge of the group said yes to all of them, so they easily become distracted to observe their classmates coming and going.

4.2. PRE-TEST

The pre-test was administered to 22 eighth-grade students. They were given a reading in English and asked five questions focused on reading comprehension (the pre-test can be seen in the appendix section) in which the questions were as follows in the next Table.

Table 6

Description of the questions in the Pre-test

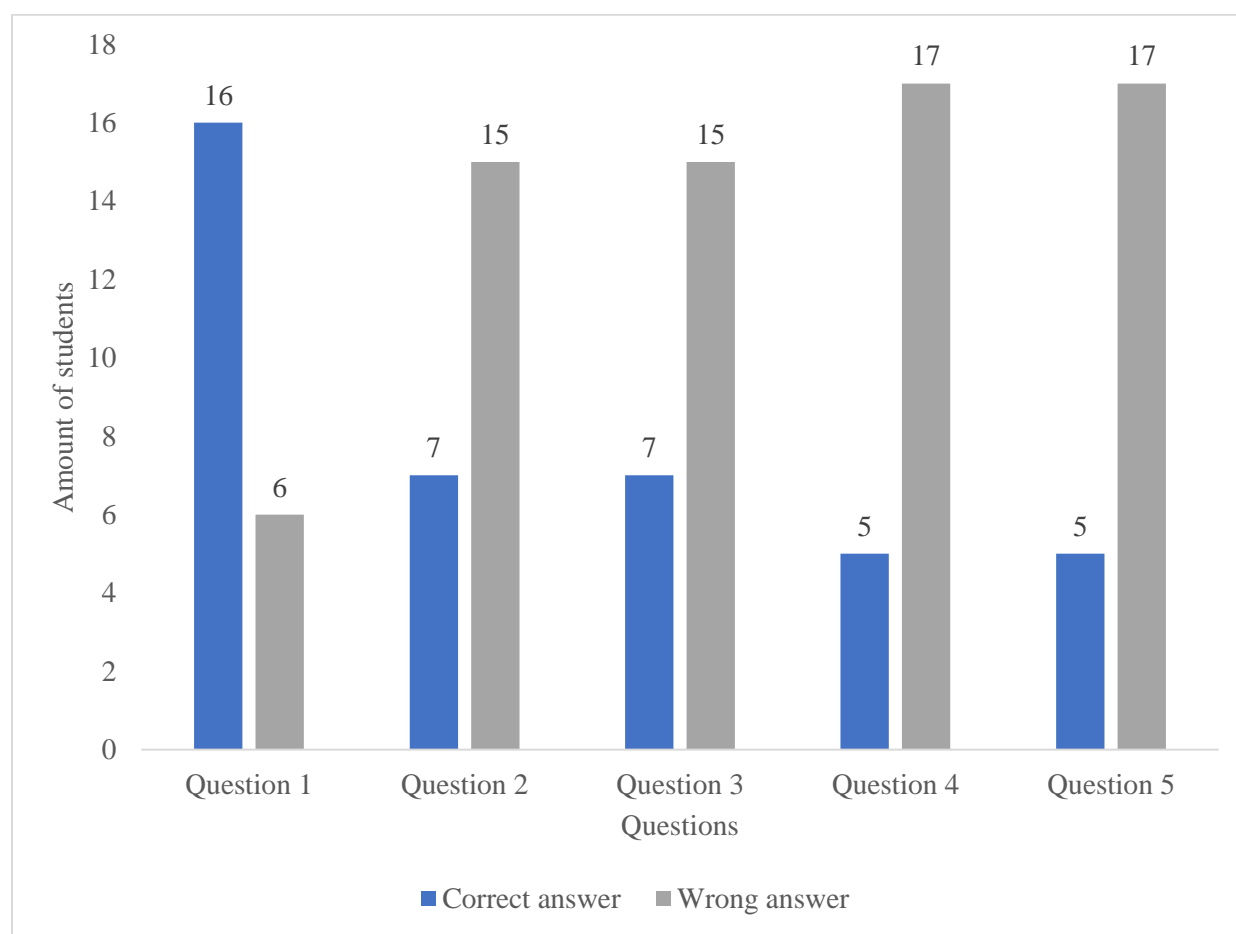
| Number of question in the Pre-test | Description of the question |
|---|---|
| 1 | What are adaptations? |
| 2 | Hibernation slows down an animal's body. According to the text, how does this affect its survival? |
| 3 | Read the following sentence from the text: "Migration is not just for the birds. Some mammals including caribou and some kinds of bats also migrate. In summer, these caribou feed and raise their young in northern Alaska and Canada. Then they travel south as far as 800 miles to forests that are somewhat protected from the artic winter" What conclusion can you draw from this evidence? |
| 4 | How have the snowshoe hare and ruffed grouse adapted similarly to cold weather? |
| 5 | What is the main idea of this text? |

Source: Data taken from the Pre-test applied to 22 students at Liceo de Miramar during April 2025.

In the bar chart (Figure 2), the performance of eighth-grade students on a pre-test is shown, reflecting the number of correct and incorrect answers for five questions designed to assess reading comprehension. Overall, the results indicate a low level of comprehension in most of the evaluated items.

Figure 2

Number of correct and incorrect answers in the pre-test



Source: Data taken from the pre-test applied to 22 students at Liceo de Miramar during April 2025.

It is observed that Question 1 (What are adaptations?) was the best answered, with 16 correct responses and only 6 incorrect, which is confirmed in Figure 2, where this question shows 72.73% correct answers. This result could suggest that the content of this question was related to prior knowledge or more basic reading comprehension skills.

Starting with Question 2, which was (Hibernation slows down an animal's body. According to the text, how does this affect its survival?), the results show a decline in performance. In both Question 2 and Question 3, which was (Read the following sentence from the text: "Migration is not just for the birds. Some mammals, including caribou and some kinds of bats, also migrate. In summer, these caribou feed and raise their young in northern Alaska and Canada. Then they travel south as far as 800 miles to forests that are somewhat protected from the Arctic winter." What conclusion can you draw from this evidence?) Only 7 students answered correctly, representing 31.82% correct answers in each case (according to Figure 2), and 68.18% incorrect answers (according to Figure 3). This change highlights that students faced greater difficulties with these items, which may be related to increased text complexity or question types.

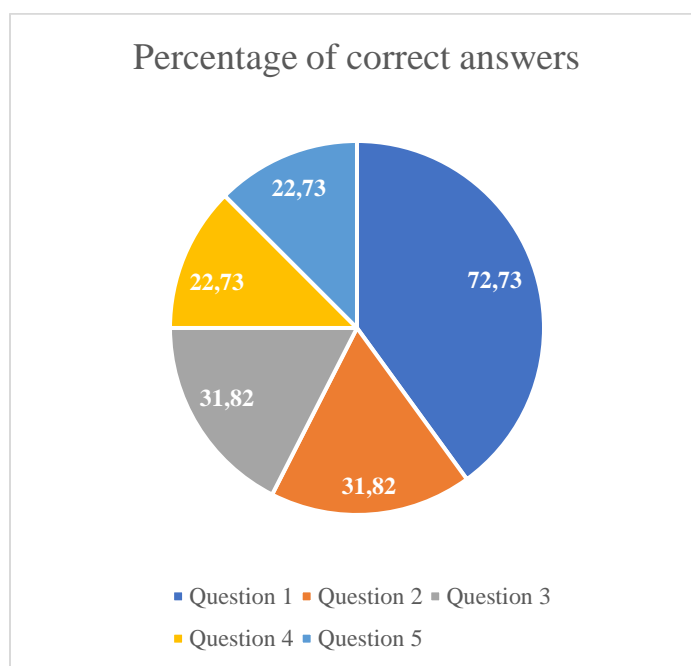
Questions 4 and 5, question 4 revolves around (How have the snowshoe hare and ruffed grouse adapted similarly to cold weather?) and 5, which was (What is the main idea of this text?) show the lowest results. Only 5 students answered each question correctly (22.73% according to Figure 2), while 17 students answered incorrectly (77.27% incorrect according to Figure 3). This trend suggests that these questions addressed more demanding or less practiced comprehension skills, such as interpreting implicit ideas, vocabulary in context, or making complex inferences.

Taken together, the charts show a downward trend in performance as the questions progress, which may indicate a progressive weakness in more advanced reading skills. The high

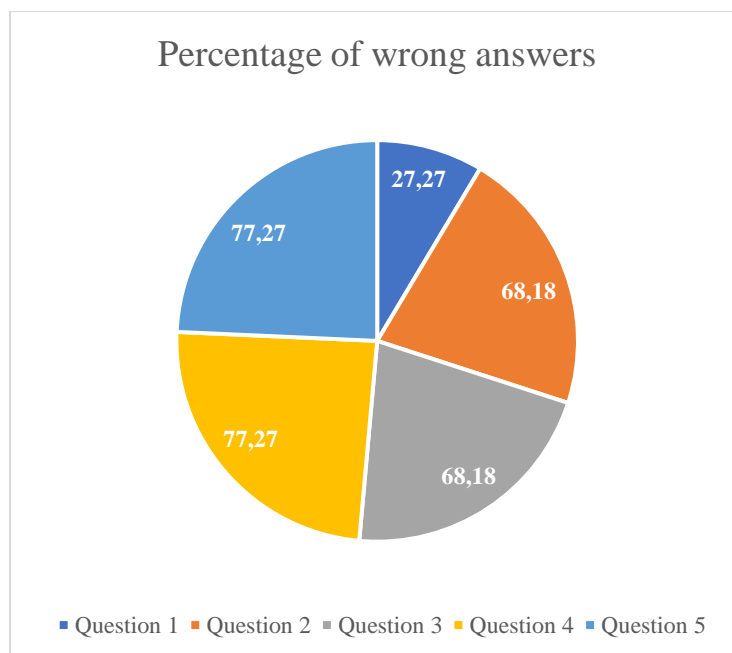
proportion of incorrect answers in the last three questions highlights the urgent need to implement pedagogical strategies focused on strengthening reading comprehension, especially in areas such as inference, identifying main ideas, and understanding vocabulary in context. Moreover, the percentages reinforce the conclusion that a significant gap exists in students' ability to understand English texts as complexity increases.

Figure 3

Response percentages of the questions in the Pre-Test



(a)



(b)

Source: (a) percentage of correct answers (b) percentage of wrong answers. Data taken from the pre-test applied to 22 students at Liceo de Miramar during April 2025.

4.3. CHECKLIST 1

After administering the pre-test, a checklist was also conducted with the 22 eighth-grade students, in which the questions were as follows in the next Table:

Table 7

Description of the questions in the check-list

| Number of question in the checklist | Description of the question |
|-------------------------------------|---|
| 1 | Students get a general idea of the text |
| 2 | Students can answer all the questions in the exercise correctly |
| 3 | Students can answer 1-3 questions of the exercise correctly |
| 4 | Students can answer 3-5 questions of the exercise correctly |

| | |
|----|---|
| 5 | Students cannot answer any of the questions of the exercise |
| 6 | Students underline more than 30 words that they do not know |
| 7 | Students underline more than 15 less than 20 words that they do not know |
| 8 | Students underline less than 10 words that they do not know |
| 9 | Students choose and write 20 to 30 words that they know, understand and write the meaning |
| 10 | Students choose and write 10 to 20 words that they know, understand and write the meaning |
| 11 | Students choose and write 5 to 10 words that they know, understand and write the meaning |
| 12 | Students choose and write 1 to 5 words that they know, understand and write the meaning |

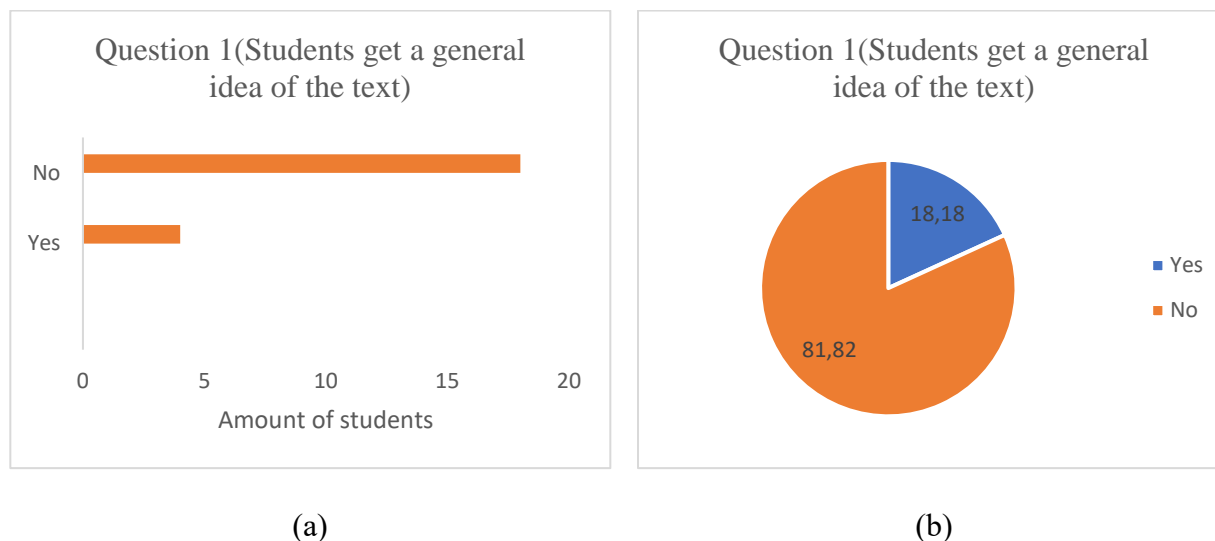
Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

Question 1 of the checklist assessed whether students were able to get a general idea of the text they read, a basic and fundamental skill in reading comprehension. The results show that only 4 out of 22 students understood the text, while 18 failed to identify the main idea. This represents only 18.18% positive responses and 81.82% negative responses (Figure 4, b).

This result is concerning, as the ability to grasp the general idea of a text is usually one of the first steps toward deeper comprehension. If most students are unable to identify this global information, it is likely that they will also struggle with more complex tasks such as making inferences, extracting specific details, or interpreting vocabulary in context.

Figure 4

Results of question 1 (Students get a general idea of the text) in the checklist



Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

The high percentage of students who failed to grasp the global idea of the text (Figure 4, b) suggests a need to reinforce teaching strategies focused on developing global reading skills, such as skimming to capture the general purpose, analyzing titles, subtitles, and keywords, as well as guided practice using questions aimed at understanding the macrostructure of the text.

Moreover, this finding supports the results of the pre-test, which also revealed significant weaknesses in reading comprehension. Both instruments point to an urgent need for systematic and differentiated instructional intervention to strengthen this essential competency in students

Regarding questions 2, 3, 4, and 5 (Figure 5 and 6), which refer to the number of correct answers in the exercise, their purpose is to assess the level of accuracy achieved by the students when responding to the reading comprehension questions from the text. These questions help to

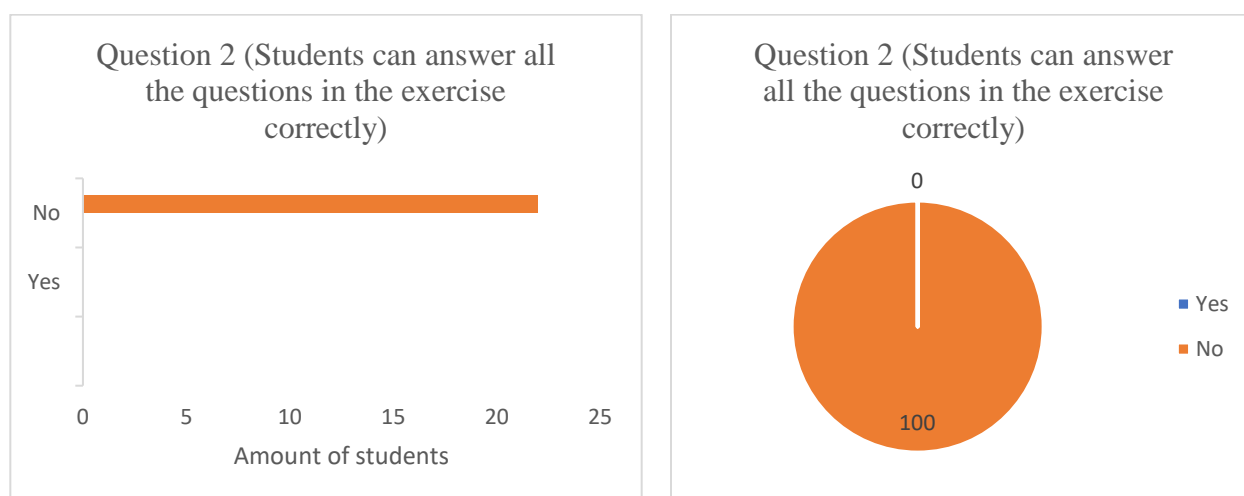
more precisely determine the students' mastery of the content and, consequently, to identify the most recurring areas of weakness.

With respect to Question 2 (Figure 5): "Students answer all questions correctly," it was observed that no student reached this level (0%). This shows a total absence of complete comprehension of the text and suggests that even the highest performing students had difficulties integrating and analyzing the information globally.

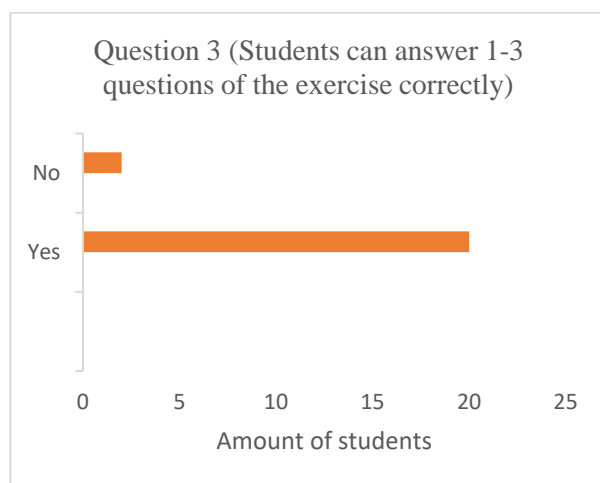
As for Question 3 (Figure 5): "Students answer 1 to 3 questions correctly," it was recorded that 20 out of the 22 students (90.91%) fall into this category. This finding reveals that although most students achieved some correct answers, these were partial and likely dependent on basic skills such as locating information or prior knowledge. This situation highlights a limited and probably superficial understanding, without clear evidence of more complex processes such as inference, critical interpretation, or text analysis.

Figure 5

Results of question 2 and 3 in the checklist

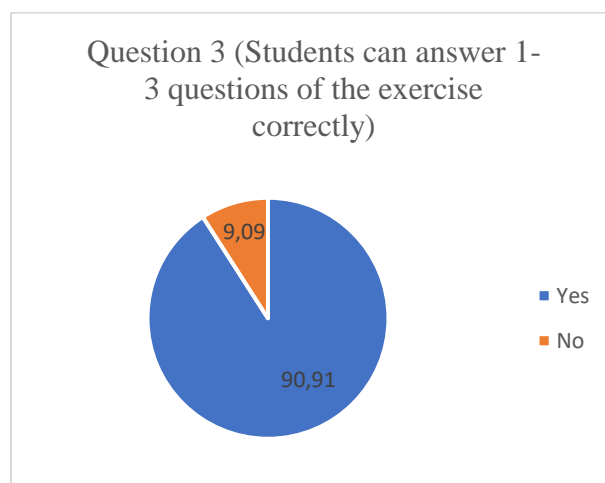


(a)



(c)

(b)



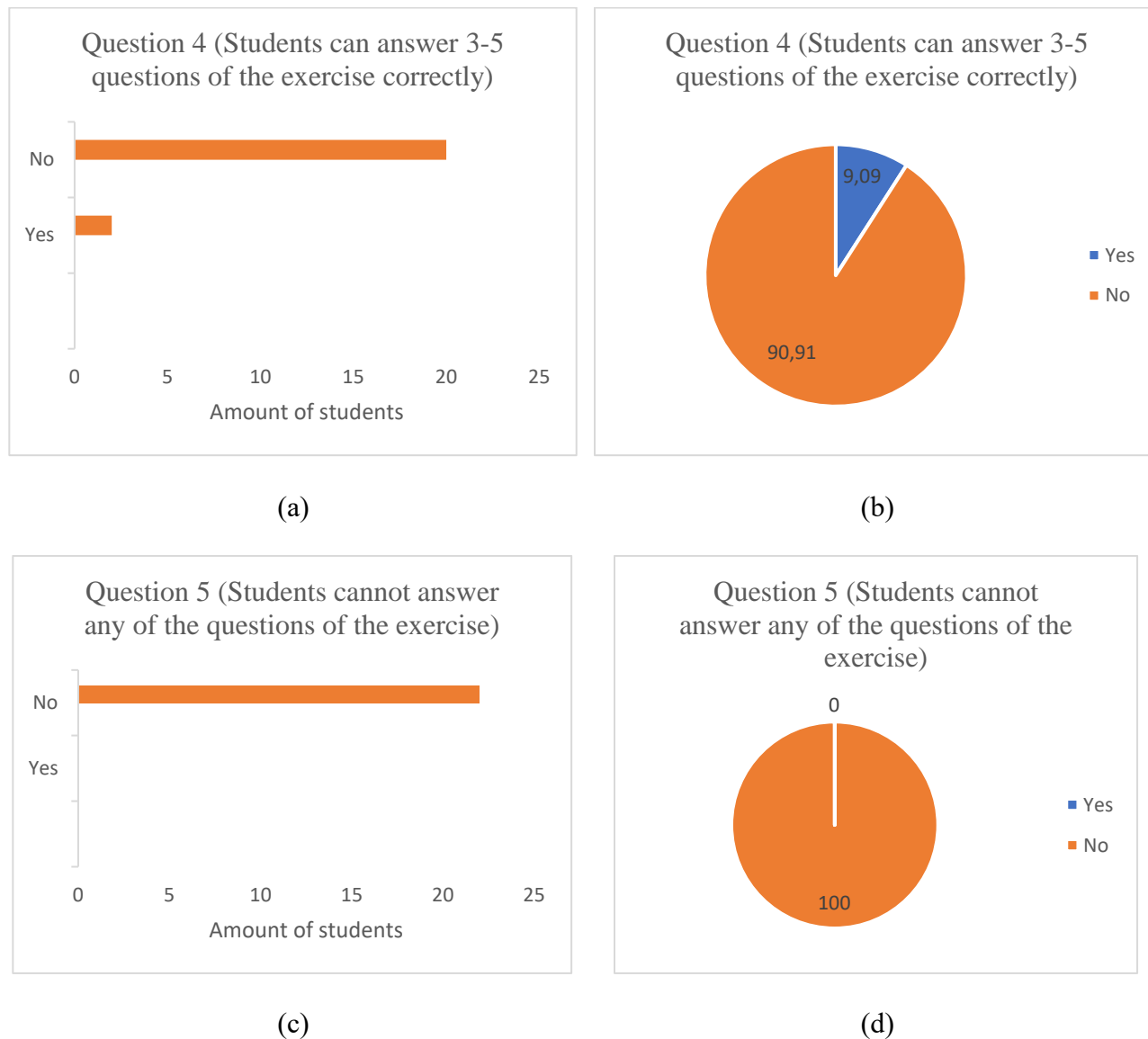
(d)

Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

Regarding Question 4 (Figure 6): “Students answer 3 to 5 questions correctly,” only 2 students (9.09%) reached this range, indicating that just a minority demonstrated a moderate level of comprehension. This group may have shown greater familiarity with the content or more effective reading strategies; however, their low number reveals that these competencies are not widely developed among the evaluated group.

