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MAESTRÍA EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS MENCIÓN INGLÉS

TEMA: THE INTEGRATION OF ICT'S IN READING COMPRENHESION IN STUDENTS OF THIRD BACHILLERATO LEVELS A-B AT UNIDAD EDUCATIVA LUIS A. MARTINEZ

Trabajo de titulación previo a la obtención del grado académico de Magister en Pedagogía de los Idiomas Nacionales e Internacionales Mención Inglés

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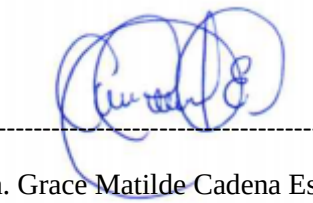

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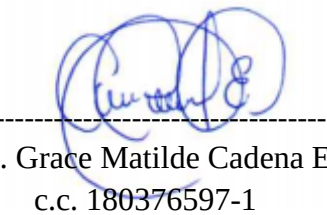

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A mis queridos padres, hermanos, esposo e hija

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THEME:

THE INTEGRATION OF ICT'S IN READING COMPRENHESION IN STUDENTS OF THIRD BACHILLERATO LEVELS A-B AT UNIDAD EDUCATIVA LUIS A. MARTINEZ

AUTHOR: Lic.Grace Matilde Cadena Escobar

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LINE OF RESEARCH: Methods and means for teaching

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ABSTRACT

The main objective of this research was to determine the relationship between the use of ICTs and comprehensive reading in English in third year high school students of the Luis A. Martínez Educational Unit. The present investigation worked with a total of 70 participants between the ages of 16-18 years old. The control group (CG) consisted of 35 students and the experimental group (EG) consisted of 35 students. Technological tools such as Padlet, Google Slides, Google Forms, Google Docs, Google Docs, Mentimeter, Miro were applied to the students in the experimental group (EG). A Pre and Post-tests taken from the official Cambridge page of the reading section and A2 level were applied for the level and ages required by the students evaluated.

The methodology used for this research was quasi-experimental because the groups were not chosen at random, but were previously formed, in this case, 2 parallel groups of third year of high school A-B, experimental group (GE) parallel A, and control

group (GC) parallel B. Besides, its purpose was to analyze whether Tics and the improvement of comprehensive reading are related. Besides, 3 virtual sessions were planned through Zoom, with a duration of 40 minutes each. Each session consisted of a procedure and reading strategies such as: Before, during and after reading, strategies such as: underlining, main ideas, concept maps, etc. The results obtained according to the Chi-square test showed that the (CG) to whom the technological tools mentioned above were applied, improved their reading comprehension. This conclusion was based on contrasting the results of the first test and then with a final test, after using the technological tools. This helped us to prove that by using the technological tools the students of the control group improved their comprehension level in terms of reading comprehension in English.

Keywords: Google Docs, Google Forms, Google Slides, Reading Comprehension, Mentimeter, Miro, ICT's, Padlet, Pre and Post-Test.

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AUTOR: Lic. Grace Matilde Cadena Escobar

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LÍNEA DE INVESTIGACIÓN: Métodos y medios de enseñanza.

FECHA: 12 de enero del 2021

RESUMEN EJECUTIVO

El objetivo principal de este trabajo de investigación fue determinar la relación entre el uso de las Tics y la lectura comprensiva en inglés en estudiantes de tercero de bachillerato de la Unidad Educativa Luis A. Martínez. La presente investigación trabajó con un total de 70 participantes comprendidos entre edades de 16-18 años. El grupo control conformado (GC) por 35 estudiantes y el grupo experimental (GE) conformado por 35 estudiantes. A los estudiantes que conformaron el grupo experimental (GE) se les aplicó herramientas tecnológicas como: Padlet, Google Slides, Google Forms, Google Docs., Mentimeter, Miro. Se aplicó un Pre y Post-tests tomados de la página oficial de Cambridge de la sección de lecturas y nivel A2 para el nivel y edades requeridas por los estudiantes evaluados.

La metodología utilizada para esta investigación fue cuasi experimental debido a que no se escogió los grupos al azar, sino que fueron previamente ya formados, en este caso, 2 paralelos de tercero de bachillerato A-B, grupo experimental (GE) paralelo A, y grupo control (GC) paralelo B. Además, su finalidad fue de analizar si las Tics y el mejoramiento de la lectura

comprensiva tienen relación. Además, se planificó 3 sesiones virtuales por medio de Zoom, con una duración de 40 minutos cada una. Cada sesión constó de un procedimiento y estrategias de lectura como son: Antes, durante y después de la lectura, estrategias como: subrayado, ideas principales, mapas conceptuales, etc. Los resultados obtenidos de acuerdo al Chi cuadrado demostraron que el (GC) a quienes se les aplicó las herramientas tecnológicas antes mencionadas, mejoraron con la comprensión lectora. Esta conclusión se basó haciendo un contraste de los resultados de la primera prueba y luego con una prueba final, después de hacer el uso de las herramientas tecnológicas. Esto nos ayudó a comprobar que usando las herramientas tecnológicas los estudiantes del grupo control mejoraron su nivel de comprensión en cuanto a las lecturas en inglés.

Descriptores: Google Docs, Google Forms, Google Slides, Lectura comprensiva, Mentimeter, Miro, Tic's, Padlet, Pre y Post-Test.

CHAPTER I

The research problem

1.1 Introduction

The use of Information and Communication Technologies (ICT) has generated a revealing change within the area of education, where the use of language and the construction of teaching-learning processes are pointing in the same direction. Thanks to this type of technological tools, real-time interaction between student and teacher can be possible.

From the focus of education, which is to train individuals with the capacity to interpret and transform society, ICTs emerge as strategies that allow the learner to acquire knowledge through constructive and collaborative work. They are also considered as learning tools to develop activities that motivate the student and involve him/her in improving their way of learning.

ICTs have become extremely important factors in the progress made in the interpretation of books. They show didactic and productive resources that call and keep the attention of the learner. Likewise, it has transformed the time the teacher talks and the time the student must speak. It provides the opportunity to create a collaborative and participatory environment to achieve significant learning. In this context, the role of the teacher is to collaborate, facilitate, and guide through previously programmed curricular activities. This allows to obtain an important cognitive level in the students.

In this way, the teacher's objective must start from the creation of creative atmospheres to obtain from the students the construction of critical thoughts. "Participation is understood as a process of communication, decision and execution that allows the permanent exchange of knowledge and experiences" (Murcia, 20015, p. 25).

According to what has been mentioned above, ICT allows teachers to use new methods and strategies to avoid falling into traditional teaching by facilitating an exchange of communication. Thus, interaction plays an important role; that is, strengthening previous technology knowledge and offering new tools that help develop new strategies within the field of teaching play an important role in the teaching-learning process by providing a significant contribution to teachers to work interactively. Their influence

in the school world is of vital importance to avoid the difficulties that students present when interpreting a text with meaning. In this research, two study groups were taken, the students of Third of Bachillerato General Levels "A" and "B" at Luis A. Martínez Educational Institute in the city of Ambato.

Therefore, it can be stated that the adequate use and training that teachers receive in the use of ICTs will not only allow achieving progress in reading comprehension but also the different areas of knowledge.

1.2 Justification

Reading comprehension has been a matter of concern for governments around the world because it is one of the difficulties that has been evident every day in classrooms. Teachers must face the situation by seeking alternatives to deal with this problem effectively.

Certain options that teachers can find are technological tools that allow these scholar instruments to improve reading comprehension more effectively and interactively. The present research responds to the need to cooperate in the expansion of knowledge of reading comprehension using technological tools in high school students. It improves reading abilities, which are so necessary at the academic level.

The use of technologies within the area of education has an enormously positive impact, because their level of motivation and interaction with colleagues and teachers increases. The tools that these students normally use are: smartphones, computers and laptops. The technological tools, in addition to promoting motivation and interaction, allow cooperation and collaborative work that help learners to promote initiative and creativity. On the other, it fosters cooperation between students and encourages initiative and creativity.

1.3 Objectives

1.3.1 General

- To investigate the effectiveness of ICT's and reading comprehension in high school students.

1.3.2 Specific

- To describe how technological tools influence reading comprehension.
- To analyze the effectiveness before and after the application of ICT's to develop reading comprehension.
- To identify student progress after using technology tools to improve reading comprehension.

CHAPTER II

RESEARCH BACKGROUND

This section compiles information from authors whose research has established a relationship between keywords such as ICTs and reading comprehension. The research is related to studies at different levels: school, college, and high school focused on the English language. Most of them present the use of different technological tools that help students improve their reading comprehension.

From the point of view of Vilaseca (2017), he made it clear that the education of the XXI century is no longer considered as a repetition of content, but rather it is a space created for the construction of knowledge but in a critical way, within a diversity of cultures accepting the differences of ideas, thoughts and changes favoring the use of ICT's due to the remarkable change in educational quality and growth of teaching staff, this is because both teachers and students must be at the forefront of the changes offered by technology.

Greenland (2019) in his research on the use of ICT's to improve reading comprehension in high school students, the goal was to encourage students to read in a way that they can understand while reading a text. After conducting a survey, it was determined that students did not have a reading habit, or if they read, they did not understand what they were reading and it took too much time to answer questions about the readings. This research lasted 2 sessions with 20 high school students, and the following reading problems were identified: reading process and reading strategies. The author applied an interview to teachers to gather information about the impact of ICT's in education, especially in adolescents. The questions were elaborated in a semi-structured way so that the topics to be studied would cover the most relevant data. In addition, to improve reading comprehension she used the process: before, during, and after reading, carried out in the first session. In the second session, she used strategies such as underlining, mind maps, vocabulary, etc. The instruments used were: questionnaires and checklists. In conclusion, the author stated that the students in the first session obtained 30 correct answers out of 50, and in the second session they obtained 45. The ICT's used in this research were: google forms (progress and evaluation of readings), Kahoot (games that help to remember vocabulary), Wordwall (crossword puzzles that determine the main idea and support ideas).

Hunt (2019) in his research considered ICT as an essential tool within education to improve teaching-learning processes. He had teachers and students as beneficiaries in the use of ICT inside or outside the classroom. One of the benefits he mentioned in his research was cooperative work, knowledge sharing, and constant monitoring of students by the teacher. On the other hand, Morales (2018) talked about learning to read, stating that this consisted of the integral development of language. Then, through his research to college students he showed that there was difficulty in learning to read because reading was not considered as the axis and engine for the development of other learning, because most of the difficulties come from the inability to learn, emotional problems, dependence on cultural traits, use of faulty learning methods, such as traditional learning where the teacher spoke and the student was only a listener.

According to Coiro (2017) in his research to university students on methods for the development of comprehensive reading, he stated that reading is a process of interpretation of signs and these can be of character (logical, models or symbols), whose objective was the transformation of knowledge, and beyond deciphering syllables or words what was intended was to change the way of understanding a text, seeking to be more entertaining reading. In the results it was observed that students felt more motivated at the moment of reading, without feeling pressure or boredom.

Dahik (2018) in her research on improving reading comprehension using the CLIL method, the findings stated that reading comprehension and English language acquisition were maximized in contrast to using the Direct method in high school students. Her findings were based on the time it took the students to read the articles according to their A2 level. Furthermore, the author stated that it is important for teachers to apply intensive reading in the classroom and extensive reading at home so that cultural knowledge can be generated, also encouraging vocabulary acquisition. On the other hand, Dakowska (2017) considered that intensive reading was able to motivate students in a way that allowed them to analyze and study the context more deeply in addition to activating their language and content more intensively. She further argued, that in the process of extensive reading, it made the students work on formal presentations on the content, showing new options.

From Gerstenet's (2019) point of view, he considered that comprehensible input means that learners are able to understand the essence of what is presented in the text, i.e. the

main idea of the text and an overall idea of what the author wants to convey to his readers. The methods used by the author were also creative and dynamic form strategies that made the learners communicate in a natural way, similar and also with a verbal communication based on the needs of the learners in which language acquisition can occur through meaningful interactions rather than learning in which the teacher has to force them. For example, the simpler the input, the more comprehensible it will be.