Figure 6

Results of question 4 and 5 in the checklist



Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

Finally, Question 5 (Figure 6): “Students do not answer any questions correctly,” resulted in 0%, meaning that all students answered at least one question correctly. While this data could be interpreted as positive in absolute terms, it does not imply that overall performance was

satisfactory, since most correct answers were concentrated in a very low range (1 to 3 correct answers).

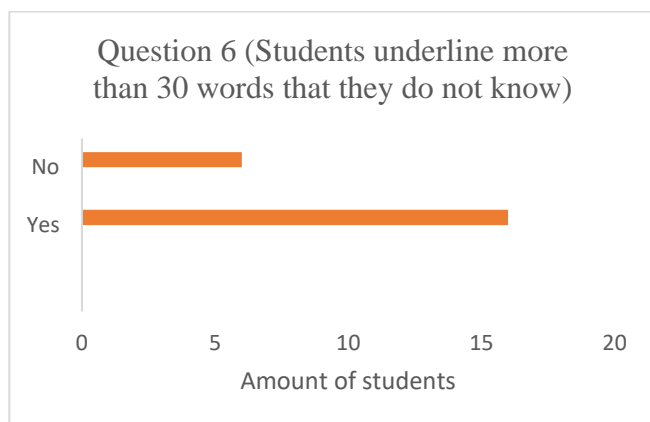
Based on the above, the results show that most students are at a very basic level of reading comprehension. The limited number of correct responses, together with the absence of students who fully understood the text, suggests significant deficiencies in the development of key skills such as extracting relevant information, making inferences, and achieving a global understanding of the text. It is essential to implement pedagogical strategies aimed at strengthening critical reading, text analysis, the use of graphic organizers, and the formulation of predictions, so that students can progress towards more complex levels of comprehension and reading performance.

Continuing, Figure 7 presents the results corresponding to Questions 6, 7, and 8 of the checklist, which are related to the underlining of unknown words during the reading of the text. These questions aim to explore students' perceptions of their vocabulary knowledge, as well as to highlight the degree of lexical familiarity they have when engaging in a written text.

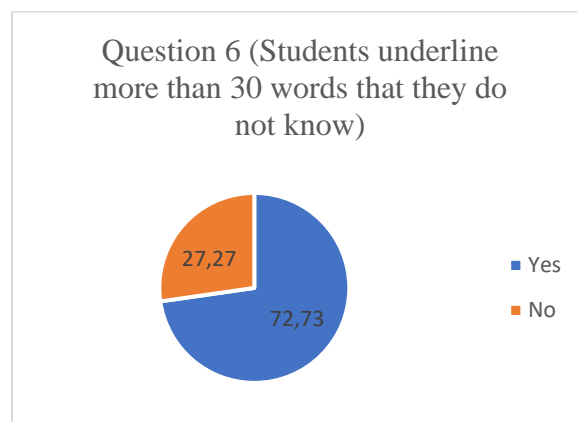
Regarding Question 6: "They underline more than 30 words they do not know," 16 students (72.73%) fall into this category. This result reflects a high perceived level of lexical unfamiliarity, suggesting that a significant portion of the text contains vocabulary that is largely unknown to most students. This situation can create a major barrier to comprehension, as not understanding key words prevents access to the overall meaning of the text, thereby hindering more complex processes such as making inferences or engaging in critical analysis.

Figure 7

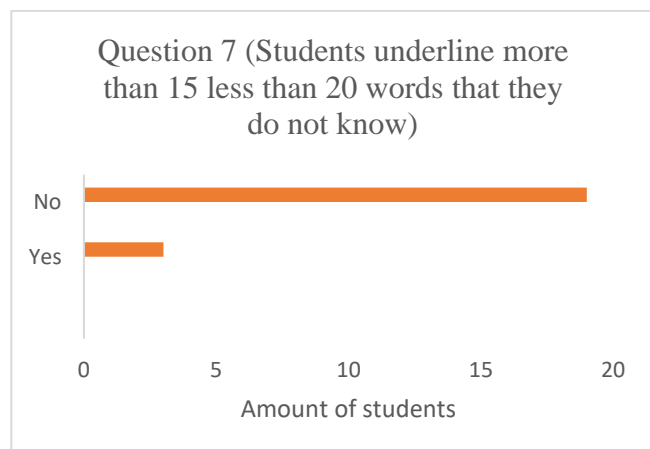
Results of question 6, 7 and 8 in the checklist



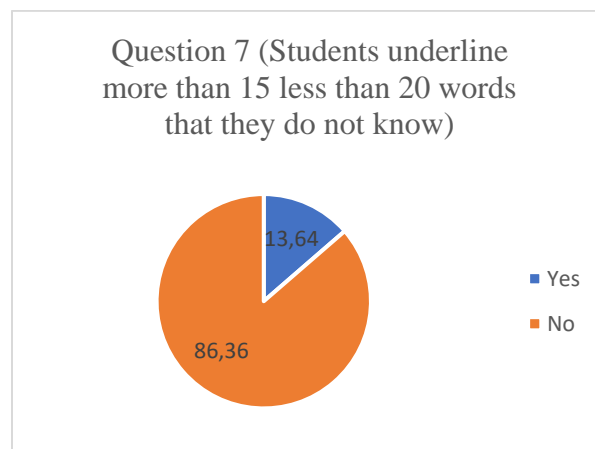
(a)



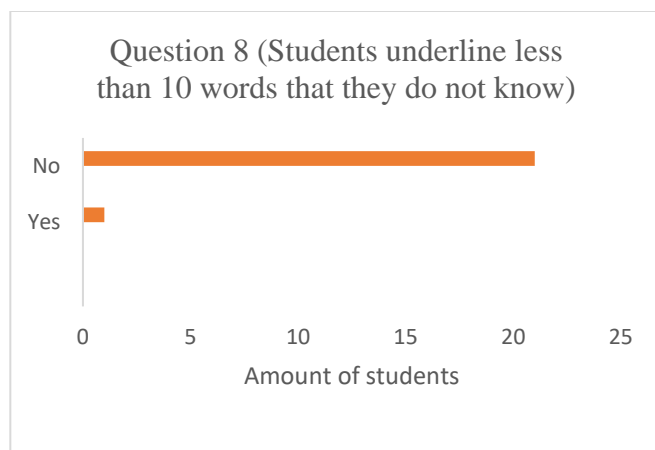
(b)



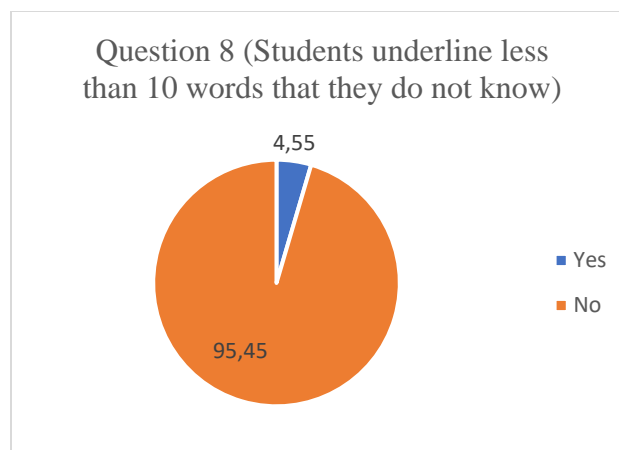
(c)



(d)



(e)



(f)

Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

As for Question 7: “They underline between 15 and 20 unknown words,” 3 students (13.64%) were placed in this group. This group represents an intermediate level of lexical difficulty. Although these students also face obstacles during reading, their level of unfamiliarity is lower compared to the previous group, which may indicate a broader lexical repertoire or a greater ability to deduce meanings from context.

Finally, Question 8: “They underline fewer than 10 unknown words,” was selected by only one student (4.55%). This finding reveals that only a small minority of the group demonstrates sufficient command of the vocabulary used in the text, which may be linked to prior exposure to this type of language or more developed reading comprehension skills.

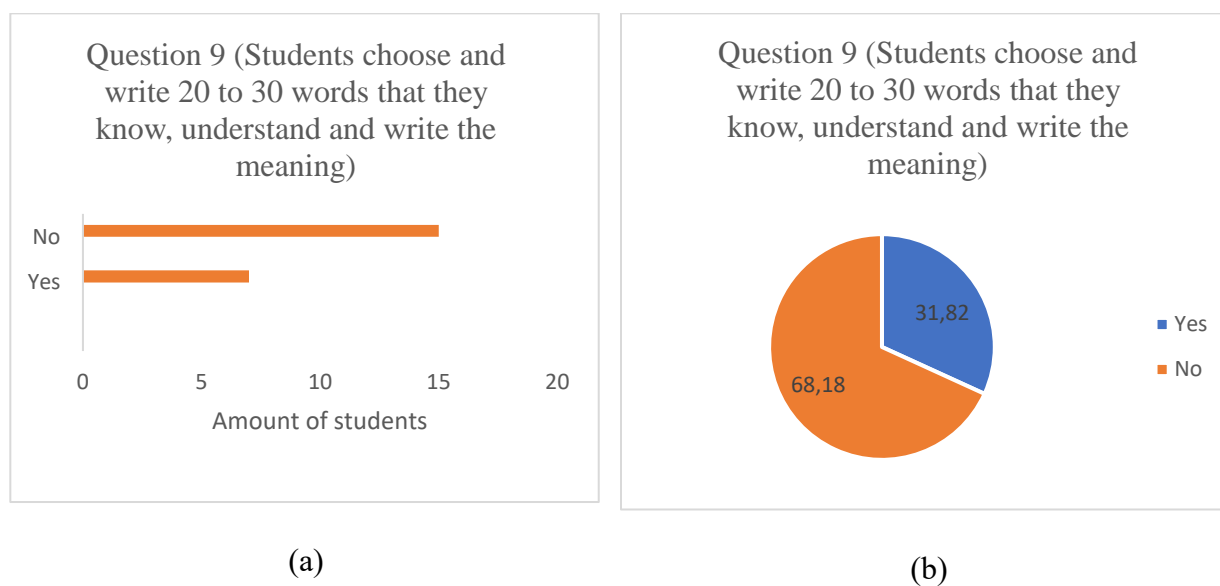
The results show that the vast majority of students encounter a high number of unknown words during reading, which directly affects their comprehension of the text. This situation highlights the urgent need to strengthen students’ lexical competence, not only through explicit vocabulary instruction but also by promoting strategies that support the deduction of meaning from context, the use of semantic and morphological clues, and activities that encourage regular

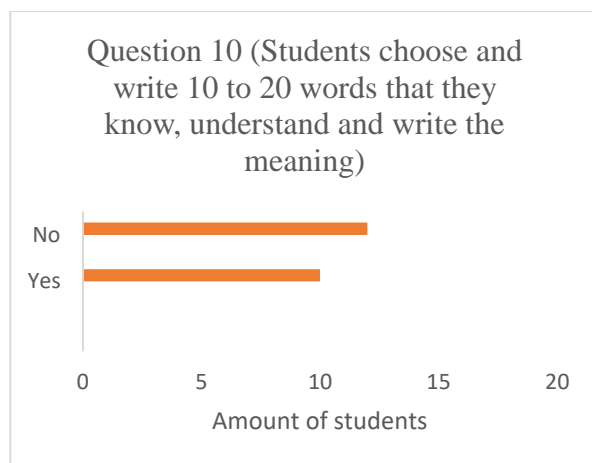
and independent reading of a variety of texts. Improving lexical competence will allow students to access text meaning more easily, facilitating a deeper and more complete understanding.

Regarding Questions 9, 10, 11, and 12 (Figures 8 and 9), which focus on the recognition and meaning of known words, the purpose of these questions was to measure how many words students can identify, understand, and define correctly. This aspect is crucial, as the richness of a student's active vocabulary directly influences their ability to comprehend texts and express themselves effectively in academic contexts.

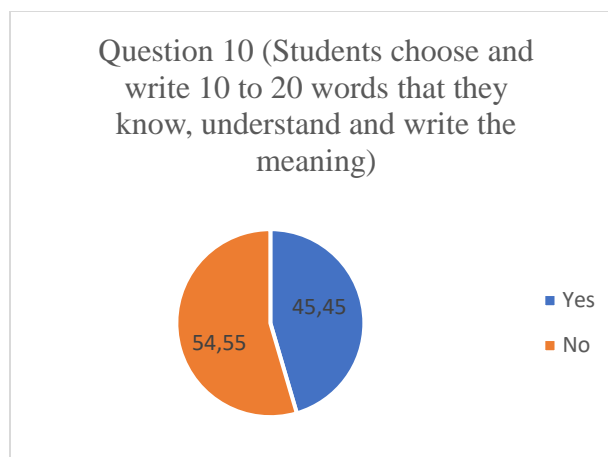
Figure 8

Results of question 9 and 10 in the checklist





(c)



(d)

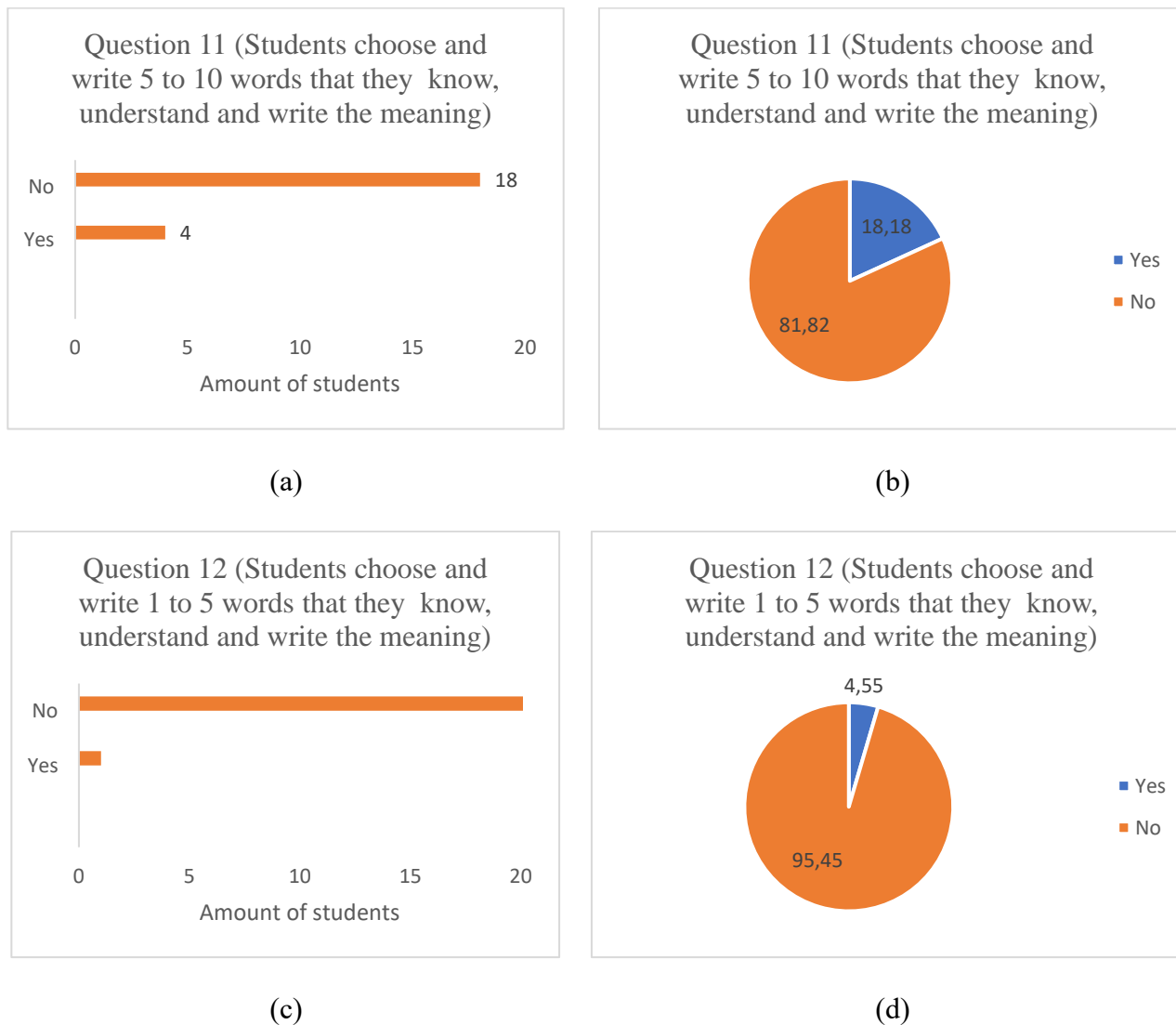
Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

In relation to Question 9 (Figure 8): “They write between 20 and 30 words they know and explain,” only 7 students (31.82%) reached this level. Although this group represents a minority, their performance is positive, as it indicates a broader and more functional vocabulary range. These students have likely developed effective vocabulary acquisition strategies, such as frequent reading, reflective writing, or the use of external resources.

On the other hand, for Question 10 (Figure 8): “They write between 10 and 20 known words,” 10 students (45.45%) were placed in this group, making it the most representative. This level reflects intermediate performance: students have a functional but still limited vocabulary repertoire, which may not yet be sufficient to engage fully with more complex texts. Continued reinforcement of frequently used and academic vocabulary is essential for these students.

Figure 9

Results of question 11 and 12 in the checklist



Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

As for Question 11 (Figure 9): “They write between 5 and 10 words,” only 4 students (18.18%) fell into this category. This result indicates a low level of word recognition and comprehension, likely affecting both reading comprehension and written expression. Lastly, for Question 12 (Figure 9): “They write between 1 and 5 words,” only 1 student (4.55%) was

recorded. This is a concerning result, as it reveals a very limited command of vocabulary, which severely restricts comprehension and participation in academic activities.

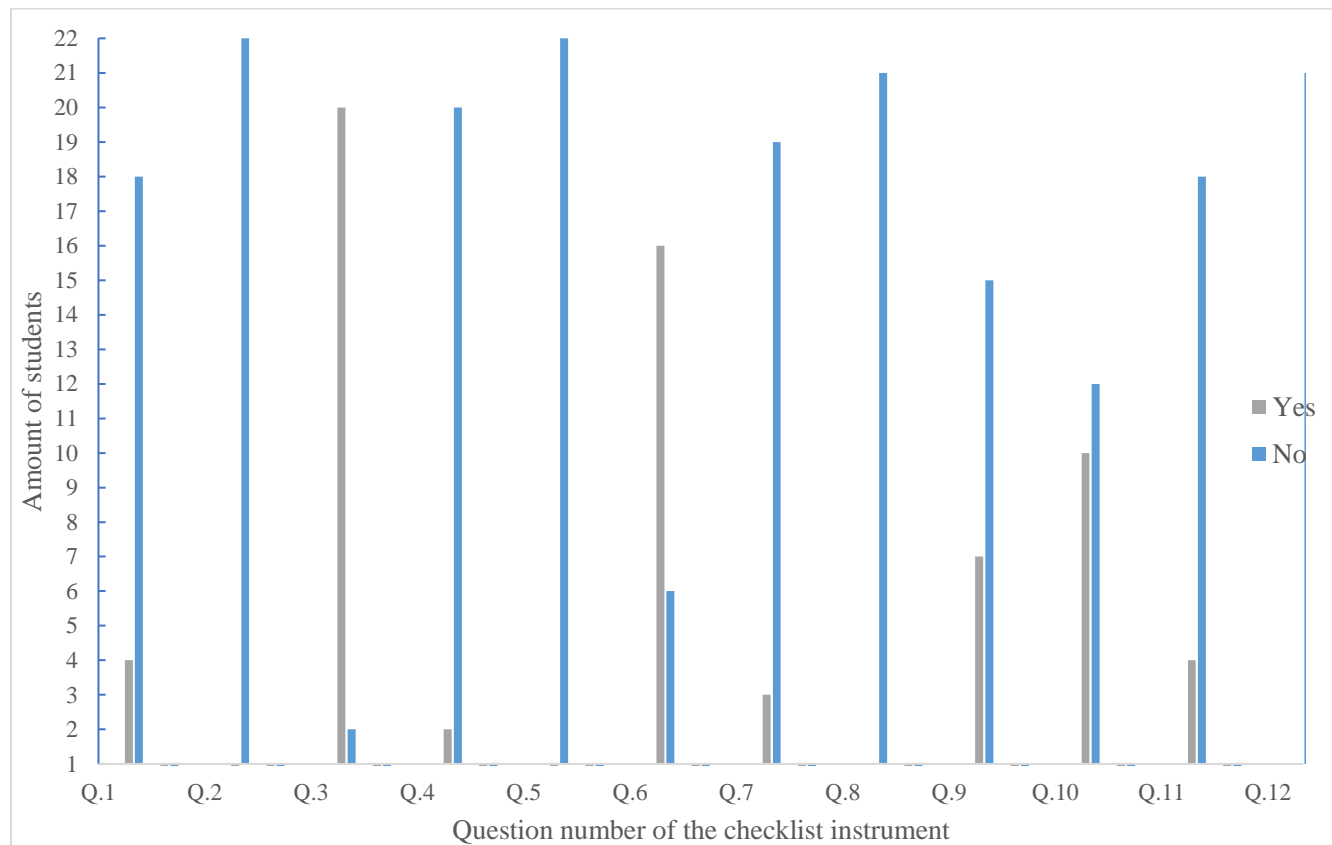
Finally, Figure 10 shows the consolidated results of all the checklist questions. This figure provides a comprehensive overview of students' performance across the various aspects assessed, including reading comprehension, vocabulary recognition, and self-perceived lexical knowledge.

The overall analysis of the data reveals that, while some students demonstrate acceptable levels in certain areas, the majority face significant challenges, particularly in vocabulary mastery and deep text comprehension. The concentration of results in the lower levels of the checklist reinforces the need for pedagogical intervention to systematically and intentionally strengthen both reading comprehension and vocabulary development.

Based on this information, it is recommended to design comprehensive instructional strategies that address both the expansion of lexical repertoire and the development of critical reading skills, with emphasis on inference, analysis, and contextual interpretation. Ongoing monitoring of these indicators will help evaluate progress and adjust interventions based on the group's actual needs.

Figure 10

Consolidated results of all the checklist questions



Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

In relation to the results presented, it can be stated that the first specific objective of this research (To identify the specific challenges students face in reading comprehension through a diagnostic assessment, to develop targeted intervention strategies) was successfully achieved. The results clearly allowed for the identification of the main areas of difficulty in reading comprehension.

In particular, the pre-test revealed a decline in performance as the questions progressed, with lower scores on items that required higher-order skills such as inference and vocabulary in

context. For example, only 22.73% of students answered questions 4 and 5 correctly, indicating difficulties in interpreting implicit information and achieving deep comprehension of the text.

The checklist reinforced these findings. Only 18.18% of students were able to grasp the general idea of the text, while a large majority (72.73%) underlined more than 30 unknown words, indicating serious lexical limitations. Additionally, 90.91% of students were only able to answer between 1 and 3 comprehension questions, reflecting a superficial level of understanding.

4.4. READWORKS

The following section presents the questions used in the ReadWorks digital tool. Two activities were conducted with the students (Test #1 and Test #2).

4.4.1. Test #1 in ReadWorks

Table below (Table 8) shows the questions that were given to the students through the digital tool.

Table 8

Description of the questions in the test #1 in ReadWorks

| Number of question in the test | Description of the question |
|--------------------------------|---|
| 1 | Where is Arturo going? |
| 2 | What caused Arturo's frown to flip to a grin? |
| 3 | The girl was trying to teach Arturo some sign language. What evidence from the text supports this conclusion? |
| 4 | How does Arturo's attitude change from the beginning to the end of the story? |
| 5 | What is one main theme of this story? |

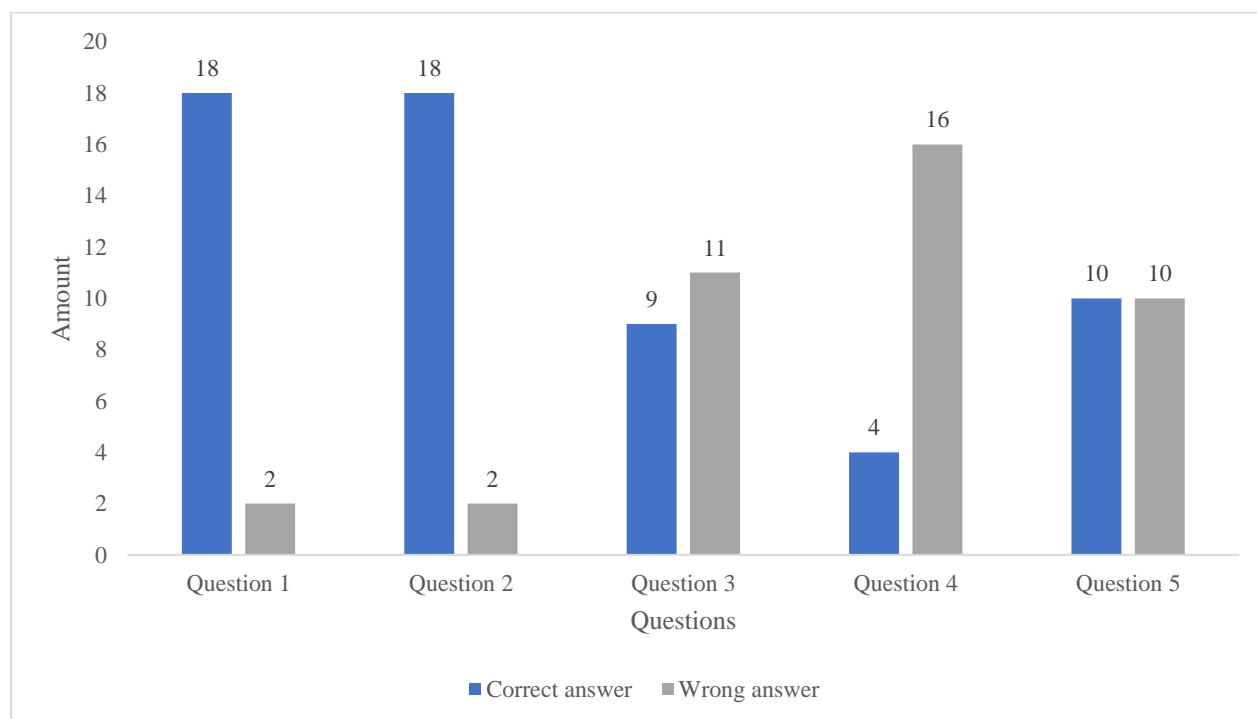
Source: Data taken from test 1 in ReadWorks applied to 20 students at Liceo de Miramar during April 2025.

It is important to mention that a total of 20 students participated in this test, as two out of the 22 students in the group were absent on the day of Activities 1 and 2.

In the bar chart (Figure 11), the performance of eighth-grade students on test 1 in the ReadWorks digital tool is presented, showing the number of correct and incorrect answers for five reading comprehension questions. The overall results reveal a variable performance, with high achievement in the first two questions but a noticeable decline in the remaining ones.

Figure 11

Number of correct and incorrect answers in test 1 in ReadWorks

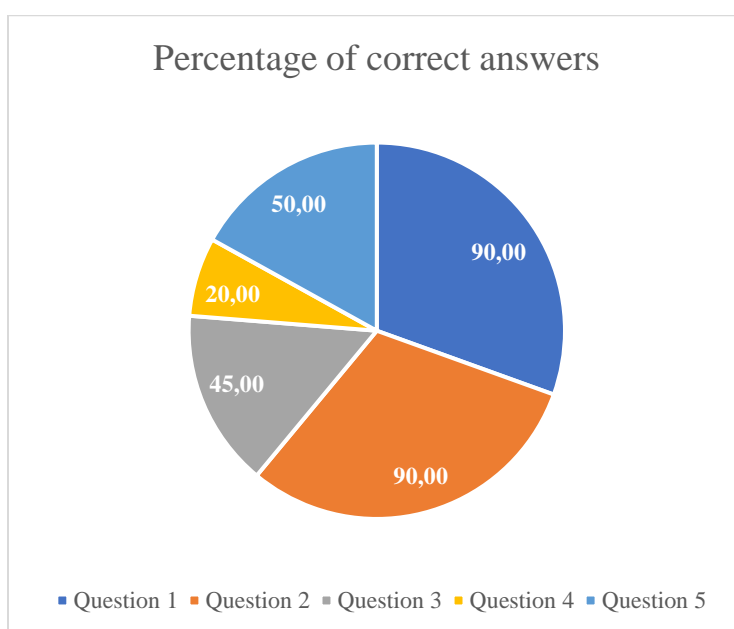


Source: Data taken from test 1 in ReadWorks applied to 20 students at Liceo de Miramar during April 2025.

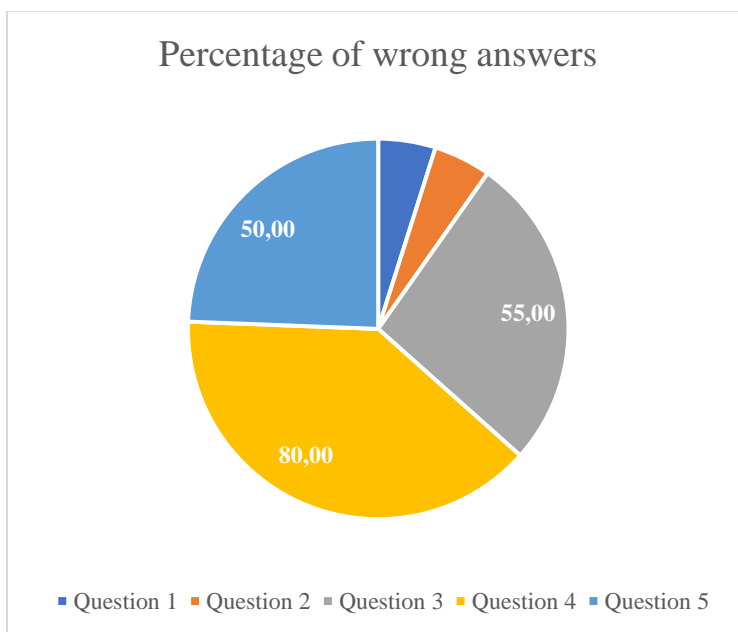
Question 1 and Question 2 were the best answered, each with 18 correct responses and only 2 incorrect. This corresponds to a 90% success rate, as confirmed in the pie chart (Figure 12, a), and suggests that these questions likely involved basic comprehension skills or content more familiar to students.

Figure 12

Response percentages of the questions in test 1 in ReadWorks



(a)



(b)

Source: (a) percentage of correct answers (b) percentage of wrong answers. Data taken from the pre-test applied to 20 students at Liceo de Miramar during April 2025.

In Question 3, the number of correct responses drops to 9, with 11 incorrect, reflecting a 45% success rate. This shift may indicate the beginning of more cognitively demanding items, requiring students to go beyond literal understanding. Question 4 displays the lowest performance, with only 4 correct answers and 16 incorrect, equating to a 20% success rate and an 80% failure rate (Figure 12, b). This strongly suggests that the question involved more complex inferential skills or unfamiliar vocabulary, posing a significant challenge.

In Question 5, performance slightly improves with 10 correct and 10 incorrect responses, achieving a 50% success rate. While better than Question 4, the even split indicates ongoing difficulties in sustaining comprehension, especially as text complexity increases.

Taken together, the results show a clear pattern: while students demonstrate confidence in basic comprehension (Questions 1 and 2), their performance weakens when facing higher-order

tasks such as inference or contextual vocabulary interpretation. This emphasizes the need to reinforce advanced reading strategies through targeted instruction, particularly in areas related to critical reading, inference-making, and vocabulary acquisition.

4.4.2. Comparative Analysis of Reading Comprehension Results: Pre-Test vs. Test #1 ReadWorks Assessment

A comparative analysis of the results from the pre-test and Test 1 in the ReadWorks digital tool reveals a consistent pattern in students reading comprehension performance, which reinforces the validity of the initial diagnostic findings.

In both assessments, students demonstrated stronger performance in the initial questions, which likely assessed basic comprehension skills or familiar content, and a progressive decline in performance as the questions increased in complexity. In the pre-test, students performed best on Question 1, with a correct response rate of 72.73%. However, this performance dropped significantly in Questions 4 and 5, where only 22.73% of responses were correct. A similar pattern was observed in the ReadWorks test: Questions 1 and 2 had the highest success rates at 90%, while Question 4 was the lowest, with only 20% of students answering correctly.

This trend indicates that students are generally capable of handling literal comprehension tasks but encounter significant challenges when required to engage in higher-order thinking, such as making inferences or interpreting vocabulary in context. These results were consistent across both instruments and suggest a widespread difficulty in developing deeper comprehension skills.

Table 9*Question by question performance*

| Question | Pre-test (% correct answers) | ReadWorks Test 1 (% correct answers) |
|-----------------|-------------------------------------|---|
| Question 1 | 72.73% | 90% |
| Question 2 | 31.82% | 90% |
| Question 3 | 31.82% | 45% |
| Question 4 | 22.73% | 20% |
| Question 5 | 22.73% | 50% |

Source: Data taken from the pre-test and test 1 applied to students at Liceo de Miramar during April 2025.

Although there is a slight improvement in some of the ReadWorks test results (Table 9), particularly in Questions 2 and 5, the most complex items (Questions 3 and 4) continue to present the greatest difficulty. This consistency across assessments suggests that students' comprehension challenges are not isolated to a specific test format but rather represent a broader issue with advanced reading processes. Therefore, both instruments clearly support the need for targeted pedagogical strategies aimed at improving students' ability to make inferences, extract main ideas, and understand vocabulary in context. Addressing these gaps is essential for fostering higher levels of reading comprehension and overall academic success.

4.4.3. Test #2 in ReadWorks

The following table presents the ten questions included in Test 2, administered through the ReadWorks digital tool. Each question is designed to assess a specific aspect of reading

comprehension, such as literal understanding, inference, identification of the main idea, vocabulary in context, and interpretation of textual evidence.

Unlike the pre-test and Test 1, which contained only five questions each, Test 2 includes a broader set of ten questions, allowing for a more comprehensive evaluation of students' reading comprehension skills. The increased number of items offers a more detailed insight into students' strengths and weaknesses across various levels of text complexity and cognitive demand.

Table 10

Description of the questions in the test #2 in ReadWorks

| Number of question in the test | Description of the question |
|--------------------------------|--|
| 1 | What does Layla get from her third-grade teacher? |
| 2 | How does Layla's Grandma describe the Three Sisters Garden? |
| 3 | <p>Read the following sentences from the text.</p> <p>“Just a minute, Ridge,” said Grandma. She unfolded the written instructions and smiled. ‘Ah, a Three Sisters Garden!’ ‘What’s that?’ asked Layla. ‘My teacher called it mixed cropping.’ ‘It is both,’ Grandma explained. ‘Corn, beans, and squash are three sisters. They take care of each other. When your seeds sprout, you will see how they work together.’ What conclusion can you draw from this evidence?</p> |
| 4 | How does Layla feel towards her little brother Ridge? |
| 5 | What is the main idea of this text? |
| 6 | Read the following sentences from the text. |

| | |
|----|--|
| | <p>“I’ve also included popsicle sticks in your kits. Write the name of each seed on a stick and put it in the dirt to mark the planting spot. That way you can identify the plants when they sprout.”</p> <p>As used in this excerpt, what does the word “identify” most closely mean?</p> |
| 7 | <p>Choose the answer that best completes the sentence below.</p> <p>_____ the Three Sisters all grow in the same area, each one grows in its own unique and different way.</p> |
| 8 | <p>What does Layla do when Ridge grabs for the seed box?</p> |
| 9 | <p>Why does Ridge decide not to help Layla pull weeds?</p> |
| 10 | <p>Based on evidence from the text, what most likely happened to Layla’s seeds at the end of the passage?</p> |

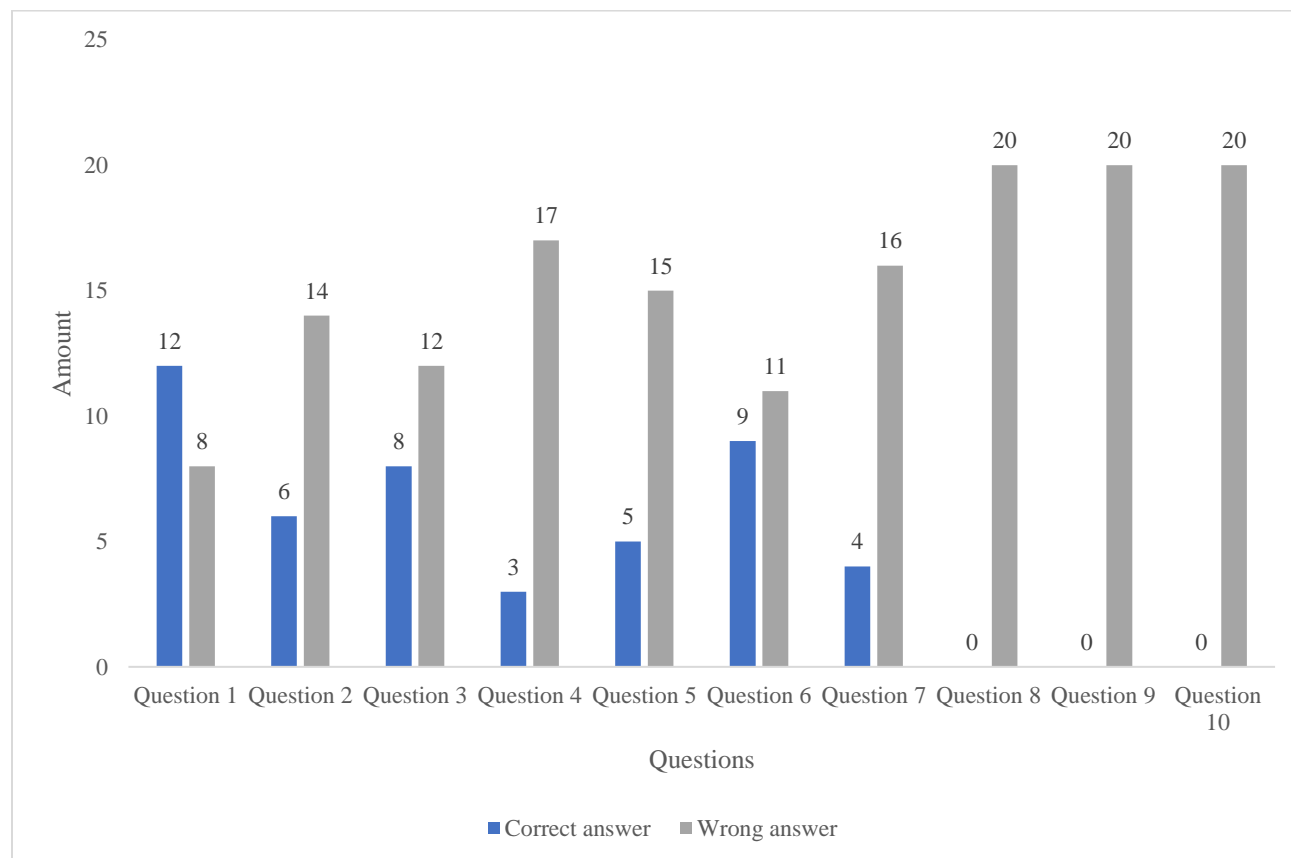
Source: Data taken from test 2 in ReadWorks applied to 20 students at Liceo de Miramar during April 2025.

In the following figures (Figure 13 and 14), the results of Test 2 are presented, which included ten reading comprehension questions administered to 20 students using the ReadWorks digital tool. The charts display both the number and percentage of correct and incorrect responses for each question.

The highest success rate was recorded in Question 1, with 12 students answering correctly (60%). This question likely involved basic or familiar comprehension skills. However, performance declined sharply in the subsequent questions. In Questions 2 and 3, only 6 and 8 students respectively answered correctly, corresponding to 30% and 40%. The performance continued to drop in Questions 4 and 5, with just 3 (15%) and 5 (25%) correct responses, indicating increasing difficulty.

Figure 13

Number of correct and incorrect answers in test 2 in ReadWorks



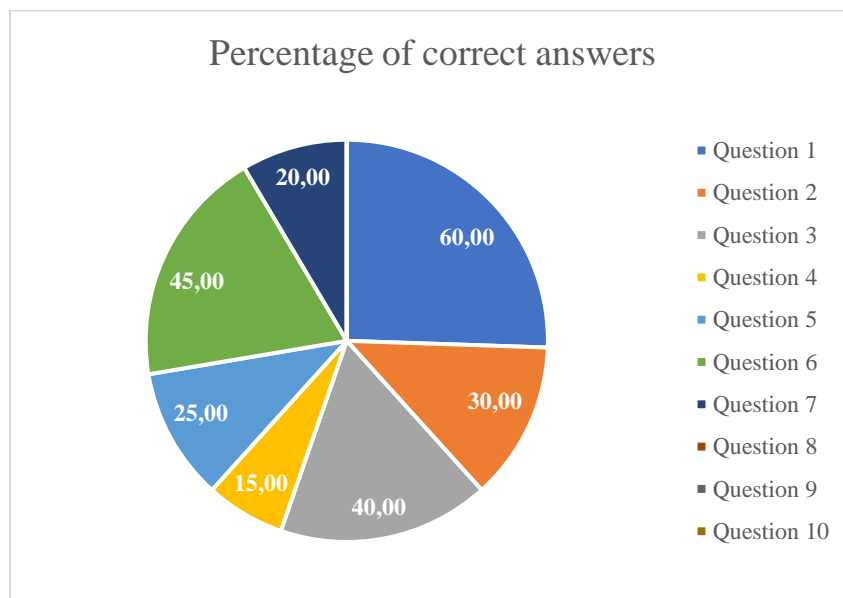
Source: Data taken from test 2 in ReadWorks applied to 20 students at Liceo de Miramar during April 2025.

Notably, Questions 8, 9, and 10 had no correct answers, with all 20 students responding incorrectly (100% error rate), as confirmed in both the pie and bar charts. These results suggest that the final questions presented a significant cognitive challenge, likely involving complex inference, abstract reasoning, or unfamiliar vocabulary.

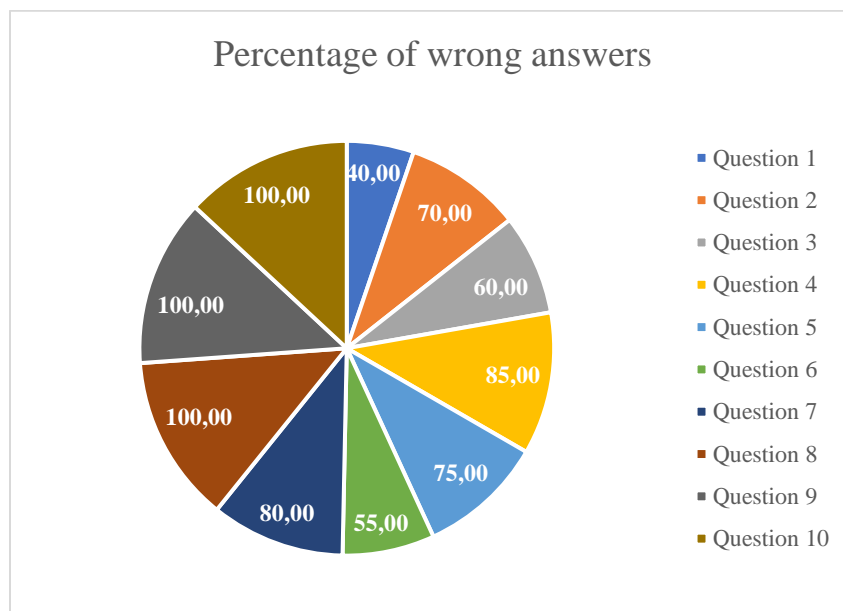
In general, most of the questions were answered incorrectly, which highlights ongoing weaknesses in higher-level comprehension skills among students. The test results confirm that, as text complexity and question difficulty increase, student performance declines significantly.