From the position of Goodman (2019) in his research on strategies to improve comprehensive reading, the following stood out: inference (guessing), scanning reading (scanning), extraction of the main idea of the text (skimming), identification of grammatical structures, elaboration of concept maps. The author mentioned these strategies as a model of improvement in the process of comprehensive reading in university students. He concluded that the relationship between the process and the content was necessary to build meaningful knowledge in students, so that, at the end of his research, the use of reading strategies did help to improve reading comprehension, as well as to increase their vocabulary.

Olvera (2018) conducted a study in high school students on the instruction of reading strategies of English texts, use of multimedia resources, in contrast to a group that used printed material. Both were conducted in classroom conditions and with the same teacher, to determine the degree of improvement in reading comprehension. This research used a quantitative approach with a quasi-experimental design of pre-test and post-test with a control and experimental group, as well as standardized level tests for the evaluation of reading comprehension. The results indicated effectiveness in the experimental group, due to the use of multimedia resources such as those created in PowerPoint and converted to HTML files with the iSpring tool in free version, free questionnaires created online for creative assessment, JClic used for activities with audio, video and image. The author concludes that the use of technological resources favored students to improve their reading comprehension.

Martinez (2017) in her research on the strategies that were used to improve reading comprehension in high school students, he claimed to have used readings and materials of equal similarity for both groups. The control group was taught English text reading strategies in the traditional way, that is, the teacher transmitting the information and

the use of exercises using a notebook and pencil. On the other hand, the experimental group received tutorials using multimedia resources such as JClic because this type of exercise is optimal with audio, image, video and feedback if necessary. The practice was carried out with physical texts, electronic texts and multimedia activities. The access for this type of exercises was done inside a computer classroom, so that students could enter from anywhere, using a PC or smartphones. Immediately after having a username and password each student could access the platform. For the use of the readings, it was divided into 4 parts: questions with true or false options, multiple choice, text completion, and matching the correct options. In this way, in each session the student had access to the platform and completed each section for each session. At the end, the author affirmed to see positive results in students who used this virtual platform because the teacher could give feedback for each section, if necessary, and in this way the students were improving in each process, affirming his hypothesis about the use of tech tool to improve reading comprehension.

Okwayumba (2017) in his research on the influence of ICT on reading comprehension. The author in his research project for testing his theory of ICT inflection in improving reading comprehension conducted pre-test on college students, for example a diagnostic test was taken to know their level of comprehension. After knowing the level of reading comprehension, a basic program called PRIMR was used. It consists of four core components, all of them based on ICT to help foster the habit of reading. Each part was confirmed by different technological tools. For example, for the first part conformed by previously recorded readings, where the student read and listened to the correct pronunciation (power point was used), second part, the student answered questions about the reading (google forms), third part writing main idea of the text, vocabulary (google slides) and the fourth part the students made a summary of the main ideas of the text (google docs). This whole process was done in groups of 4 people, with a total population of 20 people. The author concluded that he obtained important results in the students who used these tools, besides awakening in them the motivation to read by themselves.

In the research cited by Yang (2018) on the implementation of e-strategies for reading and writing in the use of virtual environments for learning English aimed at university students. For this research, a workshop was implemented through the use of a platform with a variety of e-activities and materials to strengthen reading and writing in English.

The platform used in this research was called Creative Corner, a site designed to be managed by university students. This type of platform was divided into 2 parts, the first consisted of general steps to follow with connections to get to the Reading and Writing Workshop, and the second focused on activity guides, video tutorials, teamwork roles, interactive pages, work groups, among others. All activities were conducted online, with the support of innovative resources that motivate participation and the delivery of more creative products, such as the use of the story bird page. The results after two sessions, indicated that it is necessary to work with students from an early age, due to the fact that this type of students did not have a reading habit, and creating in them this habit became difficult so that many of them could not use an electronic device such as computer or smart phone. Before using this platform, they were given a course on how to access the platform through smart phones or computers. But in the end the author concluded that the students were motivated to read in different ways, such as e-reading from the platform that allowed them to answer online and have their grade instantly. In other words, several free online platforms can be implemented, but students must know how to handle any technological resource.

Mirell (2018) in his research on technological resources to improve reading comprehension, proposed the management of Perusall online social learning platform designed to promote pre-class reading engagement. The teacher created an online course in Perusall, adopting texts, articles or documents digitally, and creating tasks at the same time. For example, students had to answer questions about the reading, such as completing with the correct word, answering true or false, multiple choice and the meaning of the words according to the context. The teacher assigned a reading to the students 2 days in advance so that it could be analyzed at home, then in class they discussed the reading, as well as the vocabulary. This platform consisted of basic annotation functions, because Persuall had a number of additional features designed to make it a more enjoyable experience between students and teachers. Finally, the author compared students who made use of the platform with students who did not use it, concluding that better results were obtained using the Persuall platform.

For Bendeck (2019) the impact of the application of the "ImmerseMe" virtual platform as an innovative tool for English language learning in university students was in a positive way, due to its ease of use and the strategies used in each activity. For example, the research was divided into 3 sessions. The first session used the brainstorming

strategy. Each student after presenting the reading, predicted what the reading would possibly be about, everyone contributed with their ideas within this platform. In the second session, students were able to draw main ideas from the text, vocabulary and a brief summary of the text. Finally, in the third session, students made a summary using mind maps and writing key words. The author noticed a very positive change in the students who used this tool, the time they spent was less and less and with a higher degree of understanding, many of the students expressed their willingness to use a digital tool instead of the traditional, because within the same platform. They had didactic resources, such as a reading with recorded audio, and thus they would improve not only their reading comprehension but also their pronunciation.

Thonner (2019) stated in his research, he used a quasi-experimental design, that is, with random assignment of groups, in other words an experimental group and a control group. The author mentioned the use of a platform called LEO, a virtual environment that was developed to favor autonomous learning so that reading comprehension can be improved taking into account the diverse learning styles of students. For this purpose, the main characteristics taken into account were constant interaction and feedback, as well as the use of different sensory stimuli (audio, image, text and video), the use of multiple-choice exercises, the linking of 2 alternatives, open answers, among others. The LEO platform included eight narrative and informative texts. In addition, the LEO platform contained texts with vocabulary tasks, reading comprehension strategies and assessment activities. Supported by previous research Reinoso (2019) in his purpose of improving reading comprehension adapted the PIRLS Reading Proficiency Test. This refers to the exploration of skills related to reading comprehension in fourth and fifth graders. The adaptation had an exploration of four skills related to reading comprehension: extracting information, making inferences, interpreting and integrating information, and analyzing text content. In the end, the first test had a reliability of 0.76 and the second test had a reliability of 0.72.

For Valadez (2017) the design of a software to improve reading comprehension started from the need to know the Doman method that focused on conducting various re investigations to understand the functioning and development of the brain. For Doman, the brain is a magical instrument that decodes the electrochemical impulses sent to the visual area of the brain, which means that it is common to recognize products such as brand names, logos and words used to promote products. Based on this, Doman assures

that intellectual capacity is directly related to learning to read at an early age. That is why Valadez, in his research worked with children and designed a prototype in the PowerPoint program under the name of baby reader, which is an interactive reading method for early ages. This program contained reading sessions for preschool children. The image, sound and video were pleasing to the eye because they are colored in a way that these captured the attention of the little ones. They were motivated by watching it. The content consisted of exercises through which the students were able to relate the words in order to complete the text.

Toro (2019) when writing about the use of ICT's to improve comprehensive reading in his research for school children, suggested two technological tools such as Prezzi and Cacoo because he considered that they favored the levels of enunciative, lexical and referential inference, which guaranteed an interpretation process in students. In addition, Prezzi is considered to offer a wide range of presentations in a dynamic and interactive way. On the other hand, Cacoo is a tool that facilitates the elaboration of concept maps. For Toro, the use of ICTs was fundamental for students in the reading process, since in her research there was an improvement in the students of her school, improving in 60% their interest in reading and 56% improved the way they understood the readings using these two tools Prezzi and Ca-coo.

Finally, the words of Díaz (2017) about the use of Moodle in university students should be highlighted because they had a follow-up in the reading process. She worked with 20 students, who started from a low reading level. The use of the Moodle platform allowed students to perform support activities in the classroom or at home. In the research conducted by Díaz, she stated that the use of this platform should go along with the use of interactive content so that students do not lose interest.

Theorical Framework

This research work is based on two conceptual variables: ICTs and reading comprehension. In the current world, in which we are living, it’s possible to shorten distances. The term "global village" has spread thanks to smart cell phones, computers, laptops, and other electronic devices that allow access to the Internet.

2.1 Independent Variable

2.1.1 ICT'S

2.1.2. Definition

The abbreviation ICT stands for Information and Communication Technologies. What ICTs are can be considered in two ways: Those traditional communication technologies such as radio, television, and conventional telephony; and on the other hand, modern technologies characterized by records of content such as computing, communications, and telematics.

This shows us that today's society is not the same as it was 50 years ago and therefore education should not be the same either. For this reason, that ICT should be considered within the curriculum of educational institutions and its final product reflected on educational practice. In many cases the computer is used as a typewriter, with the only difference that it has more functions. Carrion (2020) in his research states that the use of ICT's has contributed to the development of our society, giving unexpected turns and more in developed countries. These advances have facilitated the development of new educational practices to help improve the teaching-learning process in students.

Traditionally, it has done so based on scientific work carried out under the heading of systematization in education, but this is just one of the possibilities. It can also, of course, be done from an epistemological theoretical approach as the constructivism. Under this effort, they have already built various theories. From this point of view, the aim is to improve the development of reading comprehension by making use of ICTs, from the constructive socio-cultural approach as mentioned by Vygotsky. Thus, ICTs can allow this type of mechanism to be valid with the objective of facilitating this process because it goes beyond an instrumental reading, through books that involve both asynchronous and synchronous time.

Gallardo (2019) in his research on the use of ICT's in university students, the advantages and disadvantages of the use of ICT's within education were known.

2.1.3 Advantages

- Technological development is intended for information and communication.
- It makes users aware of all the technological tools to have access to information and also communication channels.

- ICTs are considered as dynamic technological tools, and also offer tools for interactive learning. - It allows and facilitates distance education.
- It enables long-distance communication.
- It facilitates the probability of accessing information from around the world.
- Provides countless tools to perform jobs of different categories.
- It allows several people to interact, discuss, dialogue in real-time through networks.

2.1.4 Disadvantages

- For all mobile or fixed devices, it is necessary to have a fixed internet connection or internet data.
- The speed of the tools depends on a good server, allowing or hindering access to information.
- It can create distractions in the educational field, it can create distracting factors for students.
- To access the internet, a fee must be paid for the service.
- It cannot replace face-to-face communication access.

2.1.5. ICT's in education

Thanks to the use of ICTs in different fields such as cultural, social, and educational, now it makes a generation of considerable impact, managing to expand and be part of important areas such as the economy, education, medicine, agriculture, among others, and globally. The greatest impact of ICTs is not only to access information on the web, but also to interact with other users on the same subject. Right now, it allows us to have online classes following quality standards with students, discovering new tools that allow students and teachers to exchange information in real-time. Currently, individuals generate a more significant role because it can create knowledge collectively.

2.1.6. ICT's in reading

Worthen (2018) in his study said something really important about students who are studying in a 21st-century society, information is expanding very rapidly and significantly. The need to access it, not only academically, but for other purposes such as personal and professional development as well as social inclusion. It is undeniable the transformation of reading processes thanks to ICTs. A significant example is the

number of readers who access to texts or digital books, search virtual libraries such as google scholar.

2.1.7. Tools for reading

2.1.7.1. Before the reading

Hauptmann (2019) suggests, for this step, strategies that help predict the topic in a way that helps focus on facts or events from the title of the reading, in a way that helps the reader imagine what the text might be about.

One of the tools that allow you to activate previous knowledge is to solve questions. Therefore, the application of questionnaires created with Google Forms can be done. The development of questionnaires helps to activate previous knowledge on the subject to read, to predict the possible content of the text, and observe vocabulary difficulties.

To prepare the questionnaire, it is first necessary to have an account in Gmail. Second, we go to Google forms by choosing the title of the question. The system allows seven different options ranging from the type of test to writing a short text. The answers are received automatically and in real-time allowing the teacher to know the results instantly. Finally, the student can immediately establish if he has understood what he/she read. They can also exchange the results with other students.