Figure 14

Response percentages of the questions in test 2 in ReadWorks



(a)



(b)

Source: Data taken from test 2 in ReadWorks applied to 20 students at Liceo de Miramar during April 2025.

4.4.4. Comparative Analysis of Reading Comprehension Results: Pre-Test vs. Test #2 ReadWorks Assessment

When comparing the outcomes of Test 2 with the initial pre-test, a consistent pattern of reading comprehension difficulties emerges. In both assessments, students performed better on the initial questions and showed a significant decline as the level of complexity increased.

However, Test 2 provides deeper insight, as it includes double the number of questions (10 vs 5), allowing for a more detailed assessment of students' comprehension across a broader range of skills. While Question 1 in Test 2 (60%) slightly outperformed Question 1 in the pre-test (72.73%), the later questions in Test 2 particularly Questions 8 to 10 revealed a complete lack of success, unlike the pre-test, where all students managed at least one correct response.

Table 11

Question by question performance

| Question | Pre-test (% Correct) | Test 2 (% Correct) |
|-----------------|-----------------------------|---------------------------|
| Question 1 | 72.73% | 60% |
| Question 2 | 31.82% | 30% |
| Question 3 | 31.82% | 40% |
| Question 4 | 22.73% | 15% |
| Question 5 | 22.73% | 25% |
| Question 8–10 | — | 0% |

Source: Data taken from test #2 applied to students at Liceo de Miramar during April 2025.

This comparison confirms the initial diagnostic findings: students consistently struggle with advanced reading tasks. Moreover, the inclusion of ten items in Test 2 strengthens the evidence that comprehension issues are not isolated but widespread. The results strongly support

the need for targeted pedagogical interventions focused on inference-making, vocabulary development, and deeper text analysis.

4.5.CHECKLIST 2

Table 12 describes the questions included in the observation checklist used to monitor students while interacting with the ReadWorks digital tool.

Table 12

Description of the questions in the check-list

| Number of question in the checklist | Description of the question |
|-------------------------------------|---|
| 1 | Students follow all the steps that the teacher explains to log in to the digital tool |
| 2 | Students ask many questions during the process of logging in to the online tool. |
| 3 | Students ask the teacher, “What is the next step?” |
| 4 | Students have difficulties finding the online tool in the navigator |
| 5 | Students explore the online tool easily. |
| 6 | Students show a good impression when they explore the online tool. |
| 7 | Students looked worried while they were trying to explore the online tool. |

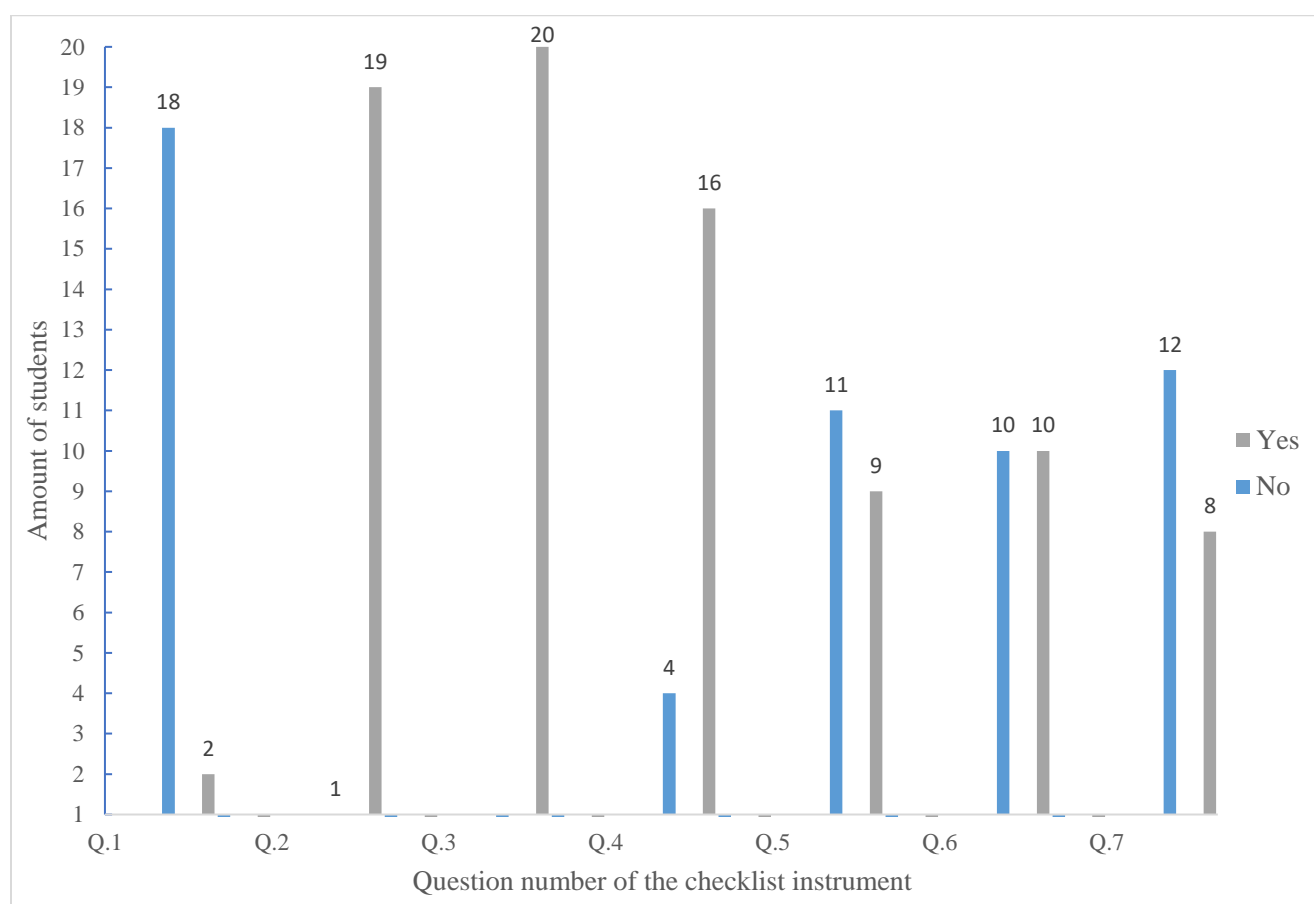
Source: Data taken from checklist observation applied to students at Liceo de Miramar during April 2025.

To complement the evaluation of the implementation process of the ReadWorks digital tool, an observation checklist was applied while students interacted with the platform. This instrument aimed to record students’ behavior, attitudes, and level of autonomy during the login and exploration phases of the tool.

The results from the observation checklist, shown in Figure 15, provide insight into students' behavior and reactions while using the ReadWorks digital tool. In general, the data reveals that although students were able to follow instructions, many of them depended heavily on teacher support and showed signs of uncertainty during the activity.

Figure 15

Consolidated results of all the checklist questions



Source: Data taken from checklist observation applied to students at Liceo de Miramar during April 2025.

Most students (18 out of 20) followed the steps explained by the teacher to log in, demonstrating a basic level of procedural understanding. However, almost all students (19 in Q2

and all 20 in Q3) asked multiple questions or needed clarification from the teacher during the login process, indicating limited digital autonomy and high reliance on external guidance.

Navigation also appeared to be a challenge, as 16 students reported difficulties in locating the digital tool through the browser. This suggests that initial access barriers may have contributed to anxiety or confusion.

When exploring the platform, the results were more varied. In Question 5, just over half of the students (11) were able to explore the tool easily, while the rest struggled. In Question 6, which evaluated the students' impressions, the group was evenly split (10 showed a good impression, 10 did not), highlighting a range of emotional responses—from engagement to indifference. Finally, in Question 7, 12 students appeared worried while exploring the tool, which points to feelings of frustration or insecurity during the experience.

Taken together, the data indicates that while the tool was introduced effectively, many students encountered technological and emotional barriers during its use. These observations reinforce the importance of providing clear guidance, scaffolding, and time for adaptation when integrating digital tools into classroom practice.

Based on the evidence gathered from Test 1, Test 2, and the observation checklist, it can be concluded that this objective was partially achieved. From an implementation standpoint, the digital tool was successfully integrated into classroom activities. Students engaged with ReadWorks through two comprehension tests and were observed during the process. However, the effectiveness of the tool in promoting significant improvement in reading comprehension remains limited.

In Test 1, students showed relatively strong performance on the first two questions (90% correct answers), suggesting some success in tasks involving basic recall or literal comprehension. Yet, their performance declined notably in the more demanding questions. Similarly, in Test 2, although 60% of students answered the first question correctly, the remaining items, especially Questions 8, 9, and 10, had a 100% failure rate, indicating major difficulties with inference, vocabulary in context, and critical understanding.

These findings are reinforced by the results of the observation checklist, which revealed that most students relied heavily on teacher guidance during the login and navigation process. Specifically, 95% of students asked several questions while logging in, and all required help to proceed through the steps. Additionally, 80% had trouble locating the tool in the browser. Emotional responses were mixed: only half of the students showed a positive impression when exploring the tool, and 60% appeared worried during the activity.

Taken together, these results suggest that while ReadWorks was appropriately implemented as a digital learning tool, the strategies promoted through it were not yet sufficient to produce measurable improvements in students' higher-order comprehension skills. Moreover, students' limited digital autonomy and signs of discomfort with the platform highlight the need for additional instructional scaffolding, digital literacy reinforcement, and more time for adaptation.

Therefore, the second objective was met in terms of execution, but its intended pedagogical impact is still in progress, requiring sustained support and refinement in future implementations.

4.6. POST-TEST

The post-test was administered to 22 eighth-grade students. They were given a reading in English and asked five questions focused on reading comprehension (the post-test can be seen in the appendix section) in which the questions were as follows in the next Table.

Table 13

Description of the questions in the Pre-test

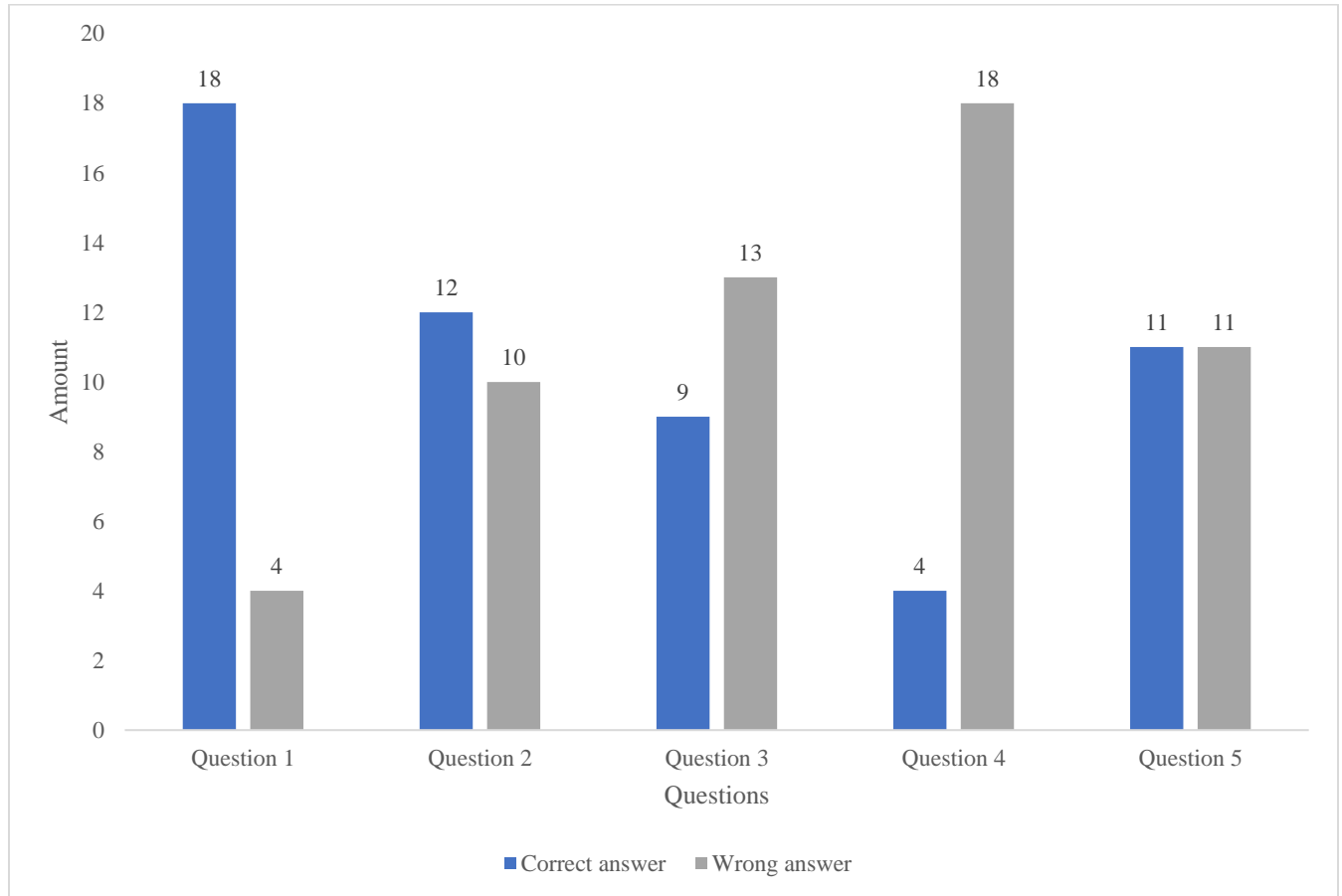
| Number of questions in the Pre-test | Description of the question |
|--|---|
| 1 | What group of animals is elk, mule deer, and pronghorn all part of? |
| 2 | What causes the mule deer to migrate every year? |
| 3 | Read the following sentence from the passage: “Humans continue to settle in places that used to be open land. Fires have damaged some of the routes used by mule deer. They have to jump barbed-wire fences, cross busy roads, and travel through farmland” What can you conclude about mule deer’s migration routes based on this information? |
| 4 | What are two approaches that conservationists are taking to protect mule deer? |
| 5 | What is the main idea of this passage? |

Source: Data taken from the Pre-test applied to 22 students at Liceo de Miramar during April 2025.

In the bar chart (Figure 16), the performance of eighth-grade students on a post-test is shown, reflecting the number of correct and incorrect answers for five questions designed to assess reading comprehension. Overall, the chart highlights significant variation in student performance across the items.

Figure 16

Number of correct and incorrect answers in the post-test



Source: Data taken from the pre-test applied to 22 students at Liceo de Miramar during April 2025.

The pie charts in Figure 17 display the percentage of correct and incorrect answers for each question in a reading comprehension assessment given to eighth-grade students. These visual representations complement the findings from the bar chart and reinforce the overall trend in student performance.

It is observed that Question 1 was the best answered, with 81.82% of students responding correctly and only 18.18% answering incorrectly. This result suggests that the content of this

question was likely aligned with prior knowledge or basic reading comprehension skills such as identifying explicit information.

Performance begins to decline starting from Question 2, where 54.55% of students answered correctly and 45.45% answered incorrectly. Question 3 continues this trend, with a lower success rate: 40.91% correct answers and 59.09% incorrect. These results indicate growing difficulty for the students, possibly due to increased complexity in the text or more cognitively demanding questions, such as those requiring inference or detail recognition.

The most critical drop is seen in Question 4, where only 18.18% of students answered correctly and 81.82% answered incorrectly. This sharp decline suggests that this question required more advanced reading strategies, such as interpreting implicit meaning, evaluating author intent, or understanding figurative language.

Question 5 presents a more balanced result, with 50% of correct and incorrect answers each. This equilibrium may indicate that the question was of moderate difficulty yet still challenging enough to divide the group evenly in terms of performance.

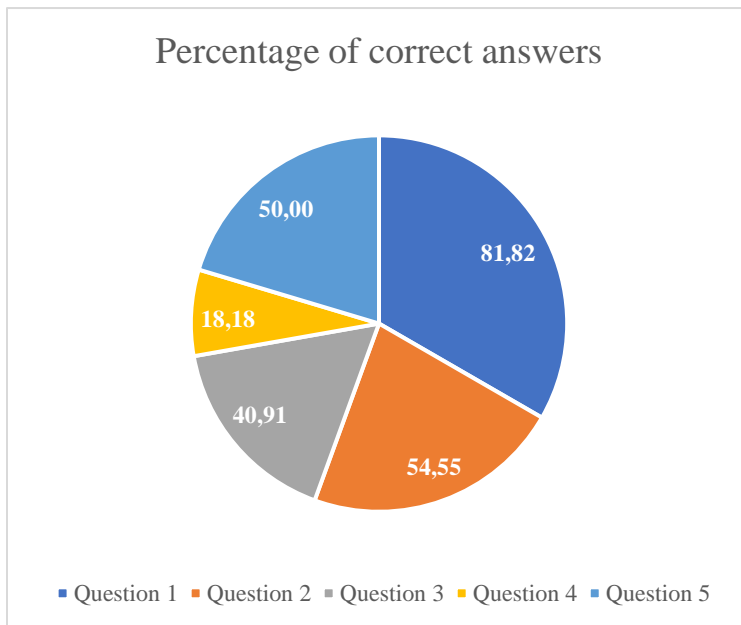
Taken together, the data in both the pie and bar charts reveal (Figure 16 y 17) a declining trend in comprehension performance as the assessment progresses. The highest performance is at the beginning, and as the questions increase in complexity, student success decreases. This pattern strongly suggests the presence of progressive difficulties in advanced reading skills among the students.

These results highlight the urgent need for targeted pedagogical interventions. Instructional strategies should focus on enhancing skills such as global understanding, inference-making, identification of main ideas, and vocabulary in context. Additionally, the data

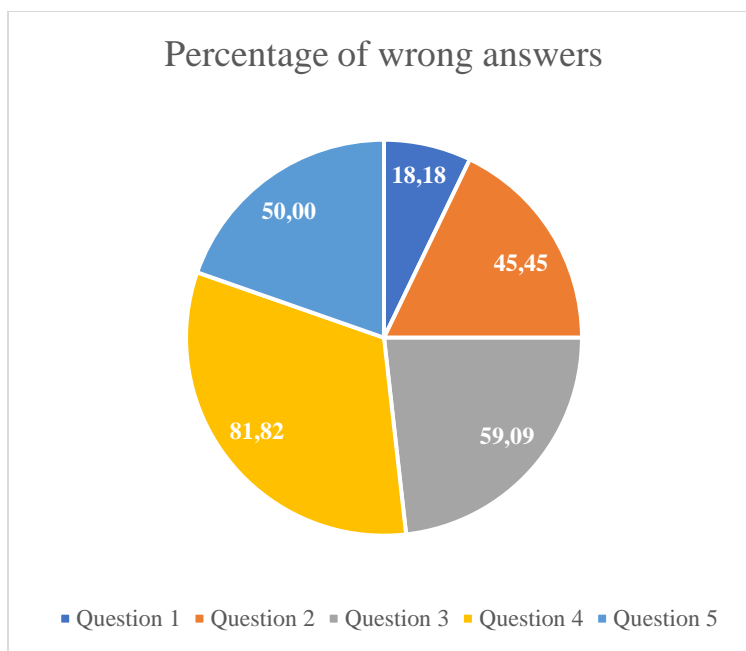
underscores a significant gap in students' ability to process more complex English texts, reaffirming the importance of differentiated and scaffolded reading instruction in the classroom

Figure 17

Response percentages of the questions in the Post-Test



(a)



(b)

Source: (a) percentage of correct answers (b) percentage of wrong answers. Data taken from the post-test applied to 22 students at Liceo de Miramar during April 2025.

4.7. CHECKLIST 3

After administering the post-test, a checklist was also conducted with the 22 eighth-grade students, in which the questions were as follows in the next Table:

Table 14

Description of the questions in the check-list

| Number of questions in the checklist | Description of the question |
|--------------------------------------|---|
| 1 | Students get a general idea of the text |
| 2 | Students can answer all the questions in the exercise correctly |
| 3 | Students can answer 1-3 questions of the exercise correctly |

| | |
|----|---|
| 4 | Students can answer 3-5 questions of the exercise correctly |
| 5 | Students cannot answer any of the questions of the exercise |
| 6 | Students underline more than 30 words that they do not know |
| 7 | Students underline more than 15 less than 20 words that they do not know |
| 8 | Students underline less than 10 words that they do not know |
| 9 | Students choose and write 20 to 30 words that they know, understand and write the meaning |
| 10 | Students choose and write 10 to 20 words that they know, understand and write the meaning |
| 11 | Students choose and write 5 to 10 words that they know, understand and write the meaning |
| 12 | Students choose and write 1 to 5 words that they know, understand and write the meaning |

Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

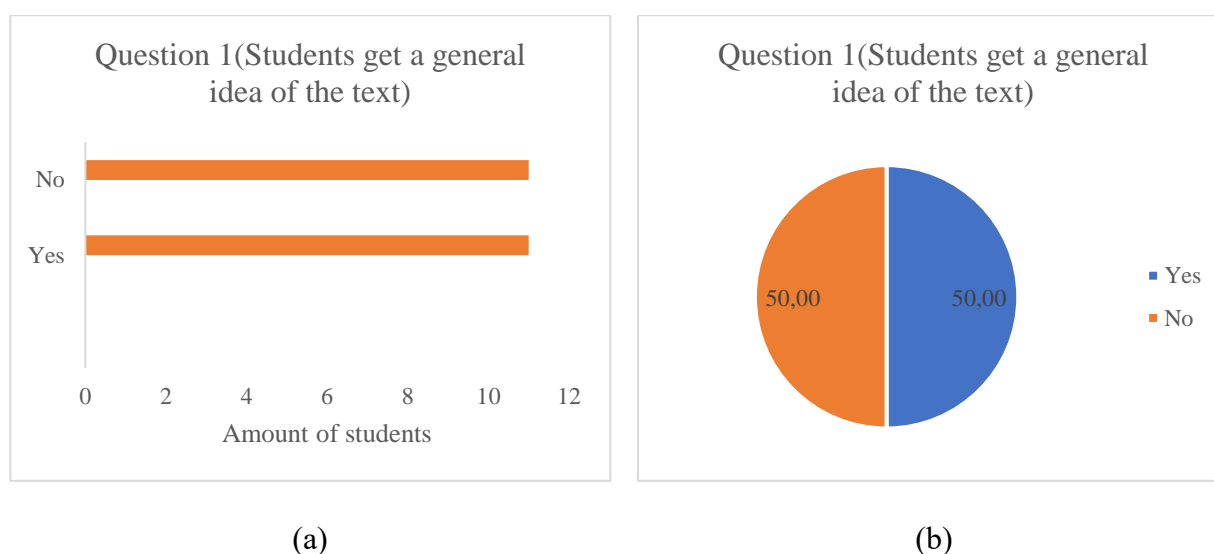
Question 1 of the checklist assessed whether students were able to get a general idea of the text, which is a basic and fundamental skill in reading comprehension. The results show that half of the students (11 out of 22) understood the text, while the other half failed to identify the main idea. This represents 50% positive responses and 50% negative responses (Figure 18, b).