2.1.7.2. During the reading

For this stage, according to Khine (2018), it is the moment in which direct interaction with the narrative text occurs and, so that students will be able to enter any virtual platform such as Moodle, Teams, Zoom. It's here where digital readings with multimedia elements will be found. During this step the reader must consider the following:

1. Header or title.
2. Subtitles.
3. Main paragraph.
4. Final paragraph.
5. The first sentence of each paragraph.
6. Full text

Shaljan (2018) considers the following technological tools that will help the student during the reading process in a way that motivates and engages them, obtaining excellent results.

Kahoot: Try it to review literary content, or do a vocabulary review while reading.

Seesaw: the tool that will help reflect on reading.

Padlet: Try it for a KWL pre-reading activity Today's Meet: it will help read the secondary channel aloud (more suggestions) Explain everything: this will help for tutorials that contain some kind of strategy.

Nearpod: it will help write down text or give or give an opinion about what has been read.

Spark Page: is one of the most used tools to give book recommendations.

Buncee: it is an incredible tool because it allows to obtain reading responses that can be shared among more users or colleagues from the same class.

Mentimeter: Online brainstorming editor.

2.1.7.3. After reading

For this stage, it is necessary to draw on the first and second stage, because it will try to fill in the gaps that were still pending. In addition, the teacher should prepare a detailed outline of what has been learned, such as the main ideas and even new vocabulary, and make a comparison with the prediction.

Evaluate: allows the teacher to have an idea of how much the student managed to acquire, using tools such as Google Forms, Quizizz.

Map: at this stage, the student can make a presentation using their ideas but including vocabulary acquired during reading. This process can be done cooperatively using Google Slides, or individually, using Prezzi, Genially or Canva allowing the student to use their creativity.

Discuss: it is important to analyze words within a context, remembering that each word in English has different uses, depending on the context. Initial prediction: check that the initial prediction was correct or not, remember to give a correct feedback to the students. Pre-reading question: the students will have doubts; try to answer all their doubts during the reading process, until the end, motivating the learners to improve their reading ability and to control the time in each stage.

2.2 Dependent Variable

2.2.1. Reading Comprehension

2.2.1.2 Definition

Gilakjani (2019) in his research work, he stated the importance of reading comprehension within the competencies of the knowledge society. That is, the ability to understand the forms of written language required by society and the need for individual reading helps to understand the context. In addition to obtaining, disseminating and enhancing meanings in the context of reading helps to understand and improve our reading competence. The role of ICT's makes a book become a dynamic material, using animations and involving the reader with multimedia annexes that help a critical analysis without losing the essence of the origin.

Rumelhart (2019) in his research on reading comprehension states that reading is not simply translating punctuation marks. It involves the use of language; it involves the handling of concepts that each author intends to interpret, as well as the interpretation of syntactic and semantic aspects. And it also includes cultural interference because it assumes knowledge of frames of reference, ideology and roles. What this author proposes allows to have a broad conception of the sub-processes and the skills required within the reading process, showing the within the reading process, showing the significance of the dimension as the cultural and ideological cultural and ideological dimension that has a significant influence during the process.

2.2.2 Process of reading comprehension

Quinteros (2017) in his study on reading comprehension processes, with a group of 30 college level students identified that the interactive process between the writer and the reader is formed when the reader interprets and constructs meaning. She also suggests reading individually because it allows the reader to pause, to think, to reflect, and to relate the previous knowledge he or she possesses.

This implies that readers know how to evaluate their own performance coherently: with this type of approach, we find the so-called reading comprehension models, adopted by (Adams and Bruce, 2012, cited by Villa, 2012). He proposes ascending, 25 descending and interactive Models. The first one referring to the objective of the text, the second one to the reader's previous knowledge and the last prototype mentioned above is assumed for this research work, where the contributions of Good-man and

Van Dijk, as well as Piaget and Vygotsky, are highlighted from a Constructivist Approach. The idea of the interactive model, according to Thornbury (2018), it is evident that to be carried out effectively and that the processes are linked to reading comprehension and the uses of technological tools. For this type of work, an activity planning is needed and the technological tools can be of great help, because in Web 2.0 a range of alternatives is offered It is adjusted for the development of strategies in each of the steps is more even in evaluation and understanding (Magliano, Millis, Levinstein and Boonthum, 2015).

2.2.2.1 Before reading

For Huluck (2019) the pre-reading process consists of teachers activating their prior knowledge in a way that helps identify their purpose and expectations for reading a book.

Preview: stage that helps to predict what the text will be about. In this way it is important that the teacher activates the knowledge in the student so that he or she can find out anything by looking at images or by a quick reading. In this way you can see the type of information, indicating the purposes of the author guiding his or her perspective. At this stage readers can get an idea of what the text will be about, an overview of how it is organized.

2.2.2.2. During the reading

Amaral (2019). For this author, it is necessary that students at this stage feel free to ask questions, provide comments, exchange ideas with their peers regardless of their level of linguistic competence. During the reading: in this process it is necessary that the students have cognition of the reading, so that they can become familiar with it, and then make an exchange of ideas and knowledge, without depending exclusively on the teacher, being their specific functions to give support during the activity in a systematic and constant way.

2.2.2.3 After reading

After reading: according to Vygotsky's approach, in the first and second phases of reading, the process allowed for an environment of socialization and dialogue. For this stage, the use of language, summaries, comments, among others, are still pending. In

addition, the work becomes more reflective, metacognitive, metalinguistic, so that knowledge becomes a reflective learning. After reading, the reader is expected to the reader to obtain his/her own comments on the reading, using the terms learned during the previous processes.

2.2.3 Strategies of reading comprehension

Bahuer (2017) in his research work on strategies, he states that reading comprehension strategies which help better reading comprehension are those that the student learns to use and prepare to read a text. This type of strategy is to help the student to have an idea of what the author is trying to transmit in the text, so that the information found in the text can be useful, creating new knowledge, using new words so that the information can be stored. When we talk about strategies, we refer to those that allow predicting the topic using main ideas, headings, images, etc.

Graphic organizers: Strangman (2020) in his research on the use of graphic organizers to help improve reading comprehension in high school students, she demonstrated that the visual and graphic presentation represents the relationships between facts or ideas that the student is having in the midst of learning. In addition, the use of graphic organizers allows the illustration of concepts, main ideas and relationships between concepts in a text through the use of diagrams. This type of strategy helps readers focus concepts and understand how they can be related to other concepts at the same time.

Recognize the structure of the story: students learn to identify different categories of content, such as characters, setting, events, problems. Often, they learn to recognize the structure of a text by linking several main ideas supported by secondary ideas and paragraphs that help corroborate the information the author intends to convey.

Therefore, for this research work, ICTs will support each of the reading phases, starting with warm-up activities before reading. In addition, details of it will be developed as this topic progresses. On the other hand, this research assumes the textual typology implementing texts in a descriptive, narrative, argumentative, instructive, and expository way. The last one has the objective of developing reading comprehension levels in the students Third of Bachillerato at Luis A. Martínez Educational Institute. This is specifically defined as Nunan (2018) states: "He who is oriented to develop an idea, analyzes a problem or describes a phenomenon to report".

2.2.4. List of reading strategies and tools

Table 1 List of tech tools using for reading strategies

Reading strategies Description	Tech tools
Predicting It helps the learner to get an idea of what reading is about. With the use of images, titles, or subtitles it will give meaningful clues of what will be covered in the text.	Jamboard Piktochart Online KWL chart template Pixabay
Connecting Makes it easy to connect prior knowledge with new information	Stomboard
Comparing Create critical knowledge so that students can contribute or give ideas jointly or individually.	Google slides Google docs WhatsApp
Inferring Try to create new information based on previous knowledge.	Writer Duet
Synthesizing Collect information while students read a text, and thus keep track of what is happening in each of the reading steps.	Google Docs Tiki Toki
Creating images Create images, can be of the main ideas or vocabulary to have a general understanding of the text.	Jamboard Piktochart PicMonkey Befunky
Self-questioning	Kahoot Wordwall Google Forms

Provide a framework for learning to take place in an active way, this means that as students participate, find the answers.	
Skimming Take a quick look around to get an overview of what the text is about.	Google Docs
Scanning At this stage the reader examines the text more carefully, locating specific details, such as names, dates, etc.	Google Docs Google Slides
Determining Importance Classify the most important information in the phrase, paragraph, sentence, or chapter.	Conceptboard
Summarizing and Paraphrasing Reducir textos usando el parafraseo, sin perder la idea central del texto.	Story map Miro mural
Re- Reading Create opportunities in a deeper way, so that your development is more fluid and understood.	Piktochart
Chunking In this section, break multiple syllable words into larger units.	Google docs
Using Analogy Transfer family names to help identify unknown ones, depending on the context	Prezzi Genially
Consulting a reference Use of a dictionary, glossary, phonetics.	Cambridge dictionary Visual dictionary online

Adapted from: "First Steps Reading Second Edition", by Doherty.U, 2012, First Steps Reading Map of Development. Oxon: Steps Professional Development.

CHAPTER III

RESEARCH METHODOLOGY

3.1. Location

The present investigation was carried out in a school located in the province of Tungurahua, Ecuador. Luis A. Martinez is the Educational Institute where the research study was carried out. The sample consisted of a total of 70 participants out of a total population of 1,090 students. The students belong to the third year of high school, that is, between the ages of 16-18 years.

The group studied is homogeneous, that is, they come from central sectors of the city of Ambato, located on Cevallos Avenue and Quito Street. Besides, the socioeconomic situation is medium, so all the students in the sample have technological tools such as smart phones, computers, tablets and the Internet.

3.2 Materials and Equipment

The instruments used in this research were a comprehension reading test taken from the official Cambridge website at A2 level, and also a survey with a Likert scale directed to third year high school students on the use of technological tools to improve reading comprehension.

Cambridge Test: This instrument was taken from the official page of (Cambridge Web of Cambridge English Preliminary A2, 2018). This test was called Pretest and Post-test aimed at 70 high school students. The information collected from the investigated group was before and after the training process mediated by ICTs.

Survey: For this survey, a Likert scale questionnaire was used to determine the level of text comprehension and reading habits of the students. The test consisted of a

questionnaire with six items, which can be negative or positive, with the following categories: strongly agree, agree, neutral, disagree and strongly disagree.

3.3 Research method

Quasi-Experimental: Sampiere (2014) considers quasi experimental to determine with greater accuracy the cause-effect relationship of the origin of the problem, due to the use of the assignment of a group of control and the other experimental. Quasi-experimental research is used because also groups to be studied are not random, but rather work with groups already selected. It is also based on a descriptive methodology. To validate the research, the population of a total of 70 students was divided into two groups. The first group called experimental consisted of 34 students from 3BGU "A". The next group made up of 36 students from 3 BGU "B" was called the control group.

Another important aspect of the control group intervention is to follow a strategy that helps students improve their reading comprehension, and the strategy that was used was: **Collaborative Strategic Reading (CSR):** At the end of the 90s, Janette Klinger and Sharon Vaughn proposed a strategy whose objective is the development of reading comprehension while working collaboratively in small groups.

CSR is divided into four reading comprehension strategies which are:

1. Before reading, "Preview the text"

In this stage the students have the opportunity to take a look at the entire text so that they are interested in the topic and facilitating the making of predictions. During this process, students have no more than 5 minutes to look at titles, keywords, images, and graphics. After this, the teacher asks questions so that they engage in a classroom discussion about what they learned from the small advances. Also, here students are encouraged to predict what they think they will learn from this reading.

2. Reading during “Click and clunk (I get it, I don't get it)

For this stage the students read the text and if they understand they can continue without having difficulties. When the learners have found a word, concept, or paragraph difficult to understand, they must decipher separation strategies such as:

• Vocabulary correction skills: in this step, students re-read to look for clues to understand the meaning of an unknown word.

• Read-Pause-Reflect: helps students understand their comprehension while reading, pausing to recall main ideas

• Recount in pairs: for this activity students can work in pairs, this means it is divided into roles, one student is assigned the role of "narrator", and the other the one who "listens". The repeater narrates about the main ideas, information from the text, while the other student listens, comments and asks questions. Then the teacher randomly calls one of the listeners to share information about what the narrator has said.

3. Get the essence

Students can identify main ideas during reading; they can use their own words to explain and check their understanding.

4. After reading: “finished”

After reading the entire text, students identify the most important ideas. The teacher can generate questions and answers about the information in the text and write information that they consider most relevant.

The CSR method proposes a collaborative work, using previous knowledge activation strategies, making predictions, addressing unknown topics, summaries and role management. In addition, this method is one of which some strategies can be taken to integrate ICT tools, since it aims to work with inferences.

Hunna (2017), argues that in order to effectively carry out the processes related to

reading comprehension, strategies such as (before, during, and after reading) must be developed. For this type of strategies, the tools offered by TICS can be of great help, since web 2.0 offers a series of tools that are adjusted to the development of each strategy in each of the stages and even for the evaluation of understanding reader, (Magliano, Millis, Levinstein, & Boonthum, 2011).

3.4 Hypothesis - Research Question – Idea to Defend

The use of ICT's helps to improve comprehension reading in students of third of Bachillerato**.**

3.5 Population or Sample

The population was made up of third year high school students from Luis A. Martínez Educational Institution in the city of Ambato. The population was made up of 68 male and 2 female students, with a total study sample of 70 students, ages between 16 and 18 years.

3.6 Data Collection

According to the hypothesis proposed, improving reading comprehension was established as a dependent variable, using the reading process strategies proposed by Solé and the collaborative reading strategy (CSR) method, and the independent variable the use of ICT's.

1.A survey was conducted with a Likert scale, 6 items with categories such as: totally agree, agree, neutral, disagree, and totally disagree with the 70 third-year high school students of Luis A. Martínez Educational Institute, in two different sessions, same survey. That is, on Monday from 2:00 p.m. to 2:20 p.m. to students from 3 BGU "A" (35 students surveyed). On Tuesday from 13:30 to 13:50 to 3 BGU "B" students (35 students surveyed). The total of students surveyed 70. The tools that were used were: **Zoom** (to gather all the students in a virtual way), **Google Forms** (a tool used to carry out the survey to the 70 students, the link was sent and the students answered with the

results were obtained simultaneously.

2. For the development of the Pre -Test and Post Test it was necessary to divide the total population (70 students) into 2 groups. The experimental group and the control group.

Experimental group

The experimental group consisted of 34 students from 3BGU "A" from Luis A. Martínez Educational Institute.

This experimental group was given the Pre-Test (see Appendix 1). A standardized test, taken from the official Cambridge website, level A2 for comprehensive reading. The Pre -Test was made up of 5 parts and with a total of 30 questions. **In part 1**, there are 5 multiple-choice questions; the texts are short such as notices, communicative information, messages such as notes, or emails. **In part 2** the students had to read and match the content of a short text with each one, this is called pairing, for this part detailed reading comprehension is required**. In part 3** the students did a true or false task. That is, reading a sentence and after reading a text, they must decide whether it is true or false, while scanning the text using synonyms or antonyms to determine these questions. **In part 4,** it corresponds to a text where the students chose five multiple-choice options, here the students had to understand the purpose or opinion of the writer. And finally, **in part 5**, the students received a short text that has 10 spaces. They were given 4 options to choose and complete each space, the spaces were designed to review vocabulary and grammar.

The test was designed in Google forms so that the results are visible in real-time; in addition, the students were brought together through the zoom platform and the link to carry out the Pre -Test was sent to them.

The time the students had was a maximum of 60 minutes.

The control group

The control group consisted of 35 students of 3BGU "B" of Luis A. Martínez Educational Institute.

The control group received 3 sessions of 40 minutes each. In the first session, the students were explained the reading strategies according to Hunna (2017) before, during and after reading, also using the RSC method. The following table was used for this method:

Table 2: CSR METHOD

CSR METHOD		
Before reading	**During reading**	**After reading**
Knowledge: what do you know about the topic?	**Clunks:** Make a list	**Questions and discussion**
Prediction: What will you learn?	**The gist:** Write the gist for each section. _____ Paragraph 1: _____ Paragraph 2: _____ Paragraph 3:	**Review:** What did you learnt?

(Adapted from *Promoting reading comprehension, content learning and English acquisition through collaborative strategic reading (CSR),* by Klingner, J.K & Vaughn, S. 1999, p.45).

Genially was used to explain the reading strategies, with a duration of 40 minutes in total.

For the practice of each strategy, we used the readings from the "Cambridge website", a website where a series of free online comprehension readings can be found. These kinds of readings allow you to practice your understanding of written English, ensures you improve your vocabulary and your understanding of grammar and word order. The texts on this platform are designed to help you develop while allowing you to observe progress in real-time.

CSR STRATEGIES:

1. Before reading (preview) the students were given a reading from “Prepare, level 5 from Cambridge Books”, a book with level A2 where a series of free online

comprehension readings can be found. For this stage the chosen reading was "Fashion and Music". To start this stage, students from 3 BGU "B" were invited to join the session by zoom.

Then, using the Padlet tool (see Appendix 3), they projected fashion images from the 1960s and the present, as well as 2 videos that contrast the current music with that of the 1960s. The students were asked: What do you see, have you listened to this type of music, and here the prediction strategy was used. After listening to their opinions, they were sent a link to the Micrometric tool (See Annex 4) so that they could brain-storm about what they think the topic would be, the students wrote options such as: fashion, music, evolution of music and fashion, etc.

After the reading of each of the answers by the students, the topic "Fashion and Music" was presented. Here, the students were divided into 7 groups of 5 people each, using the option "group section, from the zoom platform, so that the division of each group was random. Each member of the group had to fill out, through Google Docs, the KWL table (See Annex 5), with which it was intended that students write about what they knew about the topic, and what they would like to learn about it.

2. During the reading (clink and clunk), the teacher asked the students to find the words or phrases they did not understand. After doing this, students used clunk reread, looking for the suffixes or prefixes of the words they do not know, monitoring strategy and finally asked to look for the main ideas of what the text was about.

3. After Reading: it was divided by means of zoom in pairs so that in this way the work was cooperative, in this part roles are assigned, one of the students was the leader who explained what reading was about using main ideas and new vocabulary, and the other student was the listener who heard all the main ideas and summary that his part-ner commented. After this, it was returned to the general meeting where it was chosen at random to present their ideas on the text.

- These tests were designed in Google forms.
- The time for each strategy was 15 minutes.

- For session number 2, a practice was done using another reading of “lingua” designed in Google forms as the theme: “Letter to a friend”, time for this activity 30 minutes.
- For the last session, the control group takes the Post-test, the same Test designed for the experimental group, time for this activity 4 minutes.

3.7 Data processing and analysis

The data collected during the Pre-Test to the control and experimental group were collected for analysis, the quantitative method was used, so each data was classified according to its frequency.

After the Pre-Test, the data were collected and tabulated with the following results.

3.8 Response variables or results

Hypothesis verification

For the analysis of the results obtained through this research project, the author used the statistical test called "Chi-square.

Hypothesis statement:

Null hypothesis (Ho)

The use of ICT's is not related to or helps improve reading comprehension in students from third of Bachillerato.

Alternative Hypothesis (HI)

The use of ICTs is related to or helps to improve reading in students from third of Bachillerato.

Chi square

According to the analysis and comparison between the Pre and Post Test to the students of 3 BGU "A" (experimental group) and 3BGU "B" (control group), using the SPSS tool, we can observe the significant advances that the control students have, after using technological tools to improve their reading comprehension.

According to the analysis made by SPSS software with the data already tabulated:

Contingency Table PRE-TEST*POST-TEST

Table 3: Contingency Table PRETEST*POSTEST

			POSTEST			
			GOOD	EXCELLENT	REGULAR	Total
PRETEST	GOOD	Recount	2	4	0	6
		Expected count	1,4	4,3	,3	6,0
	EXCE-	Recount	0	3	0	3
	LLENT	Expected count	,7	2,1	,2	3,0
	UNSATISF	Recount	5	15	1	21
		Expected count	4,8	15,0	1,2	21,0
	REGULAR	Recount	1	3	1	5
		Expected count	1,1	3,6	,3	5,0
Total		Recount	8	25	2	35
		Expected count	8,0	25,0	2,0	35,0

Table 3
Elaborated by: Cadena, G. (2020)

After tabulating the data obtained in the pre- and Post-tests, the chi-square test, also known as the Pearson test, is performed to find out if there is a relationship between the independent and dependent variables. After performing this test, the data are as follows.

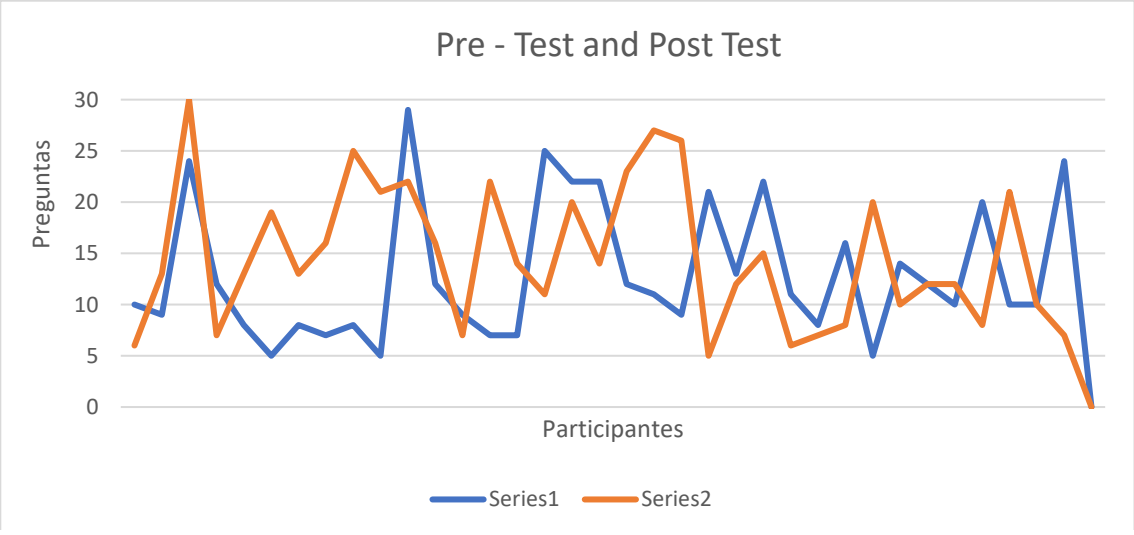
Chi-Square test

Table 4: Chi square test

	Value	gl	Asymptotic significance (bilateral)
Pearson's Chi-square	3,787[a]	6	,706
Verisimilitude ratio	4,212	6	,648
No. of valid cases	35		

Table 4
Elaborated by: Cadena, G. (2020)

Graphic 1: Pre-Test and Post Test according to SPSS



Graphic 1
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

According to the SPSS statistical test, the following data were obtained: 11 boxes (91,7%) have expected a count of less than 5. The minimum expected count is ,17. Also, according to the Chi square test table it is observed that the asymptotic (bilateral) significance is 0.706 >0.05 therefore the H1. Through this test that by means of the test of chi square of Pearson, it was obtained that if there was improvement in the students when using technological tool.

CHAPTER IV

RESULTS AND DISCUSSION

4.1. Analysis and interpretation of results

4.1.1 Student's survey

For the collection of data that can be measured, both in the pre- and post- test, the standardized Cambridge test reading part, level A2, was adapted. In this way, a survey was designed for the 2 groups to know if they have used technological tools to improve their reading comprehension before. The study lasted 3 sessions: (1) survey and pre-test, (2) reading exercise with procedures before, during and after reading and with strategies such as prediction of the topic, underlining, graphic organizers, vocabulary, (3) post-test. All the information obtained was analyzed, to test the hypothesis raised, to reach conclusions and recommendations.