The ability to grasp the general idea of a text is usually one of the first steps toward deeper comprehension. If 50% of the students are unable to identify this global information, it is likely that they will also struggle with more complex tasks such as making inferences, extracting specific details, or interpreting vocabulary in context.

The relatively high percentage of students who did not grasp the global idea of the text suggests the need to reinforce teaching strategies aimed at developing global reading skills, such as skimming to capture the general purpose, analyzing titles, subtitles, and keywords, as well as guided practice using questions aimed at understanding the macrostructure of the text.

Figure 18

Results of question 1 (Students get a general idea of the text) in the checklist



Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

Regarding Questions 2 and 3 (Figure 19), which correspond to the number of correct answers students provided in the reading comprehension exercise, the objective is to evaluate their performance accuracy and determine how effectively they understood the text. These items are essential to identify not only the level of comprehension but also the specific gaps in cognitive processing or reading strategies.

With respect to Question 2 (Figures 19 (a) (b)): “Students can answer all the questions in the exercise correctly,” it was found that only 3 out of 22 students (13.64%) were able to reach

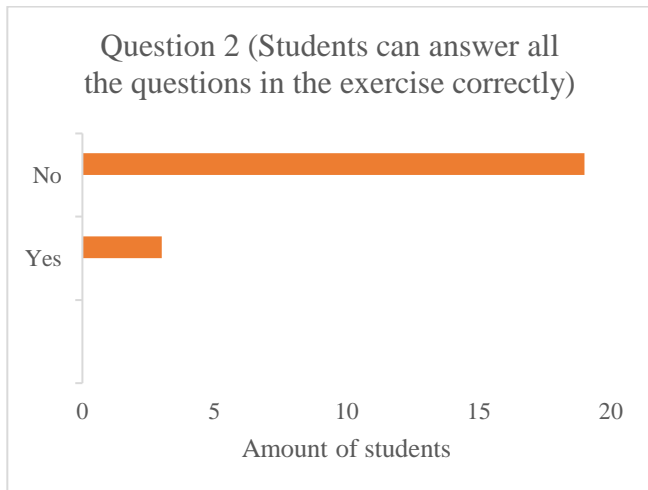
full accuracy, while the remaining 19 students (86.36%) were not. This indicates that a very limited group of students demonstrated complete comprehension, suggesting considerable challenges in integrating ideas or navigating the full set of questions with precision. It may also reflect difficulties in managing textual complexity or in applying metacognitive reading strategies.

As for Question 3 (Figures 19 (c) (d)): “Students can answer 1 to 3 questions of the exercise correctly,” the data show that 15 students (68.18%) selected this option, whereas 7 students (31.82%) did not. This result implies that a majority were able to identify at least some relevant information, likely through basic text scanning or surface-level reading. However, the fact that most students remain within this low to moderate performance band underscores the absence of deep comprehension, such as inference making or synthesis, which are essential for full textual understanding.

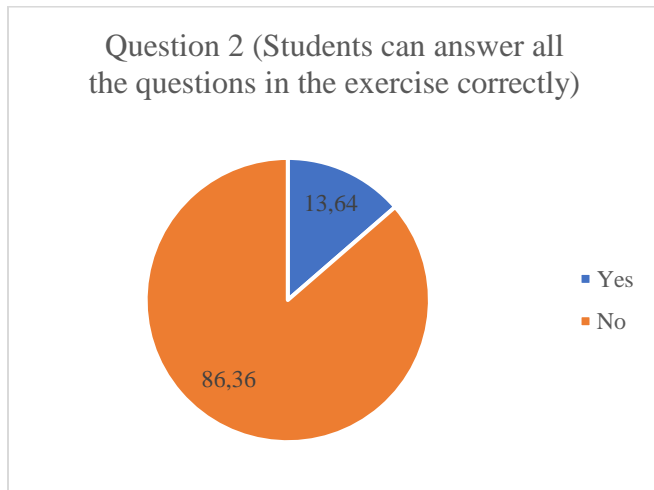
This suggests that while students may be capable of retrieving explicit information or recognizing familiar vocabulary, they struggle when it comes to interpreting implicit meanings, establishing relationships between ideas, or constructing coherent mental representations of the text. Such limitations point to a need for reinforcing higher order thinking skills in reading instruction, including strategies for inference, evaluation, and integration of textual content.

Figure 19

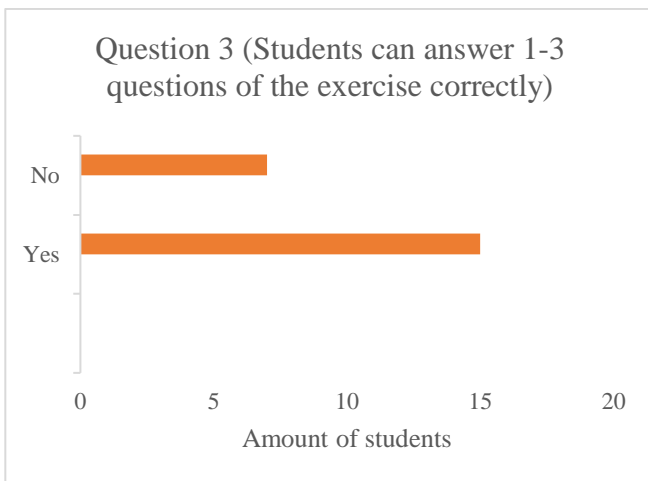
Results of question 2 and 3 in the checklist



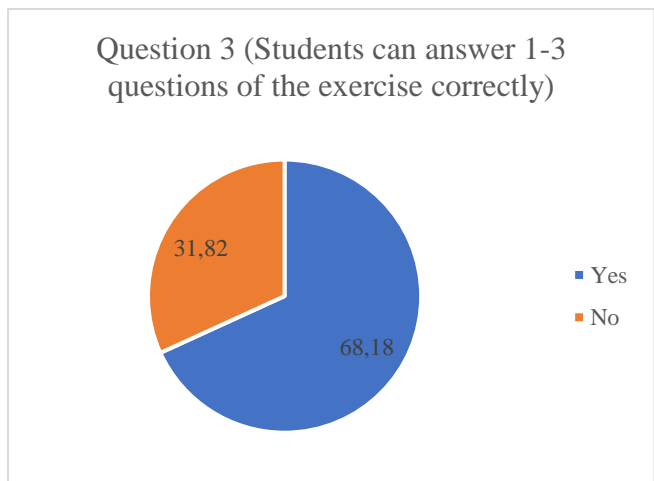
(a)



(b)



(c)



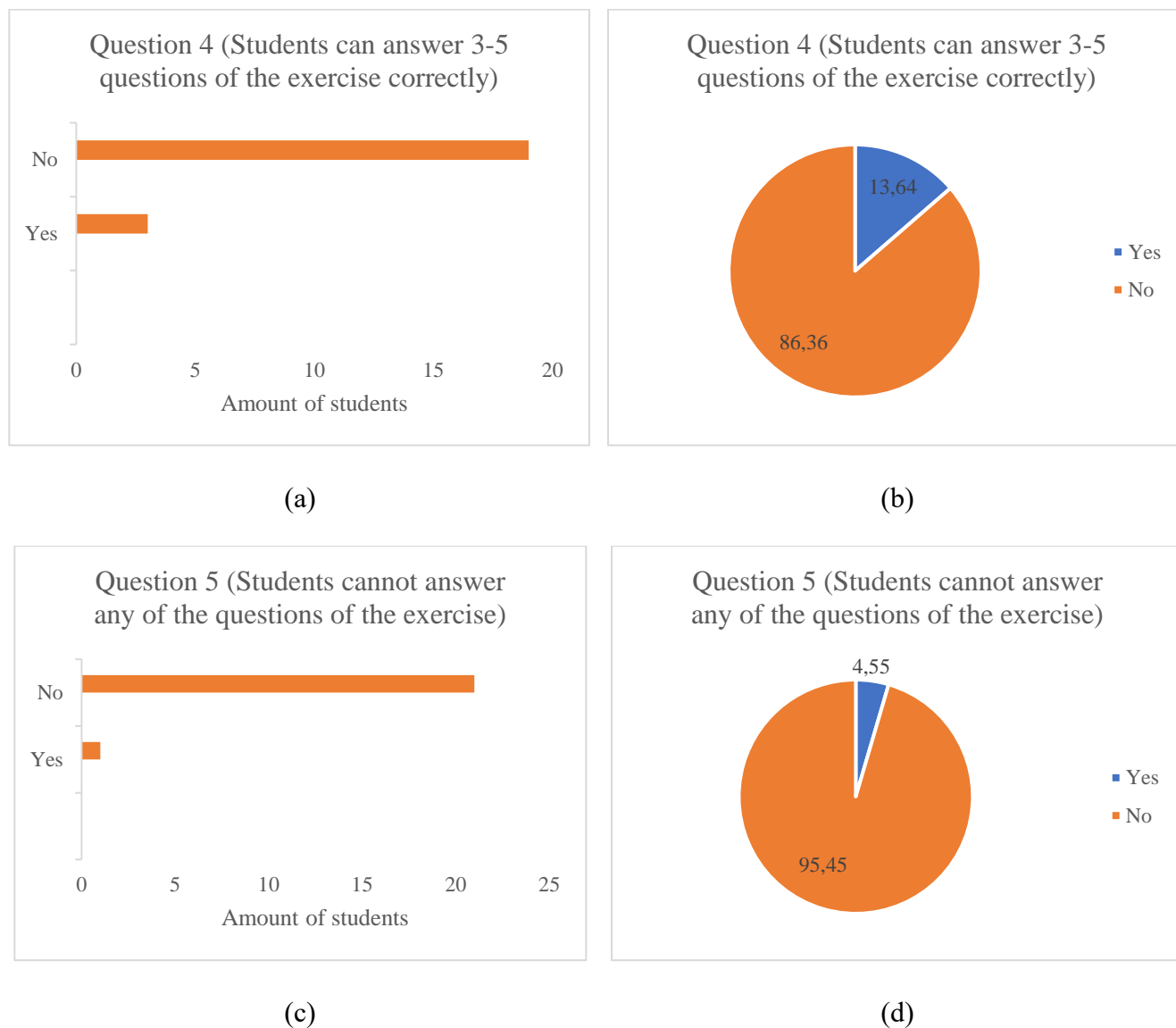
(d)

Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

Regarding Question 4: “Students answer 3 to 5 questions correctly,” (Figure 20 (a) (b)) only 3 students (13.64%) reached this level. This suggests that a small minority of the group displayed a moderate understanding of the text.

Figure 20

Results of question 4 and 5 in the checklist



Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

These students may possess better-developed strategies for locating and interpreting information or greater familiarity with the vocabulary and structure of the reading passage. However, the low proportion indicates that such competencies are not widespread, and that the majority still struggle to interpret or integrate content at this intermediate level.

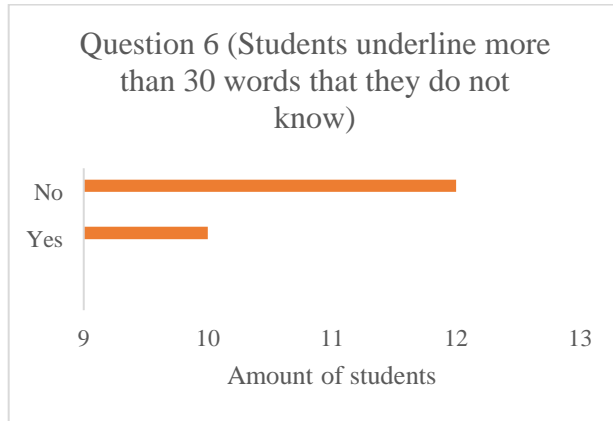
As for Question 5: “Students cannot answer any questions correctly,” (Figure 20 (c) (d)) the data shows that only 1 student (4.55%) failed to provide a single correct response. On the surface, this may seem like a positive indicator, suggesting that nearly all students were able to extract at least some information. However, this isolated case should not overshadow the broader issue: most correct answers remain clustered in the lowest bands of performance, which suggests limited engagement with the deeper meaning of the text.

Altogether, the results continue to confirm a pattern of minimal comprehension. The fact that most students remain within this low to moderate performance band underscores the absence of deep comprehension, such as inference-making or synthesis, which are essential for full textual understanding. Moreover, the reduced number of students capable of answering more than three questions correctly signals not only a surface-level engagement with the material but also a possible overreliance on literal or isolated information, without constructing broader meaning or interconnections.

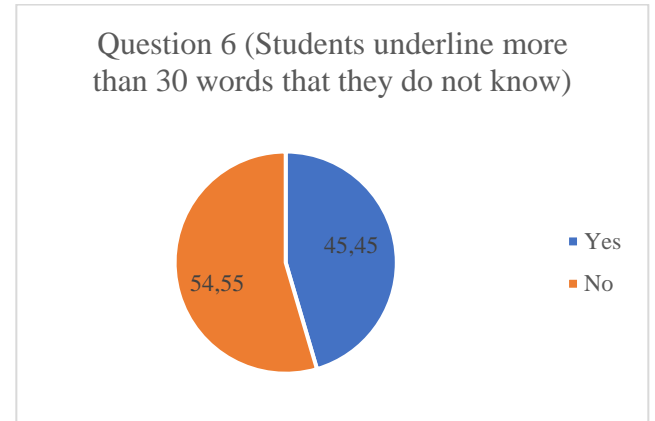
Following Figure 21, as for Question 6: “Students underline more than 30 words they do not know,” nearly half of the students (10 out of 22, 45.45%) fell into this category. This high number reveals a considerable level of lexical unfamiliarity, suggesting that for many students, the text contained an overwhelming amount of unknown vocabulary. This barrier can significantly hinder comprehension, as unfamiliar words disrupt the ability to follow and interpret key ideas.

Figure 21

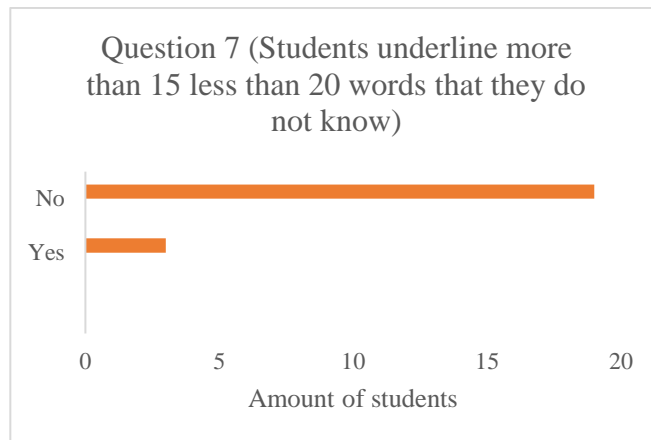
Results of question 6, 7 and 8 in the checklist



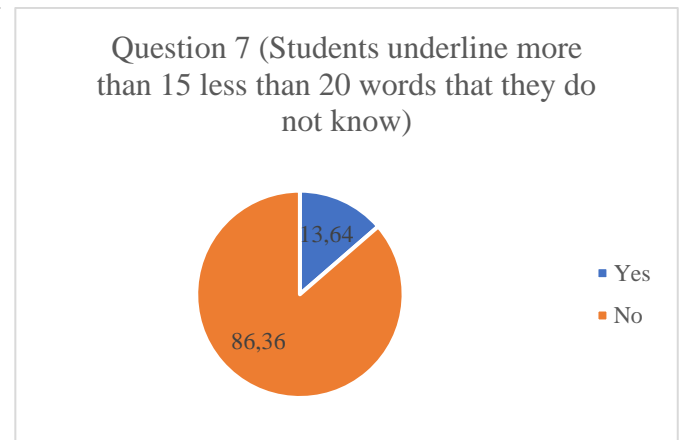
(a)



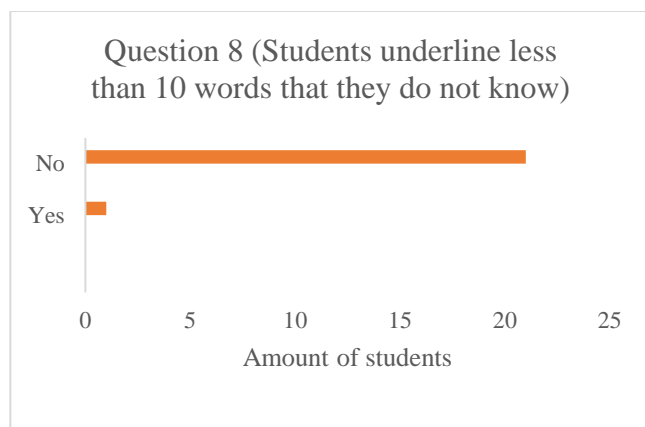
(b)



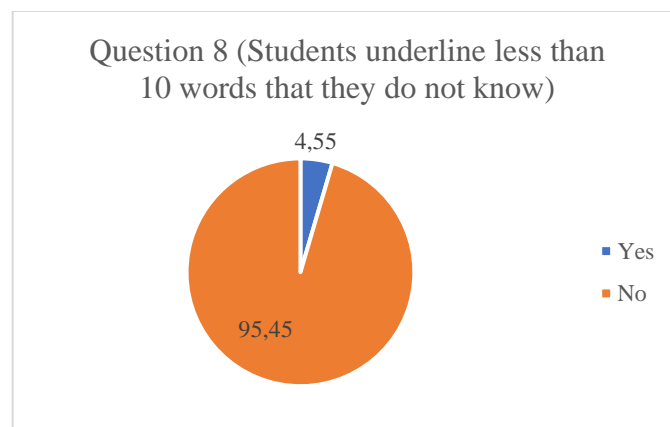
(c)



(d)



(e)



(f)

Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

As for Question 7: “Students underline between 15 and 20 unknown words,” had 3 students (13.64%) in this category, showing a mid-level of lexical challenge. These students might be more accustomed to navigating partially unfamiliar texts or have developed partial compensatory strategies, such as context clues or structural analysis, to grasp meaning.

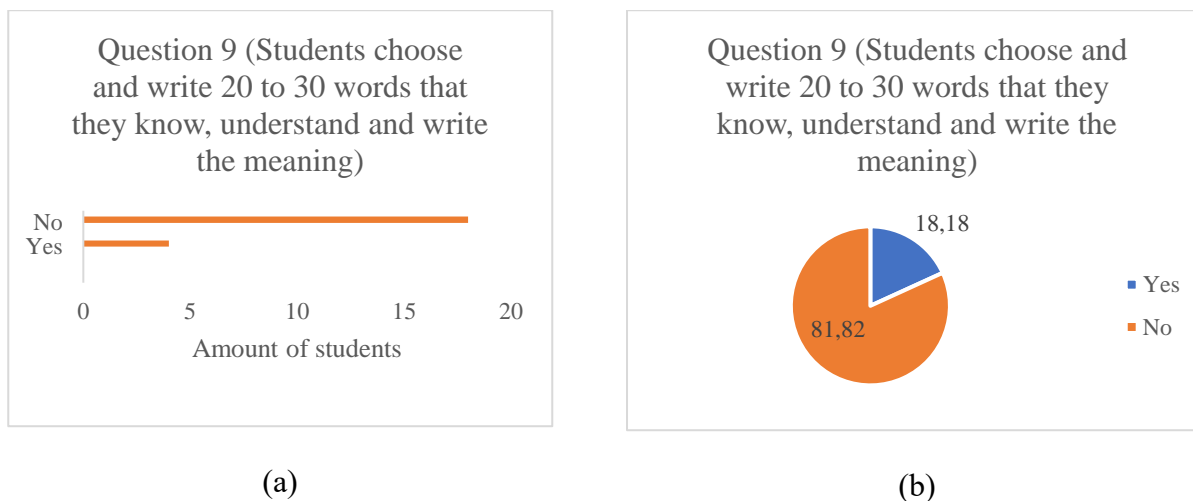
As for Question 8: “Students underline fewer than 10 unknown words,” was selected by only 1 student (4.55%). This extremely small percentage highlights that very few students felt confident about their vocabulary knowledge when reading the text. This lone case likely reflects a student with a stronger lexical base or more frequent exposure to similar texts.

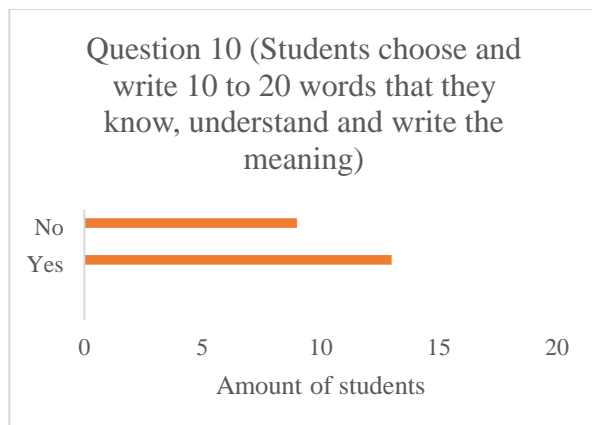
These results collectively demonstrate that most students are reading texts with a high density of unknown vocabulary, which severely restricts their ability to access meaning and develop more advanced comprehension strategies. The findings point to the urgent need to strengthen vocabulary instruction, not only through rote memorization but by integrating contextual deduction strategies, promoting extensive reading, and emphasizing semantic mapping, morphological analysis, and word-learning autonomy.