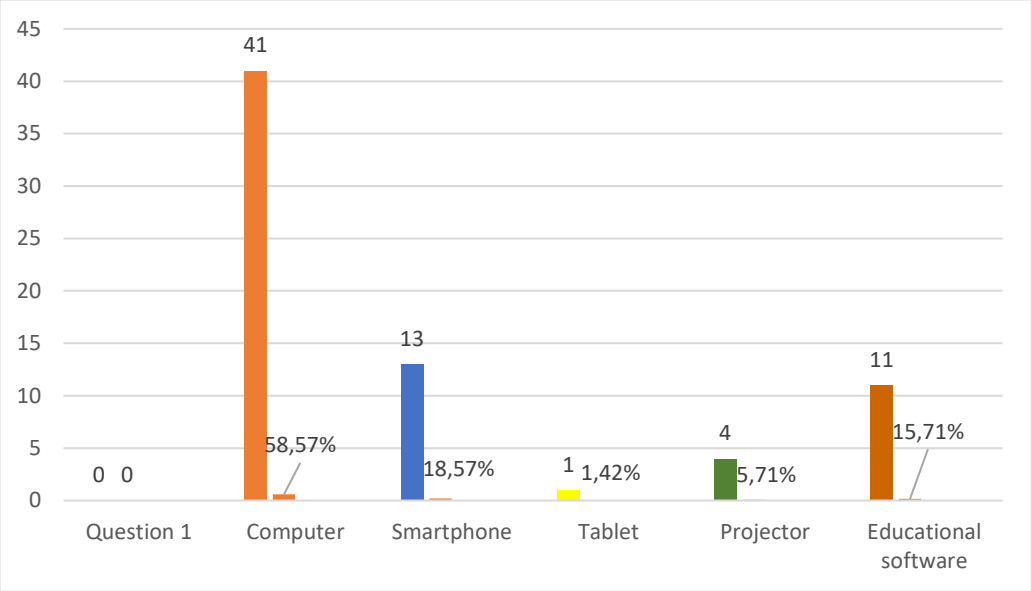
Question 1: Which of the following technological resources or electronic devices does your English teacher use in class?

Table 5: Technological resources or electronic devices using for your English teacher

Alternative	Frequency	Average
Computer	41	58,57%
Smartphone	13	18,57%
Tablet	1	1,42%
Proyector	4	5,71%
Educational software	11	15,71%
Total	**70**	**100%**

Table 5
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 2: Technological resources or electronic devices using for your English teacher



Graphic 2
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

In the first question, out of a total of 70 students, 41 students, representing 58.57%, stated that their English teacher use a computer within the classroom. While 18.57% represented by 11 students say that their teacher uses a smartphone, followed by 15.71% represented by 11 students, they claim that their English teacher uses educational software. Then we have 4 students that represent 5.71% of the total population comments that the, English teacher uses the projector for the English classes. And finally, only one student says that the teacher uses a tablet. As a conclusion we can say that at least one technological resource is used by the English teacher for his classes, which will be useful in future sessions.

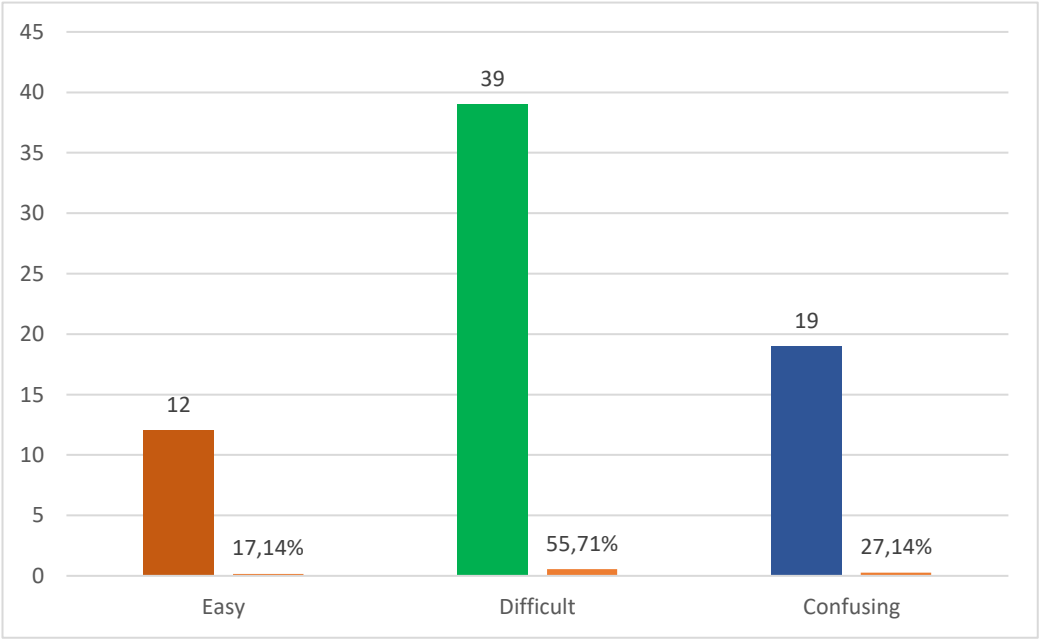
Question 2: When analyzing a piece of reading, do you find it?

Table 6: Analyze a piece of reading

Alternative	Frequency	Average
Easy	19	41,12%
Difficult	39	55,71%
Confusing	12	17,14%
Total	**70**	**100%**

Table 6
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 3: Analyze a piece of reading



Graphic 3
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

For a total of 39 students representing 55.71% of a total of 100%, they find the text difficult to understand, while 27.14% represented by 19 students say they feel confused when reading. While a small percentage such as 17.14%, representing 12 students

claim that it is easy for them to read when they have to analyze a piece of reading. We must consider the high percentage that we have in the students who comment that they find it difficult or even confusing at the moment of analyzing a reading passage.

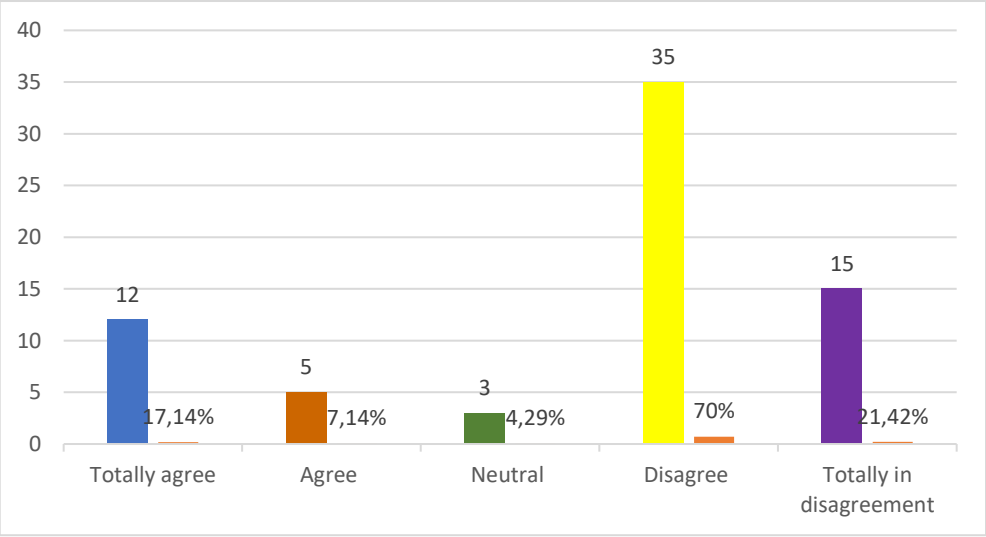
Question 3: Does your English teacher use reading comprehension activities?

Table 7: Reading comprehension activities

Alternative	Frequency	Average
Total agree	12	17,14%
Agree	5	7,14%
Neutral	3	4,29%
Disagree	35	70%
Total in disagreement	15	21,42%
Total	**70**	**100%**

Table 7
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 4: Reading comprehension activities



Graphic 4
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

For question No. 3, on whether the English teacher uses activities to improve reading comprehension, data was obtained as follows: 35 students representing 70% say they disagree, followed by 15 students who totally disagree, while 12 students represented by 17.14% say they totally agree that the teacher does use some activity, 5 students say they agree with this question, and finally 3 students represented by a minimum percentage of 4.29% remain in a neutral decision to this question. A large percentage of students report that their reading is not fluent, they pause, and often do not understand what is in the text because of new words or expressions.

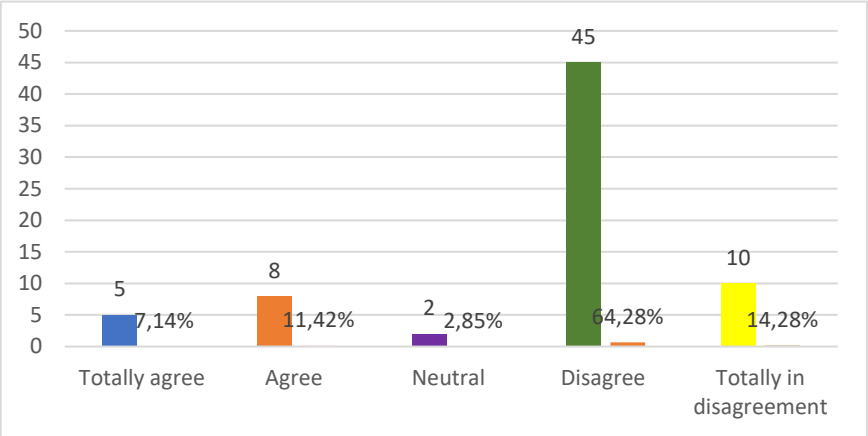
Question 4: When reading a text, do you think it is fluent?

Table 8: Is your reading fluent?

Alternative	Frequency	Average
Total agree	5	7,14%
Agree	8	11,42%
Neutral	2	2,85%
Disagree	45	64,28%
Total in disagreement	10	14,28%
Total	**70**	**100%**

Table 8
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 5: Is your reading fluent?



Graphic 5
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

Graph 4 corresponds if the students when reading a text do it fluently, 64.28% affirm that they cannot do it. While 14.28% say that they disagree. Followed by 7.14% agree in reading a text fluently. Moats (2017) suggests in his research that reading speed is another essential element in good process as part of reading fluency. Due to the results obtained in this question it is necessary that students make reference in the ability to understand a text content, taking into account the time it takes for its comprehension.

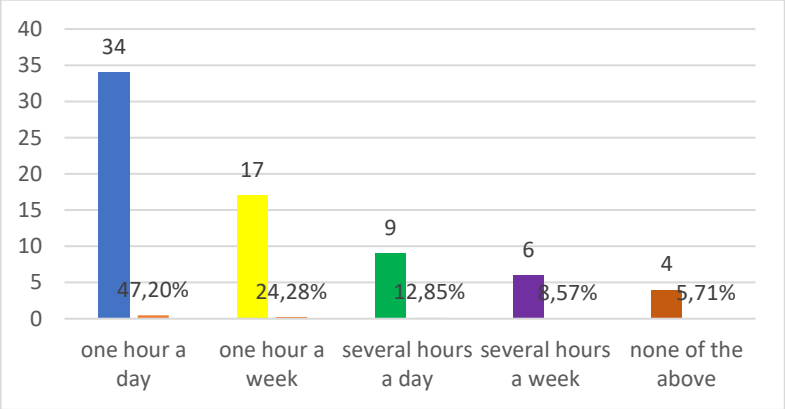
Question 5: How much time do you spend reading?

Table 9: Time for reading

Alternative	Frequency	Average
one hour a day	34	47,2%
one hour a week	17	25,28%
several hours a day	9	12,85%
several hours a week	6	8,57%
none of the above	4	5,71%
Total	70	100%

Table 9
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 6: Time for reading



Graphic 6
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

According to question 5, about the time you spend on reading, we obtained the following results: 34 students represented by 47.20% stated that they dedicate one hour per day to reading, followed by 17 students represented by 24.28% stated that they dedicate one hour per week, followed by 9 students represented by 12.85% stated that they

dedicate some hours per day, on the other hand 6 students corresponding to 8.57% confirmed that they read some hours per week, and meanwhile 4 students out of a total of 5.71% stated that they do not have to dedicate any time to reading. According to these statistics, most of the students dedicate at least one hour a day to encourage reading, but it is not considered a habit in all the students surveyed.

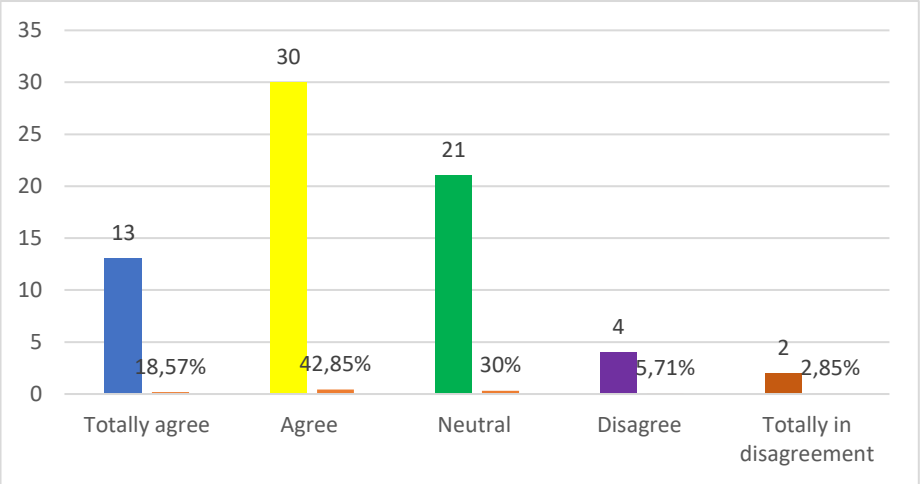
Question 6: When you read, do you use strategies such as: summarizing, highlighting main ideas, etc.?

Table 10: Strategies for reading

Alternative	**Frequency**	**Average**
Totally agree	13	18,57%
Agree	30	42,85%
Neutral	21	30%
Disagree	4	5,71%
Totally in disagreement	2	2,85%
Total	70	100%

Table 10
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 7: Strategies for reading



Graphic 7
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

For question 6, regarding the use of reading strategies such as underlining, main ideas, summarizing, or concept mapping, 21 students representing 30% of students claim to be neutral in making use of these types of strategies, while 30 students corresponding to 42.85% agree with the use of one or all of these tools. For 13 students, if they fully agree to use this strategy, 4 students, a small percentage of 5.71%, disagree that they have used this strategy, and finally only 2 students, 2.85%, say they have never used this type of strategy. As a conclusion, we can say that the great majority of students have made use of the above-mentioned strategies, so we can add to this the use of technological tools.

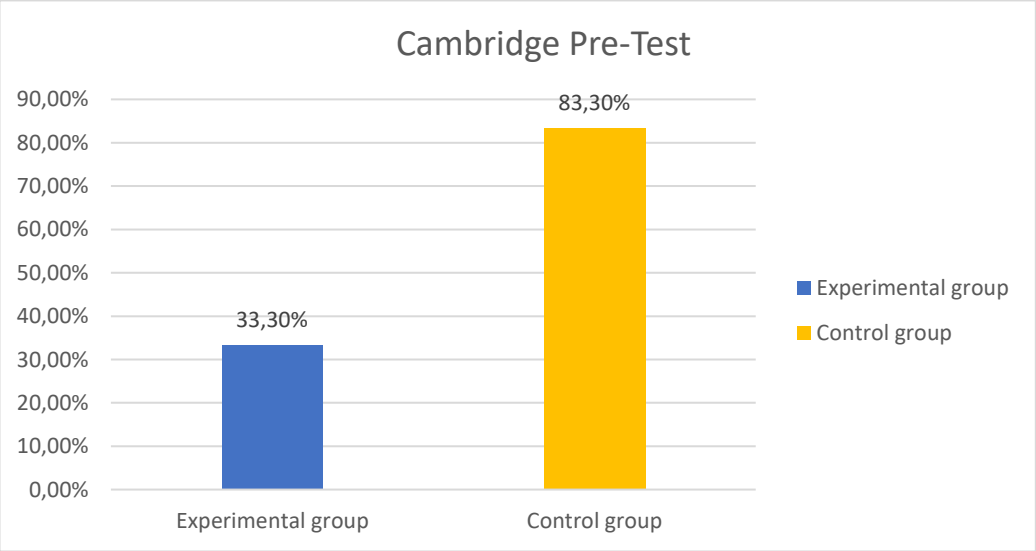
Student's Pre-Test

Table 11: Experimental group and the control group (Pre- Test)

Test	Experimental group	Control group	Expected average
Cambridge (Pre-Test)	10	24	30
Percentage	33,3%	80%	100%

Table 11
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 8: Experimental group and the control group (Pre- Test)



Graphic 8
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

The data collected has allowed to show the following results: a pre-test applied to both groups. The experimental group reached a total of 11 points out of 30, which represents 36.7%. While the control group managed to reach a total of 19 points out of 30

questions, which represents 63.3%. However, this is not a satisfactory percentage, as only 26.6% of a total of 100% separate them.

PRE- TEST PART 1

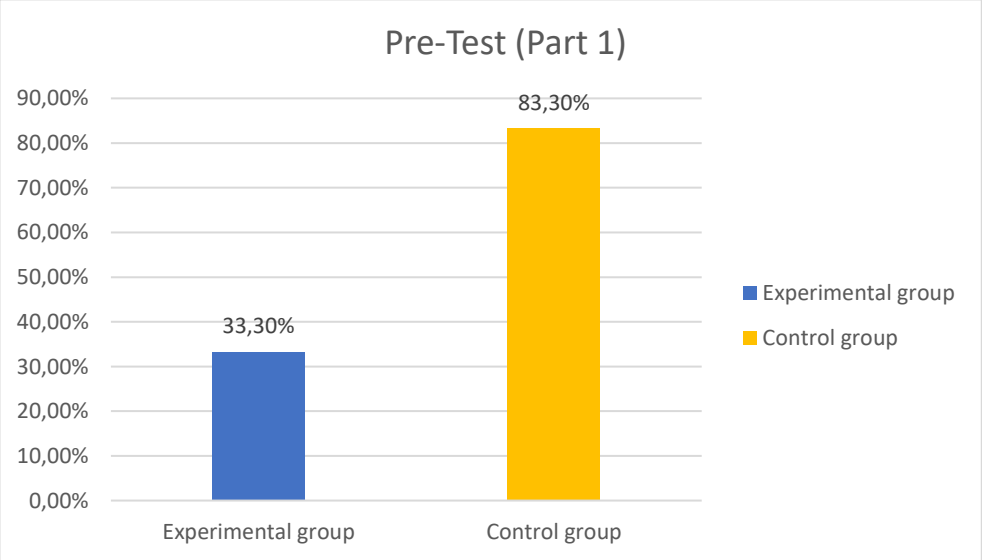
MULTIPLE CHOICES

Table 12: Pre- Test (Part 1)

TEST	Experimental group	Control group	Expected average
Part 1	2	4	6
Percentage	33,33%	66,7%	100%

Table 12
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 9: Pre-Test (Part 1)



Graphic 9
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

In the first part of the test, it was shown that the experimental group reached a score of 2 out of 6, corresponding to 33.3%, while the control group reached a score of 4 out

of 6, corresponding to 66.7%. In this first part, it referred to multiple choice questions for which it shows that the control group had a better performance in this part 1

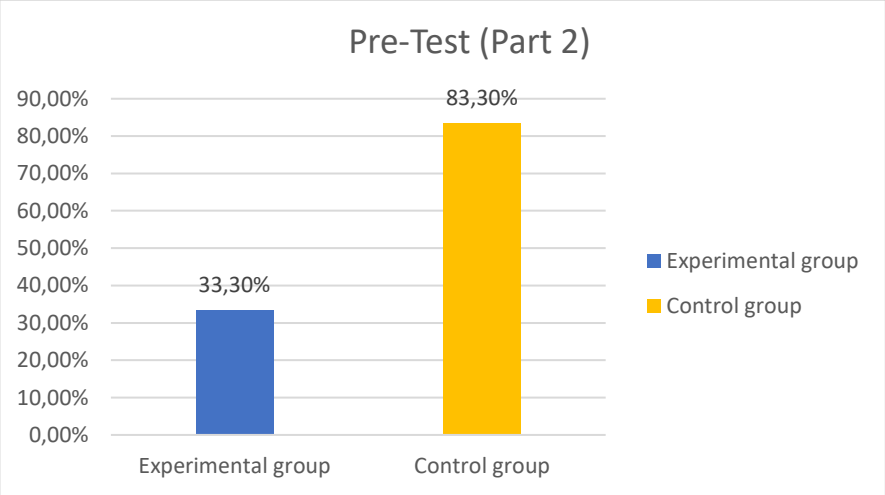
PRE-TEST PART 2

Table 13: Pre- Test (Part 2)

TEST	Experimental group	Control group	Expected average
Part 2	3	1	6
Percentage	50%	16,7%	100%

Table 13
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 10: Pre-Test (Part 2)



Graphic 10
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

In the second part of the test, it was shown that the experimental group reached a higher degree of reading comprehension of 3 out of 4, corresponding to 75%, while the control group reached a degree of 1 out of 4, corresponding to 25.5%. Therefore, it was easier for the experimental group to join the corresponding information than for the control group.

PRE- TEST PART 3

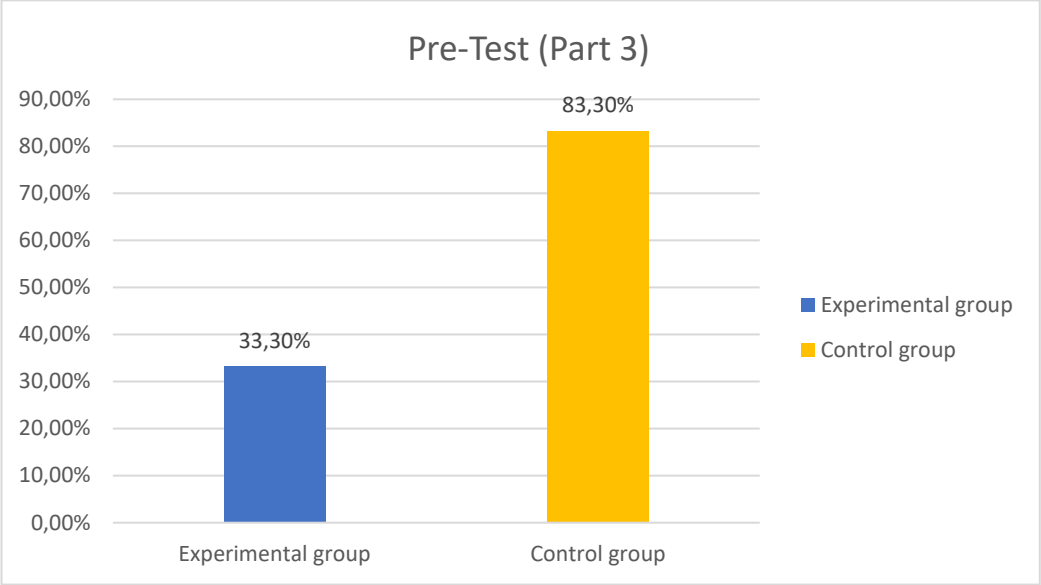
TRUE OR FALSE

Table 14: Pre- Test (Part 3)

TEST	Experimental group	Control group	Expected average
Part 3	2	3	5
Percentage	40%	60%	100%

Table 14
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 11: Pre-Test (Part 3)



Graphic 11
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

In the third part of the test, the control group had a higher score with a grade of 3 out of 5, this corresponds to 60%, while the experimental group had a low grade of 2 out of 5 equivalents to 40%. However, it is necessary to take into account the analysis of the other questions.