Regarding Questions 9 and 10 (Figure 22), which focus on the recognition and meaning of known words, the aim of these items was to assess how many familiar words students could identify and accurately define. This component is fundamental, as the richness and precision of a student's active vocabulary have a direct impact on their reading comprehension and their ability to construct meaning from texts.

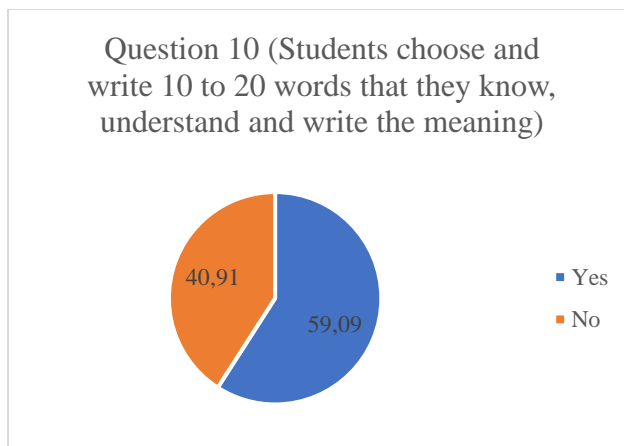
In relation to Question 9: "They write between 20 and 30 words they know and explain," only 18.18% of students responded affirmatively, while a significant 81.82% indicated that they could not. This result reveals that a large majority of students lack a sufficiently broad and functional active vocabulary, which severely limits their ability to decode, interpret, and elaborate on the content of more complex academic texts. The small group that did achieve this level likely possesses stronger vocabulary learning habits, including regular reading practices, exposure to diverse texts, or the use of explicit word-learning strategies. Nevertheless, their low representation within the group underscores the need to generalize such habits across the student population.

Figure 22 Results of question 9 and 10 in the checklist





(c)



(d)

Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

In contrast, Question 10: “They write between 10 and 20 known words,” (Figure 12 (c) (d)) yielded more favorable results, with 59.09% of students responding "yes," and 40.91% responding "no." This group, which comprises the largest proportion, reflects an intermediate level of lexical competence.

These students have built a partially functional vocabulary base, sufficient for approaching basic or moderately complex texts, yet still insufficient for achieving nuanced understanding or engaging in more critical interpretation. Continued reinforcement of high-frequency academic vocabulary and contextualized word learning is essential to support their progression.

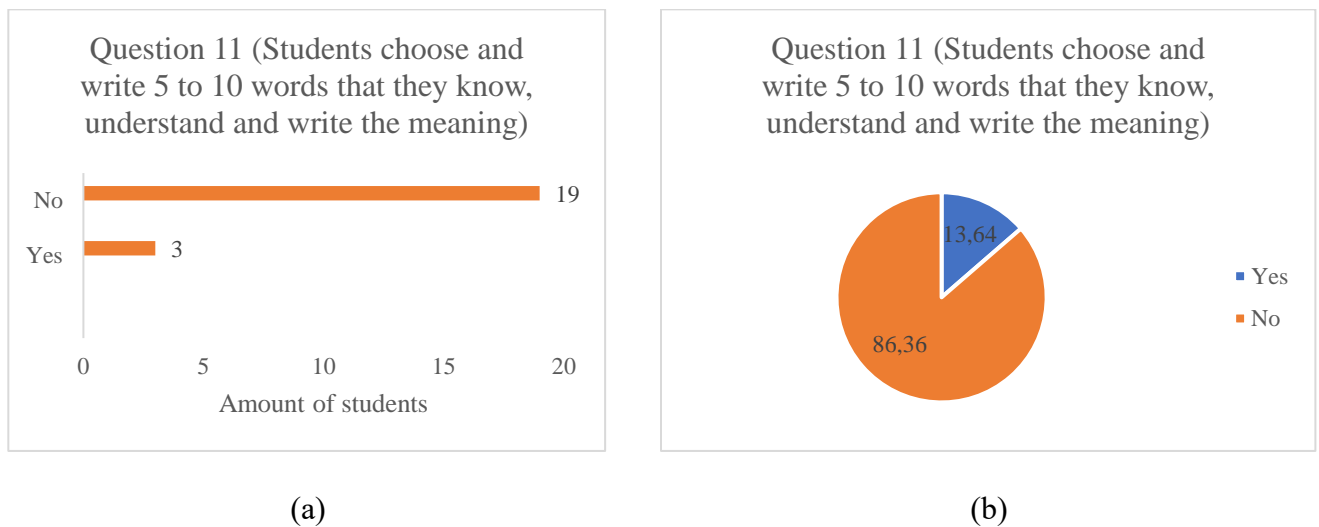
Continuing with the analysis, Figure 23 presents the results for Questions 11 and 12, which further explore students’ ability to identify and define known words. These questions are key in evaluating the depth and usability of students' active vocabulary, particularly their capacity to retrieve and apply word meanings in a productive manner.

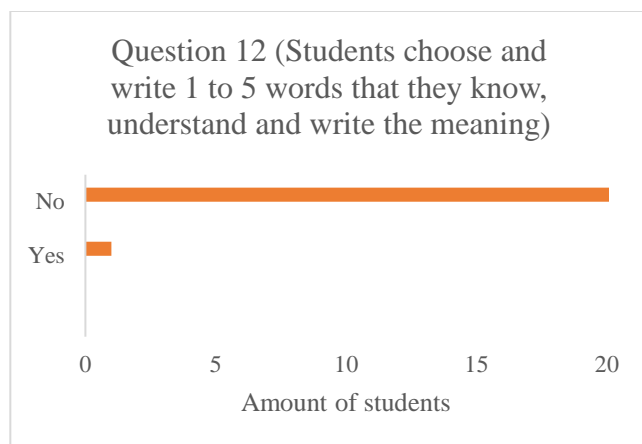
With respect to Question 11: “They write between 5 and 10 known words,” only 13.64% of students responded "yes," while 86.36% answered "no." These results highlight that most students were unable to list even a minimal number of known words, which evidences a notable gap in lexical retention or recognition.

Although this level of performance is lower than expected, the small group that did succeed may be in the early stages of developing word awareness, possibly supported by prior instruction or greater exposure to English vocabulary in and out of school contexts.

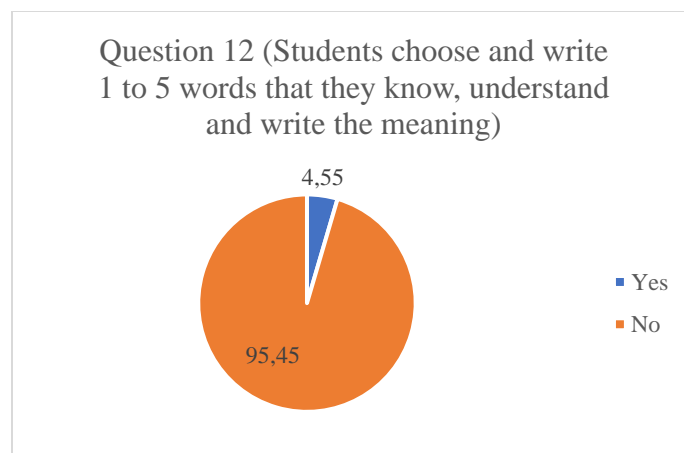
Figure 23

Results of question 11 and 12 in the checklist





(c)



(d)

Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

As for Question 12: “They write fewer than 5 known words,” the results are even more concerning. Only 4.55% of students affirmed they could do so, while an alarming 95.45% indicated they could not. This response pattern suggests that most students struggle to activate even the most basic elements of their vocabulary bank, implying that word knowledge may be passive, superficial, or insufficiently reinforced through meaningful use.

Taken together, the results from Questions 11 and 12 reveal a critical deficiency in students’ ability to recall and apply even a minimal number of familiar words, which severely hinders their reading comprehension and limits their academic engagement. This situation underlines the urgent need for intensive vocabulary development initiatives that go beyond memorization.

Finally, Figure 24 provides a consolidated overview of students’ performance across several aspects, including reading comprehension, vocabulary recognition, and self-perceived lexical knowledge. Although a small number of students demonstrated acceptable results in specific questions, such as Questions 3 and 10, the general trend indicates widespread

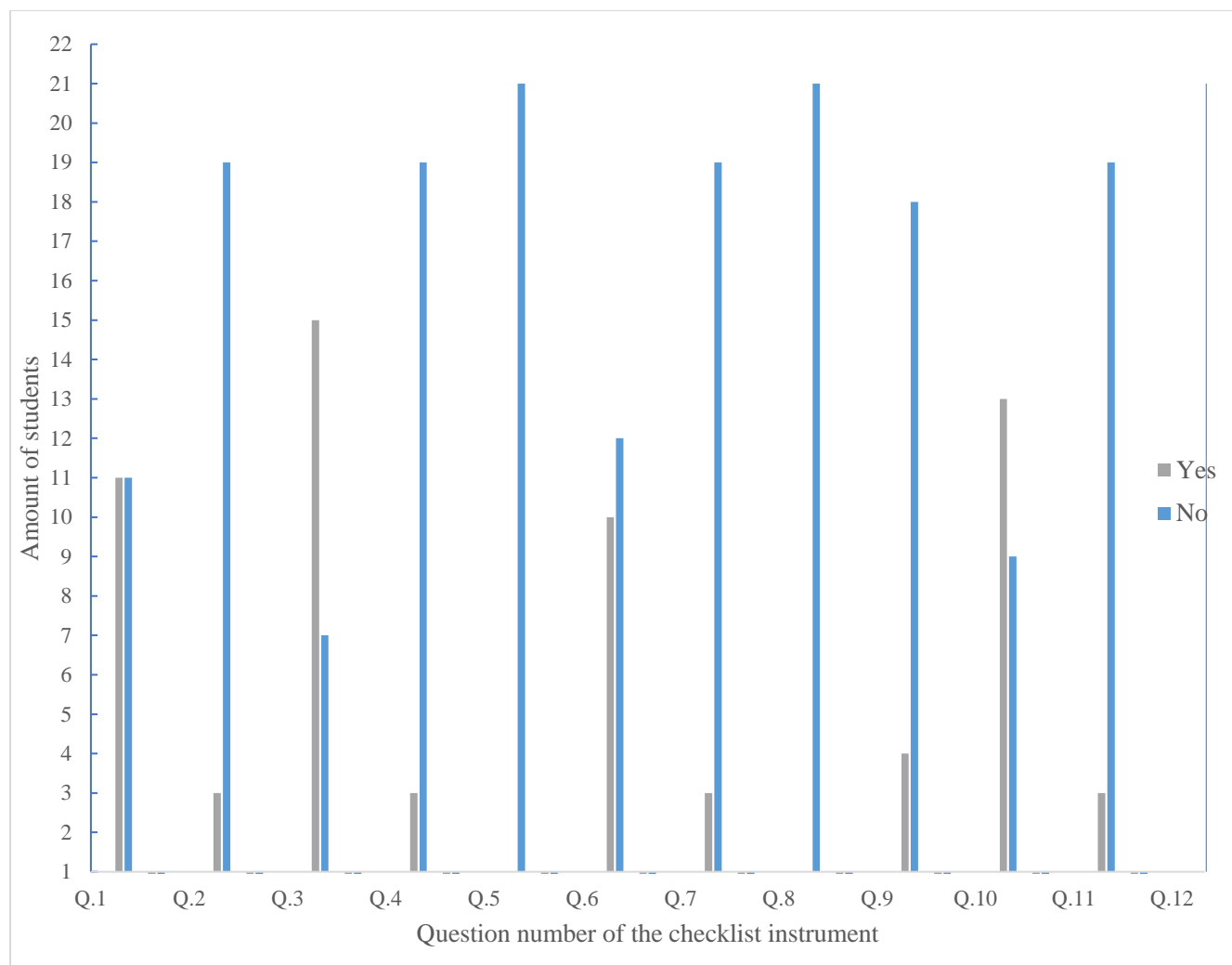
challenges. The data shows that only a minority of students were able to complete tasks successfully, especially in areas requiring basic vocabulary recall and text understanding.

Notably, over 85% of students responded negatively to key subjects like Questions 4, 5, 8, 11, and 12. These responses suggest significant gaps in both decoding written texts and utilizing known vocabulary effectively. The difficulty students had, even with seemingly simple tasks, such as identifying or defining familiar words, underscores their limited reading proficiency. This pattern reveals that most students operate at a basic or pre-functional level of reading competence.

These findings highlight the urgent need for comprehensive pedagogical strategies that simultaneously target vocabulary expansion and reading skill development. Instructional approaches should place particular emphasis on improving students' ability to make inferences, analyze text, and interpret meaning based on context. Continuous monitoring and support will be essential to ensure long-term improvement in both comprehension and vocabulary use.

Figure 24

Consolidated results of all the checklist questions



Source: Data taken from the checklist applied to 22 students at Liceo de Miramar during April 2025.

The evidence obtained from the post-test and Checklist 3 provides valuable insight into the effectiveness of the intervention. While the post-test showed varying levels of student performance across different items, the overall pattern indicates that reading comprehension remains limited, especially in higher-order skills.

In the post-test, Question 1 yielded the highest success rate, with 81.82% of students answering correctly. This suggests that students can manage basic tasks such as identifying explicit information. However, as the test progressed, performance declined. These figures reveal

a progressive struggle with increasingly complex comprehension tasks, particularly those involving inference, synthesis, or interpretation of implicit meaning.

Checklist 3 reinforces these findings. Only half of the students could grasp the general idea of the text, and a significant number reported underlining more than 30 unknown words. Additionally, over 85% of students gave negative responses to key vocabulary-related items (Questions 4, 5, 8, 11, and 12), indicating serious limitations in both lexical knowledge and productive vocabulary use.

While the digital tool was used consistently, the results suggest that it did not lead to substantial improvement in advanced reading comprehension skills. Students continued to operate within basic or low-intermediate performance bands, indicating that the intervention was not yet sufficient to close the existing learning gaps.

4.7.1. Comparative Analysis of Reading Comprehension Results: Pre-Test vs. Post-Test

When comparing the results of the pre-test and post-test, a mixed performance trend is observed among the students. Overall, there was a moderate improvement in some questions, particularly those assessing literal comprehension or mid-level complexity.

Question 1, which was the best-answered item in both assessments, improved from 72.73% correct in the pre-test to 81.82% in the post-test, indicating increased accuracy in identifying explicit information. Question 2 also showed notable progress, rising from 31.82% to 54.55%. Question 3 had a slight improvement (from 31.82% to 40.91%), suggesting small gains in interpretive skills.

However, Question 4 saw a slight decrease (from 22.73% to 18.18%), confirming that students continue to face challenges with tasks involving inference or deeper comprehension. In contrast, Question 5 improved significantly, from 22.73% to 50%, reflecting gains in identifying the main ideas or overall understanding. Taken together, these results demonstrate progress in basic and intermediate reading skills, while important limitations remain in higher-order comprehension abilities.

Table 15

Comparison of Correct Responses Between the Pre-test and Post-test

| Question | Pre-Test (% Correct) | Post-Test (% Correct) |
|------------|----------------------|-----------------------|
| Question 1 | 72.73% | 81.82% |
| Question 2 | 31.82% | 54.55% |
| Question 3 | 31.82% | 40.91% |
| Question 4 | 22.73% | 18.18% |
| Question 5 | 22.73% | 50.00% |

Source: Data taken from the pre-test and the post-test applied to 22 students at Liceo de Miramar during April 2025.

According to the comparison between the pre-test and post-test results, Objective 3 was partially achieved. The data show that students made moderate progress in certain areas of reading comprehension, particularly in questions that required literal understanding or mid-level cognitive processes.

Questions 1, 2, 3, and 5 demonstrated improvement in performance, with Question 5 showing a particularly significant gain (from 22.73% to 50%). This suggests that the intervention had a positive effect on students' ability to identify main ideas and comprehend explicit content.

However, the drop in performance in Question 4 (from 22.73% to 18.18%) and the overall difficulty with inferential tasks indicate that higher-order comprehension skills remain underdeveloped. In addition, checklist results showed persistent challenges in vocabulary knowledge and productive language use. Thus, while the results reflect clear progress in foundational and intermediate skills, they also reveal that the digital tool alone was not sufficient to produce significant improvements in advanced reading comprehension. Continued pedagogical intervention and vocabulary development are necessary to fully achieve the objective.

To enhance students' reading comprehension performance, particularly in higher-order skills such as inference, interpretation, and synthesis, it is essential to complement the use of digital tools like ReadWorks with explicit and sustained instructional strategies. Guided reading sessions should be implemented regularly, allowing teachers to model comprehension strategies such as identifying main ideas, making inferences, and interpreting implicit information. Vocabulary instruction should also move beyond memorization by encouraging the use of context clues, word families, and semantic mapping to promote a deeper and more functional understanding of language.

Additionally, the use of graphic organizers can help students structure and internalize textual information, supporting their ability to analyze and retain content. Instruction should be differentiated to meet the diverse needs of learners, with support directed toward students who continue to demonstrate difficulties. Finally, the incorporation of regular formative assessments will enable teachers to monitor student progress and adjust instructional approaches accordingly. A combination of these strategies, consistently applied alongside digital resources, will support more meaningful and lasting improvements in students' reading comprehension skills.

4.8. Students' Questionnaire

Table 16

Questions in the Likert scale of the questionnaire

| Number and description of the question of the questionnaire | Answer |
|--|----------------------------|
| 1. What is your opinion about using the online tool ReadWorks? | Likert Scale |
| 2. How do you feel about using the tool to improve reading comprehension? | Very Satisfied |
| 3. Do you consider the ability to understand texts improved after using and practicing the digital tool? | / Satisfied / Neutral / |
| 4. Do you think the ReadWorks digital tool can be useful for improving other skills? | Dissatisfied / Very |
| 5. Do you find captivating the digital tool ReadWorks? | Dissatisfied |
| 9. Do you recommend this online tool to other educational institutions to improve reading comprehension skills? | |
| 11. Do you consider that the online tool contains a variety of readings, practices, and aspects to help to improve reading comprehension skills? | |
| 6. Would you like your teacher to continue implementing the use of the tool in classes? | Yes/No |
| 7. Would you like to include more technology to improve English skills? | |
| 8. Do you consider that the application of online tools and methodology of using technology in the classroom is better than the conventional methodology to improve reading comprehension? | |
| 10. Do you like to continue using the online tool for other study aspects? | |

Source: Data taken from the questionnaire applied to 20 students al Liceo de Miramar during April 2025.

Table 16 summarizes the questions included in the student questionnaire regarding the use of the ReadWorks digital tool. Questions 1, 2, 3, 4, 5, 9, and 11 were measured using a 5-point Likert scale ranging from Very Satisfied to Very Dissatisfied, allowing for a nuanced understanding of students' perceptions. Questions 6, 7, 8, and 10 used closed ended (Yes/No) responses to gather direct opinions about the continued use and integration of technology in English learning.

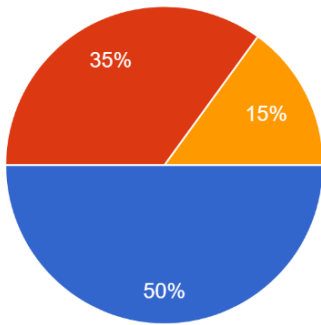
Following in Figure 25 below presents the results of the questionnaire for the questions that used a Likert scale, the responses to the Likert-scale questions regarding the ReadWorks digital tool indicate a generally positive perception among eighth grade students.

For question 1 (Figure 25, a), half of the students (50%) expressed being Very Satisfied with the use of the tool, while 35% were Satisfied and 15% remained Neutral. Similarly, in question 2 (Figure 25, b), 40% were Very Satisfied and another 40% Satisfied, showing a strong approval of the tool's impact on reading comprehension. A small percentage (10%) expressed either neutrality or dissatisfaction.

In question 3 (Figure 25, c), which asked about the improvement in text understanding, 35% responded Very Satisfied, and a significant 50% were Satisfied, indicating a notable perception of academic benefit. For question 4 (Figure 25, d), related to the development of other skills, 40% were Very Satisfied, 30% Satisfied, and 20% Neutral, with very few expressing dissatisfaction. Question 5 (Figure 25, e) received the highest level of positive feedback, with 55% Very Satisfied and only 10% Satisfied, though 25% of the students remained Neutral.

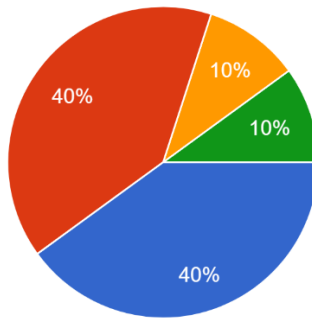
Figure 25

Results of the questions (1,2,3,4,5,9 and 11) of the questionnaire



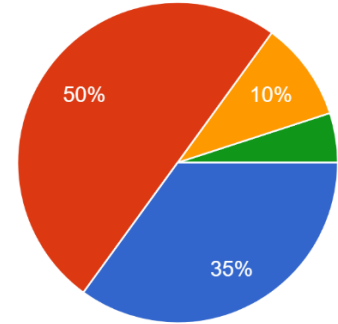
(a)

What are the most significant difficulties students have with reading comprehension in English?



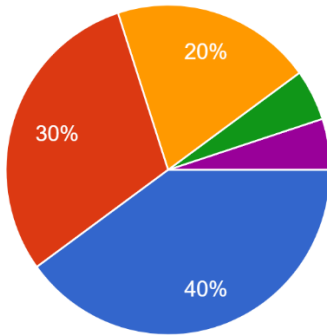
(b)

How do you feel about using the tool to improve reading comprehension?



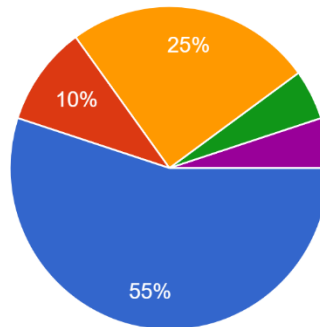
(c)

Do you consider the ability to understand texts improved after using and practicing the digital tool



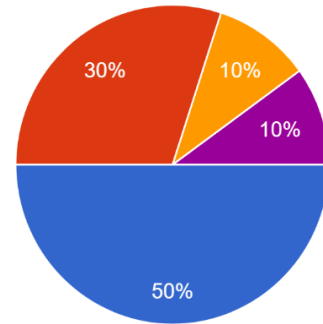
(d)

Do you think the ReadWorks digital tool can be useful for improving other skills?