PRE- TEST PART 4

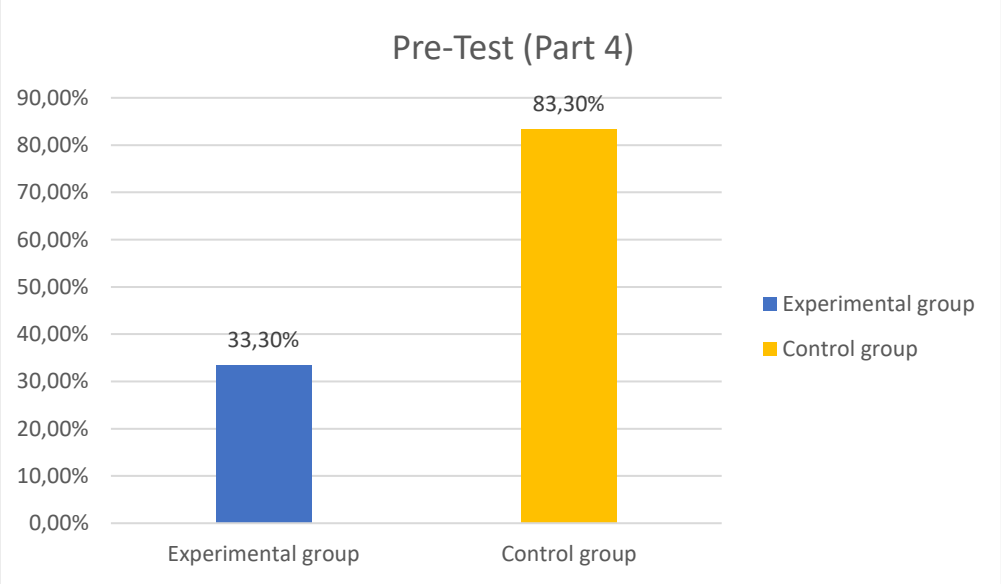
SENTENCE COMPLETION QUESTIONS

Table 15: Pre- Test (Part 4)

TEST	Experimental group	Control group	Expected average
Part 4	2	3	6
Percentage	33,3%	50%	100%

Table 15
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 12: Pre-Test (Part 4)



Graphic 12
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

In the fourth part of the reading, it is observed that none of the groups reaches the majority of the required points, but the control group achieves a score of 3 out of 6, equivalent to 50%, that is, half of the average score. For its part, the experimental

group is far below the control group, with a score of one point out of 6, corresponding to 33.3% of an overall average of 100%.

4.1.7.PRE- TEST PART 5

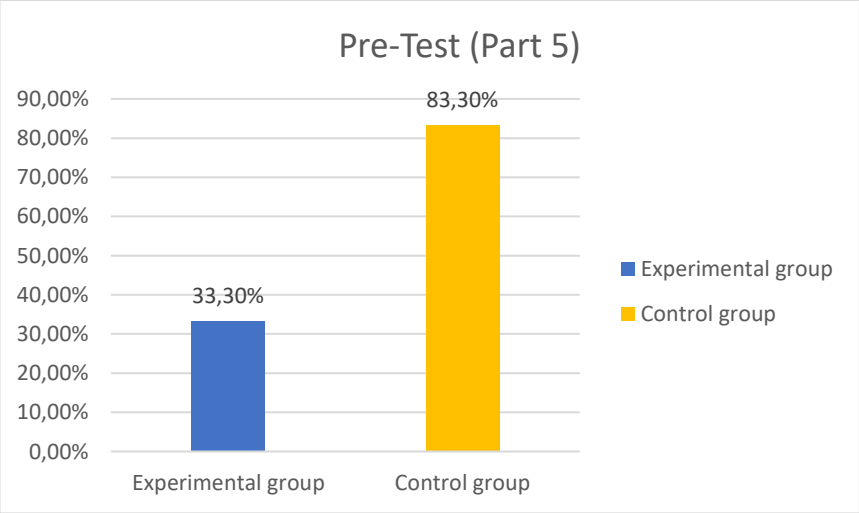
VOCABULARY AND GRAMMAR

Table 16: Pre- Test (Part 5)

TEST	Experimental group	Control group	Expected aver-age
Part 5	2	1	6
Percentage	33,3%	50%	100%

Table 16
Source: Google Forms
Elaborated by: Cadena, G. (202

Graphic 13: Pre-Test (Part 5)



Graphic 13
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

In the fourth part of the reading, we can observe that none of the groups achieve a majority of points, but the control group reaches a grade of 3 over 6, equivalent to 50%, that is, half of the average grade. Meanwhile the experimental group is below the control group with a grade of one point over 6, corresponding to 33.3% of a general average of 100%. It should be emphasized that in this question both groups do not average even half of the required average.

POST – TEST PART 1

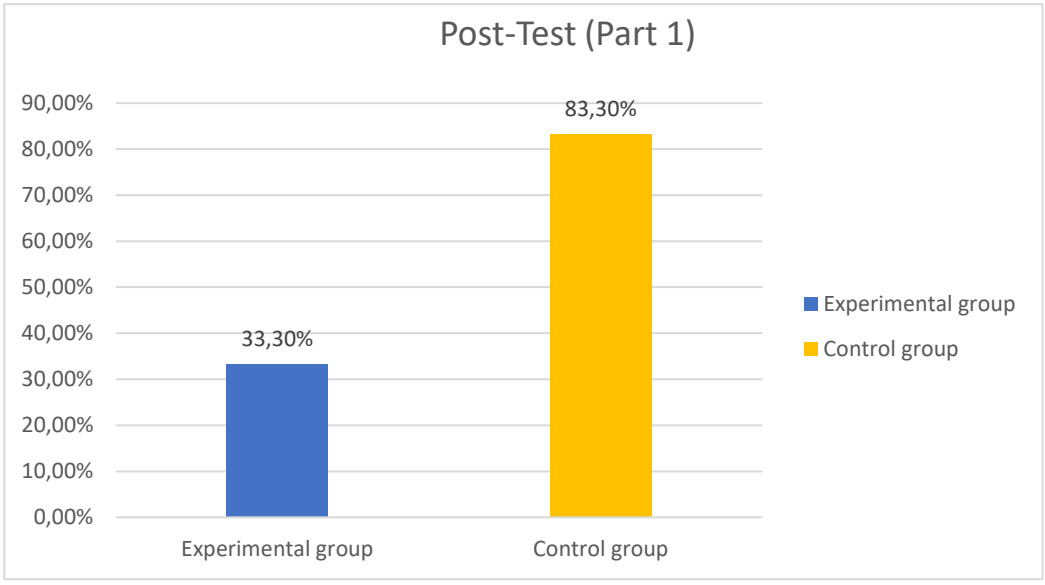
MULTIPLE CHOICES

Table 17: Post- Test (Part 1)

TEST	Experimental group	Control group	Expected aver-age
Part 1	3	5	6
Percentage	50%	83,3%	100%

Table 17
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 14: Post-Test (Part 1)



Graphic 14
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

In the first part of the reading, he indicated that the experimental group reached a grade of 3 which represents 50%, while the control group reached an average of 5 which evaluates 83.3%. This percentage indicates that the control group had an excellent performance and a quite remarkable improvement.

POST – TEST PART 2

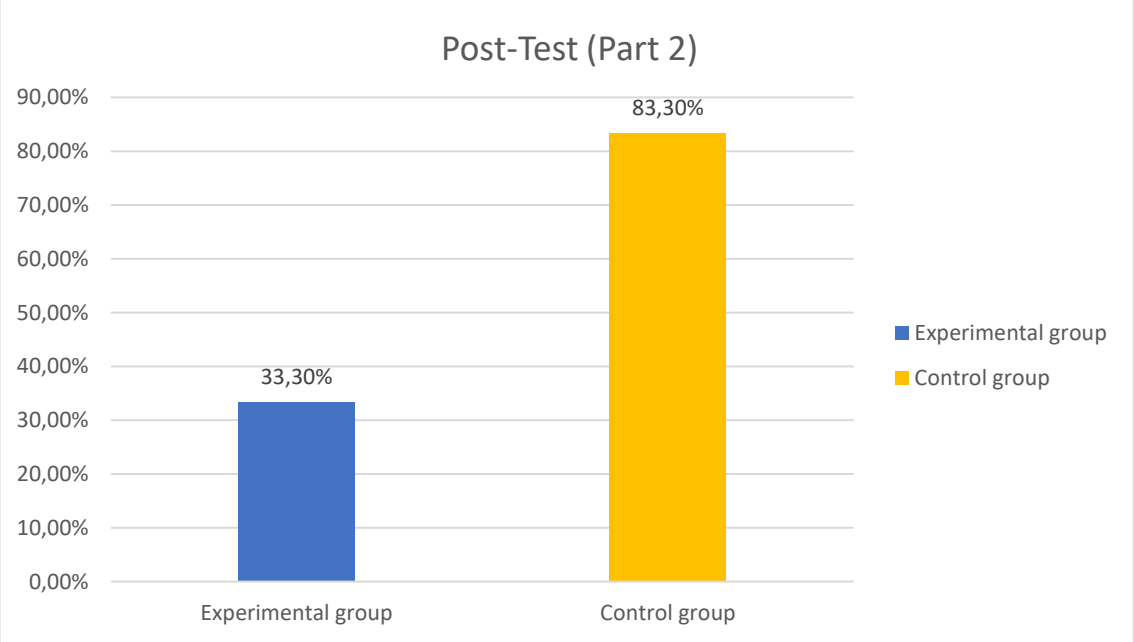
MATCH

Table 18: Post- Test (Part 2)

TEST	Experimental group	Control group	Expected average
Part 2	4	5	6
Percentage	66,7%	83,3%	100%

Table 18
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 15: Post-Test (Part)2



Graphic 15
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

For the second part of the reading, it indicates that the experimental group reached a grade of 4 items that represents 66.7% of the expected average. While the control group reached a grade of 5 over 6m representing 83.3% maintaining an improvement in the control group in the second part as well.

POST – TEST PART 3

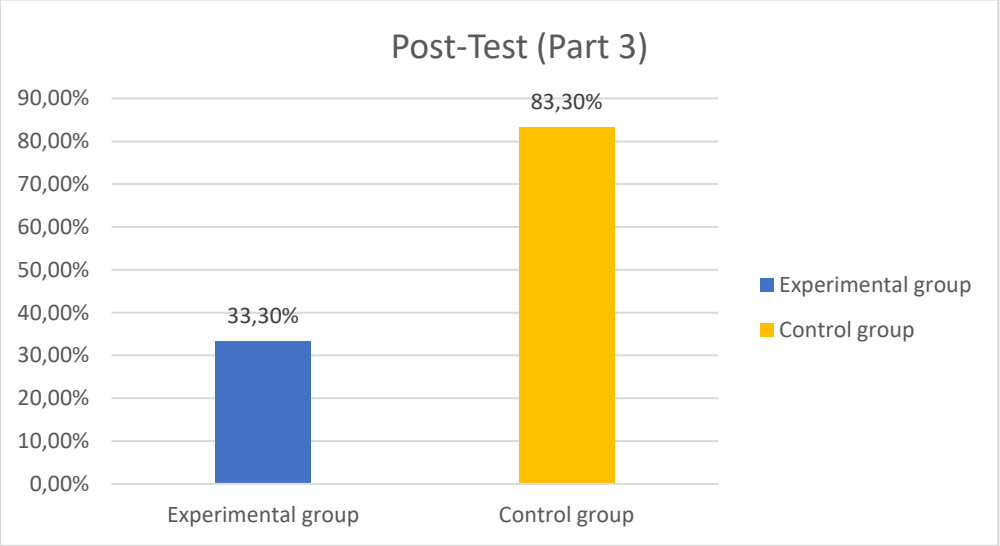
TRUE OR FALSE

Table 19: Post- Test (Part 3)

TEST	Experimental group	Control group	Expected average
Part 3	2	6	6
Percentage	33,3%	100%	100%

Table 19
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 16: Post-Test (Part 3)



Graphic 16
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

For the third part the students had to choose between true and false of 6 questions, the control group managed to obtain its maximum 100% of students answered correctly, while the experimental group had a hit of 2, that is an average of 2 hits that corresponds to only 33.3%.