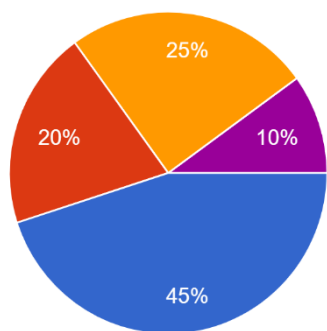
(e)

Do you find captivating the digital tool ReadWorks?



(f)

Do you find captivating the digital tool ReadWorks?



(g)

Criteria:

- A. Very Satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very Dissatisfied

Do you consider that the online tool contains a variety of readings, practices, and aspects to help to improve reading comprehension skills?

Source: Data taken from the questionnaire applied to 20 students at Liceo de Miramar during April 2025. Note: (a) question #1 (b) question #2 (c) question #3 (d) question #4 (e) question #5 (f) question #9 (g) question #11.

In question 9 (Figure 25, f), regarding the recommendation of the tool to other institutions, 50% were Very Satisfied, 30% Satisfied, and the rest split between Neutral and Very Dissatisfied at 10% each. Lastly, question 11 (Figure 25, g) showed that 45% were Very Satisfied, 20% Satisfied, and 25% Neutral, with minimal dissatisfaction.

These findings suggest that the ReadWorks tool not only meets students' expectations in terms of content and engagement but also demonstrates potential as a supportive element in improving reading comprehension skills. The overall satisfaction levels point to a favorable integration of digital tools in the English learning process at the eighth-grade level.

The following Figure 26 shows the results of questions 6, 7, 8, and 10 from the questionnaire, which used a dichotomous Yes/No response format. The data reflects a clear and

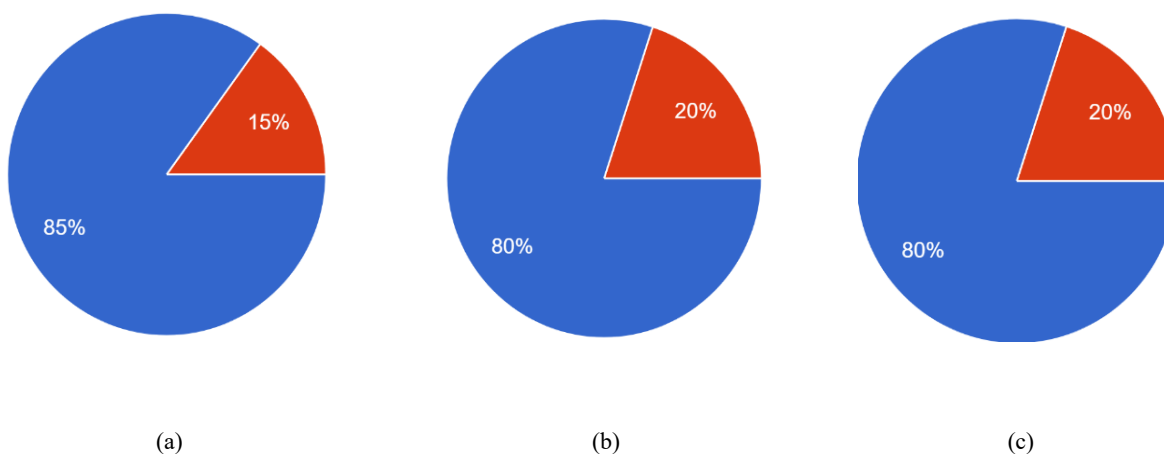
consistent preference among students for the continued integration of digital tools and technology in the classroom.

For question 6 (Figure 26, a), 85% of the students expressed that they would like their teacher to continue using the ReadWorks tool in class, while only 15% responded negatively. Similarly, question 7 (Figure 26, b) shows that 80% of students would like to include more technology to improve their English skills, with 20% indicating otherwise.

Question 8 (Figure 26, c) asked whether students believe that the use of online tools and methodologies is better than conventional approaches for reading comprehension. Again, 80% responded affirmatively, and 20% disagreed. Lastly, question 10 (Figure 26, d) revealed that 85% of students are willing to continue using the online tool for other areas of study, with only 15% responding negatively.

Figure 26

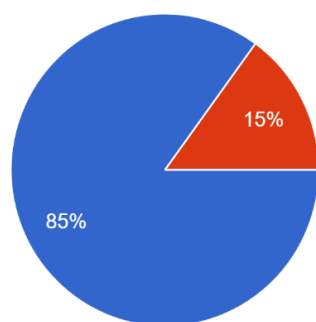
Results of the questions (6,7,8 and 10) of the questionnaire



Would you like your teacher to continue implementing the use of the tool in classes?

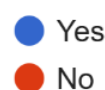
Would you like to include more technology to improve English skills?

Do you consider that the application of online tools and methodology of using technology in the classroom is better than the conventional methodology to improve reading comprehension?



(d)

Where:



Do you like to continue using the online tool for other study aspects?

Source: Data taken from the questionnaire applied to 20 students al Liceo de Miramar during April 2025. Note: (a) question #6 (b) question #7 (c) question #8 (d) question #10.

These results demonstrate a strong and consistent student preference for maintaining and expanding the use of digital learning tools in English education. The positive trend supports the relevance and perceived effectiveness of integrating technology into the academic environment.

4.9.TEACHER INTERVIEW

The results of the eighth-grade English teacher interview are shown in Table 17 below. These outcomes point to three years of work in the Ministry of Public Education (MEP) for the teacher. Though their experience is fairly recent, they show knowledge of important elements of the English curriculum, especially with regard to reading comprehension.

Table 17*Results of the teacher interview*

| Question | Answer |
|--|--|
| 1. How long have you worked as a MEP teacher? | 3 years |
| 2. Have you ever included lessons, strategies, and methodologies to develop students' reading comprehension? | Yes, in Academic English we use a lot of readings. |
| 3. What strategies, tips, or activities have you used or planned to improve students' reading comprehension? | They usually use the cell phone in class, so if you try to implement it, maybe they don't use it for procrastination in classes. |
| 4. Which type of resources have you used to teach reading comprehension? (internet, apps, books, flashcards) | All of them. |
| 5. Based on your knowledge and experience, what are your students' current reading comprehension levels? | Depending on the level, if they're in seventh grade maybe A1, if they're in 10th or 11th grade can be B1. |
| 6. Have you used online tools to teach reading comprehension? Which ones? | Yes, Kahoot, Randall's ESL, etc. |
| 7. What are the most significant difficulties students have with reading comprehension in English? | Sometimes the students don't have any interest in classes, that really frustrates, and they don't want to do anything |

Source: own elaboration.

Question two (Have you ever included lessons, strategies, and methodologies to develop students' reading comprehension?) of the interview makes it clear that the instructor was

questioned about the incorporation of techniques and approaches to grow this ability. The teacher confirmed that they do employ such techniques, particularly in the case of the “Academic English course”, which involves a considerable amount of reading. This indicates that some programs include reading comprehension, even if it might not yet be completely incorporated across all classroom settings or educational levels.

For question three (What strategies, tips, or activities have you used or planned to improve students’ reading comprehension?) the teacher noted that adolescents use cell phones during class about the techniques or activities employed to improve reading comprehension. The teacher considered how this technology might inspire students as well as cautioned about its coming to be a procrastinating tool. The instructor did not provide specific pedagogical methods such prediction, summarizing, or identifying main ideas, even if this comment indicated an awareness of classroom dynamics and student behavior.

Regarding the materials employed (question four, which type of resources have you used to teach reading comprehension? (internet, apps, books, flashcards)), the instructor noted having employed a great range. This might show open-mindedness and adaptability regarding many materials. The answer was rather generic, though, and did not clarify how these materials are incorporated into the teaching-learning process.

The teacher remarked in question five (Based on your knowledge and experience, what are your students’ current reading comprehension levels?)when evaluating students' reading comprehension levels using the Common European Framework of Reference (CEFR), that seventh-grade students may be at an A1 level while those in tenth or eleventh grade could reach a B1 level. This reference demonstrates a good grasp of grade-level expectations and international

standards. But this is the teacher's own assumptions rather than an assessment or worldwide test results basis.

In answer to question six (Have you used online tools to teach reading comprehension?) The teacher noted having employed internet resources to assist reading comprehension instruction, citing Randall's ESL Lab and Kahoot among platforms. These tools are well recognized for providing dynamic content and encouraging student involvement. The answer did not, however, provide specifics on how these instruments are pedagogically incorporated into lessons or what their evaluative role is whether diagnostic, diagnostic, or summative.

The teacher ultimately pointed out lack of motivation as the major challenge pupils encountered with English reading comprehension in response to the last question of the interview. This as answer of questions seven of the interview (What are the most significant difficulties students have with reading comprehension in English?) Students frequently exhibit few interests in class, which frustrates and decreases their motivation to engage or finish assignments, they remarked. This insight emphasizes the need of handling not only the cognitive components of instruction but also the emotional and motivational elements directly influencing student performance.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This chapter includes the main findings or the most relevant facts regarding to the accomplishment or not of the objectives of the investigation proposed in the first chapter. These conclusions offer valuable information on the campus of the effectiveness of using the digital tool ReadWorks Reading Program for improving the reading comprehension skills.

5.1 CONCLUSIONS

In relation with the first objective proposed in chapter I that is focus on identify the specific challenges students, face in reading comprehension through a diagnostic assessment to develop targeted intervention strategies can be possible to comply with the use of the pretest and the checklist. The results found in the pre-test shows the low level in reading comprehension students have when in terms of interference, deduction, and get ideas more complex and when the text or the reading do not mention or show the idea explicit, that can be perceived in the last question of the pre-test about the main idea of the text, which was one of the question with lowest percentage of accuracy.

This goes hand by hand with the next instrument that is the checklist, in which is predominant the lowest percentage of the population that gets the main idea of the text, another important fact that can be observed in the checklist is that nobody of the students can answer all the questions of the reading correctly, which clearly reflects a gap in the understanding and deep comprehension of the reading. Besides that, most of the students in the checklist are located or most of the population just can answer one, two or three question correctly.

Additionally, the difficulties on the understanding and low level of reading comprehension can goes hand by hand with the issue that the majority of the students underline more than thirty unknown words, which clearly reflects the gap of knowledge of vocabulary which clearly will

affect when students need to analyze the text in depth, because if they do not know the meaning of some words, much less understand what is implicit, it means that more difficulties or complications they have when the idea is implicit of the text because they do not have the capacity nor to understand what is explicit. It can be said that the first objective is achieved since the results of the pre-test clearly show the gaps that the students have in reading comprehension skill and that act as a guide that is needed to put more effort on creating and planning activities, lessons and moments to reinforce this skill.

Regarding to the objective number two of the investigation to implement the ReadWorks digital tool in classroom activities to promote strategies that enhance students' reading comprehension skills. It shows that although the investigator writes the indications on the board clearly, writes the name of the online tool and the way to how search it on the navigator, students feel the necessity to constantly ask to the investigator what is the next step or how to do or, even though they have the capacity to follow the instructions it is shown that the students have the necessity to have the support of the teacher to guide them that they were completing all the steps correctly.

Besides that, adding more details to fulfillment of this objective it can be said that half of the students show good attitude and they feel calm during trying to log in to the link, on the other hand the other half of the group feel anxious and stressed and in some cases they want that the investigator and the teacher help them with the process, the constant number of times they asked questions reflect their lack of patience and self-confidence. It also reflects that they did not pay attention, since even if the instructions were clearly written on the board, they would ask if it was right or if they were doing well.

In relation with the third objective of the investigation about to determine the improvement in students' reading comprehension skills through a post-test assessment following the use of the digital tool it can be said that this objective was partially achieved because in the comparative chart between the results the pre-test and the post, that chart shows an improvement in the correct answers in the post test which clearly shows a slight improvement in the answer given by the students. That highlights that the constant practice and use of the online tool can help to improve the students' reading comprehension skills, a growth in knowledge and acquisition of new vocabulary, it can be said even that the practice the skill with students can improve in the comprehension of the main and second ideas of the readings. However, the post test and checklist show that students still have a basic level of vocabulary because most of the students underline more than thirty unknown words.

As part of the instruments the students' questionnaire shows that students were satisfied with the online tool Readworks because in question number one about the feeling or the perception of the use of the tool was mostly positive perceptions since fifty percent express that they were very satisfied, thirty five percent that they were satisfied, and the left fifteen percent mentioned that was neutral which clearly shows a good perception to the online tool for the students. Furthermore, most percent of the students with eighty-five percent mention that they want their professor to continue using the tool, what is a positive sign that the tool has positive impact in the education and in the improvement on the improving the reading comprehension skill.

5.2 RECOMMENDATIONS

Mention before the main aspects that can be highlighted of this investigation, the researcher will give certain recommendations that can help or guide another researchers or readers to have better educational and pedagogical result with the use of this tool. These recommendations are based on the project named The effectiveness of using the digital tool ReadWorks Reading Program for improving the reading comprehension skills of eight-year students at the Miramar High School in the first quarter of 2025

- a) It is needed to have more time to explain the online tool before students make their first contact with the students. This means show videos or make attractive presentation for the students that includes the screenshots about how the tool looks like, so in that way avoid stress or anxiety of the students when their use or see a new educational tool.
- b) Give to the students more chance or time to the students to they can freely act up the tool before making the first reading and practice.
- c) Use the online tool at least once a week, so in that way students keep in touch with the online tool, so they do not forget how to use it and put into practice more constantly the practice of the skills so can be perceiving better results on the improvement of the skill.
- d) Ask to the group about their likes or dislikes, so in that way the professor can look for readings about students' like topics, so in that way students can feel more motivated to continue practicing and make them feel an important part of the class and included them.
- e) The online tool can have important improvement on the skill but is needed to use it for some weeks or months if you can perceive a significant improvement of the skill.

- f) The online tool can be adapted to different levels because it has the option to choose the level to want to work with, so the online tool can be adapted to any educational level in which students already know read.

CHAPTER VI

PROPOSAL

6.1.NAME OF THE PROPOSAL

The current proposal is “The improvement of reading comprehension using online digital tools”. This project is based on the investigation of the effectiveness of using the digital tool ReadWorks Reading Program for improving the reading comprehension skills of eighth-year students at Miramar High School in the first quarter of 2025.

6.1.1 DESCRIPTION

This project or process learning activity is intended for secondary students, specifically for eighth-grade students at Miramar High School. The main objective is to improve the understanding of different types of reading and the improvement of the reading comprehension skill about capturing main ideas, conclusions, and information of the text through practicing this skill with the online tool ReadWorks program. The schedule of this plan lasts five weeks. During the first week, students will take a pre-test as a guide to know their initial comprehension skill. The next week, the students will start using the ReadWorks digital tool as a first approach to start practicing this skill with the online tool, then the following two weeks is the same dynamic that students can read the text and answer the questions provide by the digital tool, as a way that the students can practice every week this skills because they are constantly expose to the readings. The project concludes in the fifth week with a post-test to evaluate the students' progress after using the online tool in the reading comprehension skill.

6.1.2 Place to be developed

This proposal will be developed at Liceo de Miramar High School, a High school founded in 1971. This means that in this current year, 2025, this high school has 54 years of teaching, preparing, and graduating students to get a complete secondary education.

6.1.3 Organization

This institutions are public, belongs or is directed by Ministerio de Educación Publica (MEP) , the institution is named Liceo the Miramar High School, which is Located in the province of Puntarenas in the Canton of Montes de ore and belongs to scholar circuit 04.

6.1.4 Involved Population

The involved population of this proposal is centered in students in basic or intermediate proficiency level, in terms with the linguistic band can be used in students since A1 to C2 enrolled in Public or private educational institutions.

6.2 OBJECTIVES OF THE PROPOSAL

6.2.1 General objective

To determine the effectiveness of using the ReadWorks digital tool for improving reading comprehension skills with eighth -year students of Miramar High school, Puntarenas in the first Quarter of 2025.

6.2.2 Specific objectives

- a) To identify the specific challenges students, face in reading comprehension through a diagnostic assessment, in order to develop targeted intervention strategies.
- b) To implement the ReadWorks digital tool in classroom activities to promote strategies that enhance students' reading comprehension skills.
- c) To determine the improvement in students' reading comprehension skills through a post-test assessment following the use of the digital tool.

6.3 CHRONOGRAM OF ACTIVITIES

| Session | Activity | Description |
|---------|--|---|
| 1 | <p>Observation</p> <p>Pre-test application</p> | <p>In this session, the researcher observes the group and applies the pre-test. In this case, the pre-test is applied on paper; the online tool is not used yet.</p> |
| 2 | <p>Explanation of how to get into the online tool.</p> <p>The first approach is practicing reading comprehension with the program ReadWorks.</p> | <p>During this session, the researcher explains step by step how to access the tool from Google, writes the steps and the code of the class on the board. After that, when all students can access to the ReadWorks programs, they complete the first practice that was previously uploaded by the researcher</p> |
| 3 | <p>Second approach of practicing comprehension with the online tool.</p> | <p>The researcher previously uploaded the reading with the respective practice that he or she wants to practice for this class.</p> |
| 4 | <p>The third approach of practicing reading is with the online tool.</p> | <p>During this session students do the reading and complete the practice comprehension as all the last two classes.</p> |
| 5 | <p>Post Test Application</p> | <p>This is the closing of the activity, students complete a reading and a practice for the last time as a post-test, so in that way, the researcher</p> |

| | | |
|--|--|--|
| | A questionnaire for the students to ask them their perception of the online tool | observes if there is an improvement or not after practicing this skill. The researcher applied a questionnaire to know the perception of the students to practice reading comprehension. |
|--|--|--|

6.4 BUDGET FOR ITS IMPLEMENTATION

This project is a low-cost project or null concerning the money needed to carry it out. Students need a cellphone, which nowadays most of the students have; or in case they do not have one, the professor can bring them the printed material. The online tool has free access, just ask for a login with an email.

REFERENCES

- Allan Wigfield, Jessica Gladstone, and Lara Turci. (2016). *Beyond Cognition: Reading Motivation and Reading Comprehension*. ResearchGate. https://www.researchgate.net/publication/303498757_Beyond_Cognition_Reading_Motivation_and_Reading_Comprehension
- Al-Rimawi, S & Al Masri, A. (2022). The Level of Reading Comprehension Skills of Students with Learning Disabilities in Jordan. *Journal of Educational and Social Research* 12(1). P. 234-245. DOI: <https://doi.org/10.36941/jesr-2022-0019>
- Alvi, M. (2016). A manual for selecting Sampling Techniques in research. Munich Personal RePEc Archive, 1–57. <https://mpra.ub.uni-muenchen.de/70218/>
- Angulo Abarca, Cindy Elena Chaves Gutiérrez, Eros Yadid. (2022). *Implementing Quizlet Tool to Improve Reading Skills of 10th Grader Students at Belén High School*. Universidad Latina de Costa Rica. <https://repositorio.ulatina.ac.cr/handle/20.500.12411/1560>
- Bharathi, M. (2023). Digital Tools for Teaching English: An Effective and Innovative Way. *International Journal of English*, 12. (1), 94-101. <https://doi.org/10.34293/rtdh.v12iS1-Dec.47>
- Bradshaw, S., Nobles, S & Xiao, W. (2022). Using Article-A-Day as an ALL-school Enrichment Program. ReadWorks. <https://about.readworks.org/blog/category/research>
- Bui, T. (2022). English teachers' integration of digital technologies in the classroom. *International Journal of Educational Research Open*, 3, 1-15. <https://doi.org/10.1016/j.ijedro.2022.100204>

Burke, A. (2023). Reading Comprehension | Inferential, Literal & Evaluative. Study.com. Recovered from: [https://study.com/academy/lesson/reading-comprehension-literal-inferential-](https://study.com/academy/lesson/reading-comprehension-literal-inferential-evaluative.html#:~:text=Inferential%20comprehension%20refers%20to%20the,the%20case%20with%20literal%20comprehension)

[evaluative.html#:~:text=Inferential%20comprehension%20refers%20to%20the,the%20case%20with%20literal%20comprehension](https://study.com/academy/lesson/reading-comprehension-literal-inferential-evaluative.html#:~:text=Inferential%20comprehension%20refers%20to%20the,the%20case%20with%20literal%20comprehension).

Calder, M & Nobles, S. (2023). Digital Reading Formats Improve Reading Comprehension. ReadWorks. <https://about.readworks.org/blog/category/research>

Charlesworth Author Services. (2024). Applied Research Essentials: Types, examples, and writing guide. <https://www.cwauthors.com/article/applied-research-essentials>.

Campbell, C. (2023). *Teacher Toolkit for Receptive Skills: Listening and Reading*. Dirección de Desarrollo Curricular Departamento de Tercer Ciclo y Educación Diversificada Asesoras nacionales de inglés.

Chaudhary, S & Devi, V. (2019). BENEFIT OF COMPUTER ASSISTED LANGUAGE LEARNING(CALL). JOURNAL OF ENGLISH LANGUAGE AND LITERATURE (JOELL). 6(2), p 10-13. doi: <https://doi.org/10.33329/joell.62.10>

Cordero, M. Q. (2023). *Costa Rica isn't reading well — but what does this mean?* El colectivo 506. <https://elcolectivo506.com/costa-rica-isnt-reading-well-but-what-does-this-mean/?lang=en>

Cortés, X. B. (2013). *Using the Dictionary for Improving Adolescents' Reading Comprehension of Short Scientific Texts*. ResearchGate. https://www.researchgate.net/publication/262436012_Using_the_Dictionary_for_Improving_Adolescents'_Reading_Comprehension_of_Short_Scientific_Texts

Desarrollo educativo. (2021). Montes de Oro. <https://montesdeoro.go.cr/desarrollo-educativo/>

Dina, A & Ciornei, S. (2013). The Advantages and Disadvantages of Computer Assisted Language Learning and Teaching for Foreign Languages. *Procedia - Social and Behavioral Sciences*. 76, p. 248-252. <https://doi.org/10.1016/j.sbspro.2013.04.107>

DiscoverPhDs. (2020). What is Research? - Purpose of Research. DiscoverPhDs. <https://www.discoverphds.com/blog/what-is-research-purpose-of-research>

Divine Mercy University. (2020). LibGuides: Quantitative, Qualitative, and Mixed-Methods Research: Home. <https://library.divinemercy.edu/research-types>

Dougherty, K & Earnest, G. (2015). Developing Reading Comprehension: Effective Instruction for All Students in Prek-2. In Walpole, S & McKenna, M. The Guilford Press (Ed), *Developing Reading Comprehension*. The Guilford Press.

Eaton, S. (2020). Understanding Academic Integrity from a Teaching and Learning Perspective: Engaging with the 4M Framework. Calgary: University of Calgary. <http://hdl.handle.net/1880/112435>

Edwards, L. (2023a). *What is ReadWorks and How Does It Work? Best Tips and Tricks*. Tech & Learning. <https://www.techlearning.com/how-to/what-is-readworks-and-how-does-it-work-best-tips-and-tricks>

Elizabeth S. Pang, Angaluki Muaka, Elizabeth B. Bernhardt and Michael L. Kamil. (2020). *Teaching reading*. SADAG, Bellegarde.

- Elley and Francis Mangubhai, W. (2018). *The Impact of Reading On Second Language Learning*. Scribd. <https://es.scribd.com/document/521583722/The-Impact-of-Reading-on-Second-Language-Learning>
- Fernández-Sánchez, M., Garrido- Arroyo, M y Porras-Masero, I. (2022). Curricular integration of digital technologies in teaching processes. *Frontiers in Education*. 7(12), 1-16. <https://doi.org/10.3389/feduc.2022.1005499>
- Fithriyah, N. L. (2021). Fostering Students' Positive Attitude Towards Reading Comprehension Through ReadWorks. AtlantisPress. <https://www.atlantis-press.com/proceedings/isolec-21/125965737>
- García, J. & Cain, K. (2014). Decoding and Reading Comprehension: A Meta-Analysis to Identify Which Reader and Assessment Characteristics Influence the Strength of the Relationship in English. *Review of educational research*, 84(1), 74–111.
- González-Gómez, L. (2019). La comprensión lectora y su importancia para estudiantes de la Universidad Mundo Maya, campus Campeche. *Revista Electrónica Gestión de las Personas y Tecnología*, 12,(36). Disponible en: <https://www.redalyc.org/articulo.oa?id=477865646004>
- Jiménez, E. (2014). Comprensión lectora VS Competencia lectora: qué son y qué relación existe entre ellas. *Investigaciones sobre Lectura*, (1), p. 65-74. <https://www.redalyc.org/pd.f/4462/446243919005.pdf>
- Kumari, N., Akshwin, T., & Thenmozhi, M. (2023). COMPUTER ASSISTED LANGUAGE LEARNING.

https://www.researchgate.net/publication/372371825_COMPUTER_ASSISTED_LANGUAGE_LEARNING

Liceo de Miramar, L. (s/f). International Baccalaureate. Ibo.org. Recuperado el 14 de enero de 2025, de <https://www.ibo.org/es/school/051551>

McGeown, S. P., Duncan, L. G., Griffiths, Y. M., & Stothard, S. E. (2015). Exploring the relationship between adolescent's reading skills, reading motivation, and reading habits. *Reading and Writing*, 28, 545–569. <https://doi.org/10.1007/s11145-014-9537-9>

Ministerio de Educacion Publica(MEP), M. (2024). *NATIONAL STANDARDIZED FOREIGN LANGUAGE TEST: ENGLISH*. https://dgec.mep.go.cr/wp-content/uploads/2024/04/INGLES_INGLES.pdf

Mohamed, R. (2023). Reciprocal Teaching as a Cognitive and Metacognitive Strategy in Promoting Saudi University Students' Reading Comprehension. *Open Education Studies*, 5. 1-18. <https://doi.org/10.1515/edu-2022-0200>

Murray, M. (2016). Language Comprehension Ability: One of Two Essential Components of Reading Comprehension. In K. Munger. Open SUNY (Ed.), *Steps to Success: Crossing the Bridge Between Literacy Research and Practice*. Open SUNY.

Nobles, S. (2023). Here's Why Research is Essential to EdTech ReadWorks. ReadWorks. <https://about.readworks.org/blog/category/research>

Núñez-Valdés, K., Medina-Peréz, J y González-Campos, J. (2019). Impact of reading comprehension skills on school learning: A study made in a commune of the Metropolitan region, Chile. *Revista Electrónica Educare*. 23(2), 1-22. doi: <http://dx.doi.org/10.15359/ree.23-2.2>

OECD. (2019). PISA 2018 Results (Volume I): What Students Know and Can Do. Retrieved from <https://www.oecd.org/pisa/>

Physiopedia.com (2024). Types of Research. https://www.physiopedia.com/Types_of_Research

Raman, M., Calder, M, Karimian, N & Nobles, S. (2023). How does ReadWorks Create High-Quality Texts for Reading Comprehension? ReadWorks. <https://about.readworks.org/blog/category/research>

Ranganathan, P. (2019). Understanding research study designs. Indian Journal of Critical Care Medicine: Peer-Reviewed, Official Publication of Indian Society of Critical Care Medicine, 23(S4), 0–0. <https://doi.org/10.5005/jp-journals-10071-23314>

Rochanaphapayon, T. (2024). Digital Literacy: Enhancing English Reading Comprehension among Foreign Language Students. *English Language Teaching*,17,(1), 26-33. doi: 10.5539/elt.v17n1p26

Santi, K., & Reed, D. (2015). Improving Reading Comprehension of Middle and High School Students. Springer International Publishing. https://www.researchgate.net/publication/272489877_Improving_Reading_Comprehension_of_Middle_and_High_School_Students

Sawchuk, S. (2024). *Reading Comprehension Challenges and Opportunities, in Charts*. EducationWeek. <https://ejournal.unp.ac.id/index.php/jelt/article/view/110022/104116>

Saylor Academy. (2012). Micro, Meso, and Macro Approaches. Github.io. https://saylordotorg.github.io/text_principles-of-sociological-inquiry-qualitative-and-quantitative-methods/s05-01-micro-meso-and-macro-approache.html

- Simmons, N. (2020). The 4M framework as an analytic lens for SoTL's impact: A study of seven scholars. *Teaching & Learning Inquiry*, 8(1).
<http://dx.doi.org/10.20343/teachlearninqu.8.1.6>
- Smith, R., Snow, P., Serry, T., & Hammond, L. (2021). The Role of Background Knowledge in Reading Comprehension: A Critical Review. *Reading Psychology*, 42(3), p. 214–240.
<https://doi.org/10.1080/02702711.2021.1888348>
- Stevani, M., Prayuda, M., Wulan, D., Mangadar, S & Erikson, K. (2022). Evaluation of contextual clues: EFL proficiency in reading comprehension. *English Review: Journal of English Education*, 10(3), p. 993-1002. <http://doi.org/10.25134/erjee.v10i3.7076>
- Strathmore University Business School. (2021). Research designs: an overview. Strathmore.edu. <https://sbselearning.strathmore.edu/course/view.php?id=227>
- Wahyuni, N. S. D. (2020). SENIOR HIGH SCHOOL STUDENTS' ENGLISH READING HABITS AND THEIR ABILITY TO COMPREHEND SHORT STORY IN ENGLISH: A correlational study at SMA Negeri 1 GunungTuleh. *Journal of English Language Teaching*, 9, 639–643.
<https://ejournal.unp.ac.id/index.php/jelt/article/view/110022/104116>
- Wahyuni, N. S. D. (2020). SENIOR HIGH SCHOOL STUDENTS' ENGLISH READING HABITS AND THEIR ABILITY TO COMPREHEND SHORT STORY IN ENGLISH: A correlational study at SMA Negeri 1 GunungTuleh. *Journal of English Language Teaching*, 9, 639–643.
<https://ejournal.unp.ac.id/index.php/jelt/article/view/110022/104116>

Wiącek, M. (2024). *Computer Assisted Language Learning (CALL)*. Taalhammer.
<https://www.taalhammer.com/computer-assisted-language-learning/>

Widiastuti, O., Sulisty, T & Liskinasih, A. (2021). *COMPUTER-ASSISTED LANGUAGE LEARNING HANDBOOK FOR STUDENTS*. Media Nusa Creative.
[https://www.google.co.cr/books/edition/Computer_Assisted_Language_Learning/PthWEAAAQBAJ?hl=es&gbpv=1&dq=The+Computer-Assisted+Language+Learning+\(CALL\)+method&printsec=frontcover](https://www.google.co.cr/books/edition/Computer_Assisted_Language_Learning/PthWEAAAQBAJ?hl=es&gbpv=1&dq=The+Computer-Assisted+Language+Learning+(CALL)+method&printsec=frontcover)

ANNEXES

6.5 INSTRUMENTS

6.5.1 Cover Letter

I as a student who is aspiring for my English teaching degree at Universidad Hispanoamericana am writing you to invite you to participate in a study aimed at knowing the reading comprehension skills of eight-year graders from Liceo the Miramar High School. This study seeks to gather data on the levels of reading comprehension skills of eighth graders and the changes that occur after applying the online tool ReadWorks. I assure you that all responses will be used strictly for the investigation and will be confidential and anonymous. The data collected will be aggregated, and no individual responses will be identifiable. We adhere to strict ethical standards to ensure the privacy and security of all participants. To participate in this study, please complete the interview and you will be part of the students who will be observed to know the results. Your involvement in this study is highly appreciated and will contribute significantly. Thank you for your time and cooperation.

Sincerely, Ana Quesada Alvarado, Student from Universidad Hispanoamericana

Objective 1: To identify the specific challenges students, face in reading comprehension through a diagnostic assessment, to develop targeted intervention strategies. (checklist and a pre-test)

6.5.2 Instrument: Checklist 1

| | | | |
|---|-----|----|-------------|
| Students get a general idea of the text | Yes | No | Observation |
| Students can answer all the questions of the exercise correctly | Yes | No | Observation |
| Students can answer 1-3 questions of the exercise correctly | Yes | No | Observation |
| Students can answer 3-5 questions of the exercise correctly | | | |
| Students answer any questions of the exercise correctly | Yes | No | Observation |
| Students underline more than 30 words that they do not know | Yes | No | Observation |

| | | | |
|---|-----|----|-------------|
| Students underline more than 15 and less than 20 that they do not know | Yes | No | Observation |
| Students underline less than 10 words that they do not know | Yes | No | Observation |
| Students choose and write 20 or 30 words that they know, understand and write the meaning | Yes | No | Observation |
| Students choose and write 10 or 20 words that they know, understand and write the meaning | Yes | No | Observation |
| Students choose and write 5 or 10 words that they know, understand and write the meaning | Yes | No | Observation |

| Students choose and write less than 5 words that they know, understand, and write the meaning | Yes | No | Observation |
|---|-----|----|-------------|
| | | | |

6.5.3 Pre-test

Instructions: Students must read the test and underline the words they do not know the meaning of, besides that students must write the words they know and the meaning.

Finally, students must answer the questions

“Winter is on the way”

If you had been living in North America many millions of years ago, you would have found the weather warm and damp all year around. There were no winters as we know them. Then the climate began to change. To survive, the kinds of plants and animals living then had to be able to live through the cold seasons.

As millions of years went by, certain kinds of plants and animals lived through the winter better than others. Others didn't do as well, and over the years, they died out. Today, the plants and animals that you find in the northern part of the United States all have ways of behavior or physical characteristics, called adaptations, that help them survive the winter season. Let's look at some of how different kinds of plants and animals are adapted to live through the winter.

Hibernation is a deep sleep in which an animal's breathing, heartbeat, and other body processes slow down until the animal is barely alive. In this way, it survives the winter by using very little food energy. Hibernators include chipmunks, woodchucks, and some bats and mice. Some other animals such as bears and skunks are not very active during the winter, but they do not hibernate.

Many trees seem to be dead in the winter. In a way, they hibernate like certain animals. If you cut down through the twig, you will find the young leaves that will bloom in the spring. They are protected from drying out by layers of tough bud scales.



© AMNH

Most — but not all — caribou migrate to find food and reproduce. Some herds roam far; others stay local.

Migration is not just for the birds. Some mammals, including caribou and some kinds of bats, also migrate. In summer, these caribou feed and raise their young in northern Alaska and Canada. Then they travel south, as far as 800 miles to forests that are somewhat protected from the arctic winter.



© *Denali National Park & Preserve*

a grey-brown snowshoe hare in the summer

In summer, the snowshoe hare is a grey-brown. As winter nears, a new coat of white-tipped hairs gradually covers the animal. Soon the hare blends into the snowy background.

Snowshoe hares also have large, hairy feet — “snowshoes” that enable them to move more easily over snow.



© *Denali National Park & Preserve*

a white snowshoe hare in the winter

Feet that grow into a kind of “snowshoe” help the ruffed grouse walk on snow. These birds live in the forests of southern Canada and the northern United States. In the fall, a comb-like fringe grows on the edges of their toes. This fringe increases the surface of the birds’ feet two or three times, enabling them to walk on the snow without sinking.

Making hay is the way that the pika prepares for winter. These rodents, about the size of a chipmunk, live on the rocky slopes of western mountains. Through summer, pikas cut stems of grass and put them in piles to dry. The dried “hay” is then stored among rocks for winter food.



Image courtesy of the California Department of Fish and Wildlife

During late summer, the American pika collects plants and stores them in “hay piles.”

Look around this fall and winter and see if you can find other ways in which plants and animals adapt to survive

Questions

1. What are adaptations?

A. small rodents that are the size of chipmunks and eat hay

- B. behavior or physical characteristics that help animals survive
- C. shoes that you need to wear when you visit a snowy place
- D. a place with warm and damp weather all year around

2. Hibernation slows down an animal's body processes. According to the text, how does this affect its survival?

- A. It helps its survival because it can run faster to find food.
- B. It hurts its survival because it cannot escape other animals.
- C. It helps its survival because they need very little food energy.
- D. It hurts its survival because they stay in one place for months.

3. Read the following sentences from the text.

“Migration is not just for the birds. Some mammals, including caribou and some kinds of bats, also migrate. In summer, these caribou feed and raise their young in northern Alaska and Canada. Then they travel south, as far as 800 miles to forests that are somewhat protected from the arctic winter.”

What conclusion can you draw from this evidence?

- A. The caribou hibernate after they migrate 800 miles to the forests because they are tired.
- B. Only young caribou migrate south for the winter because they do not have fur to stay warm.
- C. Winter in northern Alaska and Canada is colder than winter in the forests the caribou migrate to.
- D. Caribou and bats migrate south from northern Alaska and Canada to the same forests.

4. How have the snowshoe hare and ruffed grouse adapted similarly to cold weather?

- A. They grow hair on their feet that helps them walk in the snow.
- B. They slow down their heartbeat, so they use little food energy.
- C. Their fur or feathers turn white to help them hide in the snow.
- D. They migrate to forests that are protected by cold temperatures.

5. What is the main idea of this text?

- A. Trees hibernate in their way during the winter because they appear dead and protect young leaves from drying out.
- B. Some animals, like chipmunks and woodchucks, hibernate in the winter while other animals, like bears and skunks, are less active.
- C. The pika is a rodent that makes winter food for itself by cutting stems of grass, drying them out, and storing them in rocks.
- D. As the climate in North America changed, plants and animals adapted in different ways to survive during cold weather.

Taken from: ReadWorks Online tool

Objective 2 To implement the Readworks digital tool in classroom activities to promote strategies that enhance students' reading comprehension skills.

Instrument: A checklist about the use of Readworks, it is applied after the researcher explains how to use the digital tool, so the researcher observes how they use it

6.5.4 Checklist 2

| Students follow all the steps that the teacher explains to log in to the digital tool | yes | No | Observation |
|---|-----|----|-------------|
| | | | |

| | | | |
|---|-----|----|-------------|
| Students ask many questions during the process of logging in to the online tool | yes | No | Observation |
| Students ask the teacher “What is the next step?” | yes | No | Observation |
| Students have difficulties finding the online tool in the navigator | yes | No | Observation |
| Students explore the online tool easily | yes | No | Observation |
| Students show a good impression when they explore the online tool | yes | No | Observation |
| Students looked worried while they were trying to explore the online tool | yes | No | Observation |
| | | | |

Objective 3: To determine the improvement in students' reading comprehension skills through a post-test assessment following the use of the digital tool.

6.5.5 Post-test: “Safer Travels for big game Animals”

When you hear the words “big game,” your first thought might be of football or your favorite video game. In nature, big game is a term that describes large mammals. In the United States, elk, mule deer, and pronghorn are considered big game. They are all types of large mammals that people can choose to hunt for food.

These animals are called “big” for good reason. A mule deer, for example, can weigh almost 500 pounds! They have large antlers and can run as fast as 45 miles per hour. Because of the position of their eyes, they can see 310 degrees around them! Remember, a full circle is 360 degrees.

Mule deer migrate, often traveling hundreds of miles across mountainous landscapes in western states. They like to live in one place in the summer and a different place during the winter. That is mainly because as the seasons change from summer to winter, there is less food for them to eat. They eat grasses and other plants. As the temperature gets colder, some plants die. The mule deer know their winter home will have more for them to eat. So, when the temperature starts to change, herds decide it's time for them to be on their way to their other home.

Conservationists are worried about the dangers these animals face as they travel. Humans continue to settle in places that used to be open land. Fires have damaged some of

the routes used by mule deer. They have to jump barbed-wire fences, cross busy roads, and travel through farmland. In some places, there is nothing for them to eat and no place for them to find shelter. There are no roadside rest stops for these travelers!

Conservationists want to make sure as many of the mule deer as possible make it to their summer or winter homes. They are studying the paths the animals take and finding ways to make the routes safer. To do this, they are protecting and restoring these migration paths. In Utah, conservationists remove plants that prevent sagebrush from growing in the mule deer's winter ranges. During the winter, sagebrush is the mule deer's main source of food.

In other places, like Montana, conservationists are planning to put up fences along highways that lead to special wildlife overpasses. They hope to keep the mule deer off the roads, so they don't get hit by cars. This will also protect the drivers. In Wyoming, conservationists are protecting 280 acres of land that are part of the animals' migration path. They are doing this to keep people from building on it. These are just a few of the ways conservationists are protecting these big game animals.

The next time you think about traveling, remember that big game species such as mule deer might be doing the same thing. Now you know they are doing it safely!

Taken from: Readworks Online tool

Questions

1. What group of animals are elk, mule deer, and pronghorn all part of?

A. sea creatures

- B. big game
- C. small game
- D. extinct game

2. What causes the mule deer to migrate every year?

- A. change in temperature
- B. big rainstorms
- C. hunters in their area
- D. fights between mule deer

3.

Read the following sentences from the passage.

“Humans continue to settle in places that used to be open land. Fires have damaged some of the routes used by mule deer. They have to jump barbed-wire fences, cross busy roads, and travel through farmland.”

What can you conclude about mule deer’s migration routes based on this information?

- A. Their routes have been impacted by humans.

- B. Their routes are becoming safer.
- C. Their routes have not changed.
- D. Their routes are not impacted by humans.

4. What are two approaches that conservationists are taking to protect mule deer?

- A. studying them in captivity and tracking them using nanotrackers
- B. relocating them to the eastern United States and protecting them there
- C. putting up signs to alert people to their presence and leaving bowls of water for them
- D. restoring their food sources and protecting them from injury on roads

5. What is the main idea of this passage?

- A. In Utah, conservationists are removing plants that might stop sagebrush from growing where the mule deer live in the winter.
- B. Mule deer have special eyes that allow them to see 310 degrees around them, which means they can almost see in a full circle.
- C. Mule deer's migration routes are getting more dangerous, so conservationists are taking steps to protect these big game animals.

- D. A mule deer can weigh almost 500 pounds, but it doesn't use its size to eat other animals; instead, it only eats plants

Questions Taken from: Readworks Online tool

Instrument: Questionnaire for the students

1. What is your opinion about using the online tool Readworks?
 - A. Very Satisfied
 - B. Satisfied
 - C. Neutral
 - D. Dissatisfied
 - E. Very Dissatisfied

2. How do you feel about using this tool to improve reading comprehension?
 - A. Very Satisfied
 - B. Satisfied
 - C. Neutral
 - D. Dissatisfied
 - E. Very Dissatisfied

3. Do you consider the ability to understand texts improved after using and practicing the digital tool?
 - Yes
 - No
 - Other comment

4. Do you consider that the Readworks digital tool can be useful to improve other skills?

E. Very Satisfied

F. Satisfied

G. Neutral

H. Dissatisfied

I. Very Dissatisfied

Other comment

5. Do you find captivating the digital tool Readworks?

Yes

No

A. Would you like your teacher to continue implementing the use of the tool
in classes?

Yes

No

Other comment

7. Would you like them to include more technology to improve English language
skills?

Yes

No

Other comment

8. Do you consider that the application of online tools and methodology of using
technology in the classroom is better than the conventional methodology to
improve reading comprehension?

Yes

No

Other comment

9. Do you recommend this online tool to other educational institutions to improve reading comprehension skills?

Yes

No

Other comment

10. Do you would like to continue using the online tool for other study aspects?

Yes

No

Other comment

11. Do you consider that the online tool contains a variety of readings, practices, and aspects to help to improve reading comprehension skills?

Yes

No

Other comment

6.5.6 Interview for the teacher in charge of the group

1. How long have you worked as a MEP teacher?
2. In your experience as a teacher, have you ever included lessons, strategies, and methodologies to develop student's reading comprehension?
3. Which strategies, tips, or activities have you used or planned to improve students' reading comprehension in your classes?

4. Which type of resources have you used to teach reading comprehension? (internet, apps, books, flashcards)
5. Based on your knowledge and experience, what are your students' current reading comprehension levels?
6. Have you used online tools to teach reading comprehension? Which ones?
7. In your opinion, which are the most significant difficulties that students have with reading comprehension in English?

6.5.7 Questionnaire for the students

Instrument: Questionnaire for the students

1. What is your opinion about using the online tool Readworks?
 - A. Very Satisfied
 - B. Satisfied
 - C. Neutral
 - D. Dissatisfied
 - E. Very Dissatisfied

2. How do you feel about using the tool to improve reading comprehension?
 - A. Very Satisfied
 - B. Satisfied
 - C. Neutral
 - D. Dissatisfied
 - E. Very Dissatisfied

Instrument: Questionnaire for the students

1. Do you like the online tool ReadWorks?
 - Yes
 - No
 - Other comment

2. Do you consider the online tool useful to improve reading comprehension Skills?
 - Yes