POST – TEST PART 4

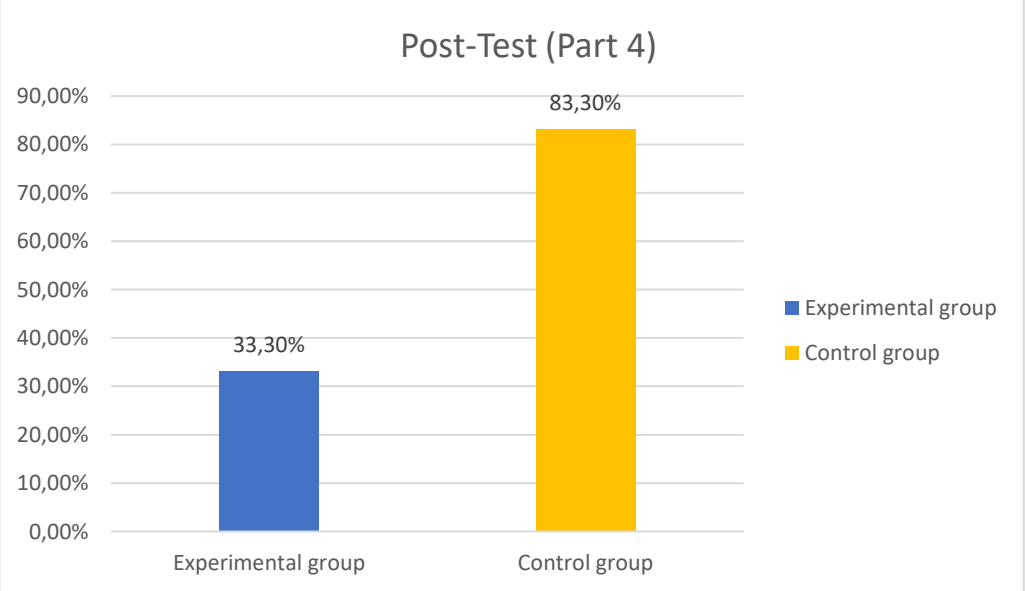
SENTENCE COMPLETION QUESTIONS

Table 20: Post- Test (Part 4)

TEST	Experimental group	Control group	Expected aver-age
Part 4	3	5	6
Percentage	50%	83,3%	100%

Table 20
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 17: Post-Test (Part 4)



Graphic 17: Post-Test
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

In the fourth part of the reading that corresponded to completing information from the readings, that is, answering questions about the text, author and data that the author considers relevant, the experimental group obtained an average of 3 points out of 6, which is equivalent to 50% of the general average. While the control group obtained a total of 83.3%, that is, 5 points out of 6. This shows us the performance that the control group is having over the experimental group. In addition, it is necessary to focus on the percentage of improvement that the control group is having on each of the parts of the reading.

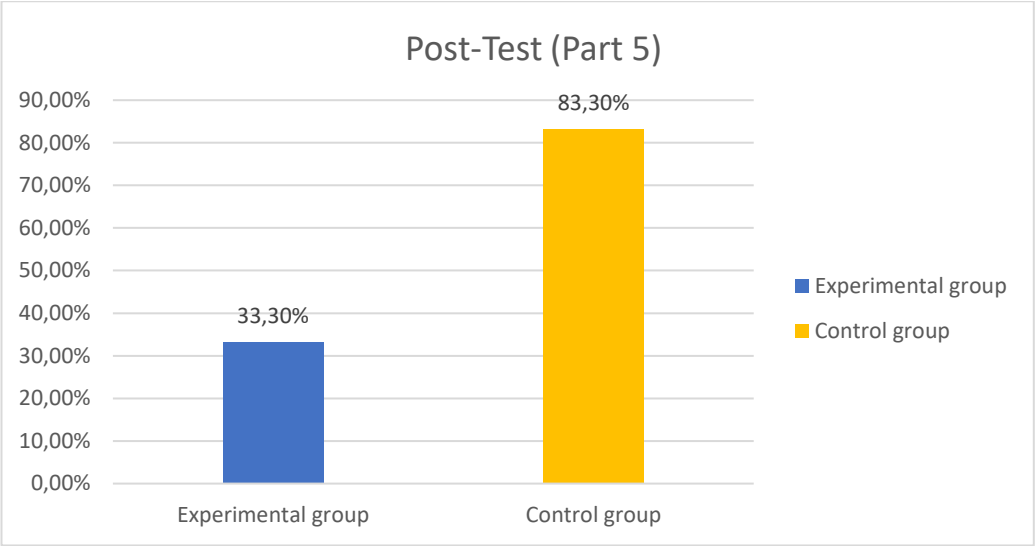
POST – TEST PART 5
SENTENCE COMPLETION QUESTIONS

Table 21: Post- Test (Part 5)

TEST	**Experimental group**	**Control group**	**Expected average**
Part 5	2	5	6
Percentage	33,3%	83,3%	100%

Table 21
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Graphic 18: Post-Test (Part 5)



Graphic 18
Source: Google Forms
Elaborated by: Cadena, G. (2020)

Analysis and interpretation

For the fifth and last part of the reading of the exam taken from Cambridge the experimental group had a percentage of 33.3% which is equivalent to an average of 3, while for the control group it obtained a percentage of 83.3% observing a quite notable progress and improvement in the students, the range of improvement is also established in this type of questions such as vocabulary (new words for the students, within the context). In addition to the vocabulary, the grammar within these readings helps the student to identify and study grammar within readings, and not to study grammar as a subject.

CHAPTER V
CONCLUSIONS AND RECOMENDATIOS

5.1 Conclusions

After the corresponding analysis of the research, the following conclusions have been reached:

- The experimental group obtained a total of 18 points out of 30 in the pre-test, while in the post-test it obtained 26.7 points out of 30. As a result, the control group improved its performance by 70% using technological tools to improve its reading comprehension. Therefore, the control group increased their performance by 30%. Consequently, it can be deduced that there is a positive influence in the use of technological tools on reading comprehension in third year high school students of the Luis A. Martínez Educational Institute, which is why this research was necessary in order to better exteriorize the problems found and take corrective actions on them.
- According to the strategies applied in a three-session plan, concluded in a reading comprehension class, a meaning construction strategy must be applied using previous knowledge, that is, making predictions from the text or using clues that help to understand the context. In addition, strategies such as underlining the text, identifying the main ideas of each paragraph, making inferences, making a summary using organizing graphics should be included.
- To conclude, we end with a three-stage reading comprehension process: before, during and after the reading. So, it helps the student to improve and organize his reading comprehension and apply a variety of strategies according to his needs. In the initial stage, it is necessary to use a strategy that helps to predict knowledge and that the student becomes familiar with what he or she will read. And during reading, it is important to control, to verify the new meanings and the new words within a context. Finally, in the last stage, it is important to make a critical reading, besides a self-evaluation of what is understood, you can use graphic organizers as a summary of what has already been learned, in this way the group of students can control what they are learning.

5.2 Recommendations

If teachers decide to use technological tools to improve their reading comprehension, they should consider the following recommendations:

- Technological tools offer great opportunities to improve reading comprehension. To make correct use of technological tools, teachers must correctly organize reading topics, according to their level, interests and needs. In addition, the teacher must activate previous knowledge in students to help generate contextualized learning, in order to improve not only their academic performance but also their reading comprehension.
- It is necessary that the teacher helps the students to be aware of the previous knowledge they have before knowing the content of the text, so that they do not arrive at zero, they arrive with a previous knowledge. Therefore, with the use of technological tools (reading process), we help them to predict the topic, the content and to express themselves in their own words, about the experiences of what they already know, so that the technological tools can be used in the whole academic process, and in this way empower the students in their reading comprehension.
- Demonstrate that reading comprehension requires processes and strategies such as finding main ideas, underlining new words such as finding main ideas, underlining new words. When readers understand the text, it is because they use strategies that allow them to evaluate whether they have understood the information. For the understanding part, summaries are used that constitute powerful strategies by using technological tools in each process, such as preelection using strategies such as predicting, KWL charting and activating their previous knowledge. During reading, strategies such as underlining new words and identifying main ideas are used. After the reading, making inferences, graphic organizer.

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5.4 Annexes

Annex 1: Pre and Post Test

UNIDAD EDUCATIVA LUIS A. MARTÍNEZ

"PRE AND POST TEST DIRECTED TO STUDENTS OF THIRD OF BACHILLERATO AT LUIS A. MARTÍNEZ EDUCATIONAL INSTITUTE A-B"

INSTRUCTIONS TO STUDENTS

- Click on the following link :

  https://docs.google.com/forms/d/1NZTlrgE18WGMjsn462GfiqD-ed-WwLCDYJHJzhVlqh4E/prefill

- Write your name and last name
- Read carefully all the questions.
- You must choose one answer for each question.
- You will have 40 minutes for this test.

Part 1
Questions 1 – 6

For each question, choose the correct answer.

1

A The bicycle that's for sale was built for a child.

B Some parts of the bicycle must be changed.

C Debbie is selling the bike because she's too big for it now.

2

A Tim thinks Ben should look on the concert website.

B Tim hopes that Ben will be able to come with him.

C Tim wants to know if Ben can pay him back today.

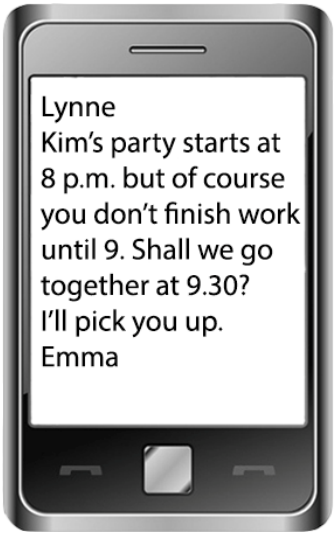
3

A You get into the park by going this way.

B It is more expensive to go here alone.

C You will have fun if you come with friends.

4



A Emma knows that Lynne can't be at the party when it starts.

B Emma wants to go to the party a bit later than Lynne.

C Emma wants to go out with Lynne but not to the party.

A The ice cream shop is open for only 2 hours.

5

B Two ice creams will cost the same as one.

C

D You can get free ice creams all afternoon

6

A to check if Anna has completed her home-work

B to let Anna know what they did in class today

C to ask Anna to contact her about the homework

Retrieved from: https://www.examenglish.com/KET/KET_reading_part5_2020.htm

Part 2

Questions 7 – 13

For each question, choose the correct answer.

		Tasha	Danni	Chrissie
7	Who writes both a magazine and a blog?	**A**	**B**	**C**
8	Who says that studying and writing a blog at the same time can be hard?	**A**	**B**	**C**
9	Who answers questions from other people who read her blog?	**A**	**B**	**C**
10	Who plans to stop writing her blog soon?	**A**	**B**	**C**
11	Who didn't have many people reading her blog in the beginning?	**A**	**B**	**C**
12	Who asks a member of her family to help her write her blog?	**A**	**B**	**C**
13	Who says writing a blog is easier than some other types of writing?	**A**	**B**	**C**

Retrieved from: https://www.cambridgefoundation.jp/pdf/ceq/a2/A2%20Key%202020%20sample%20tests%20Reading%20and%20Writing%20-%20question%20paper.pdf

Young blog writers

Tasha

Last year I wrote for my college magazine, which I found really difficult, but I don't think it's hard to write a good blog. Mine is about things from daily life that make me laugh. My older brother also has a blog, but we're writing about different subjects. We don't discuss what we're planning, but we read each other's blogs sometimes. I like giving advice to people who write in asking for it – it's good to know I've helped.

Danni

I started writing my popular film blog because I love movies. I like it when readers send me articles by email about a film they've seen, and I put these on my blog for everyone to read. I'm still at college, so I'm careful about spending too long on my blog, which is difficult as writing well takes time. I don't think I'll write it for much longer. I'm busy, and it's time to do something new.

Chrissie

I began writing on a school magazine. I stopped after a few years, but I missed it, so I started my own – I'm still writing it now! The blog's new for me, and I write about daily life. I get ideas from friends or my sister when I can't decide what to write about – we always think of something interesting, sad or serious. At first, almost nobody visited my site, but now more do, I've had some lovely comments.

Retrieved from: https://assets.cambridgeenglish.org/cbt/key-reading-writing-2020/test-content/KR400252EVO-0-0.xml.xhtml

Part 3

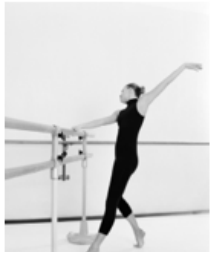
Questions 14 – 18

For each question, choose the correct answer.

A family of dancers

The women in the Watson family are all crazy about ballet. These days, Alice Watson gives ballet lessons, but for many years, she was a dancer with the National Ballet Company. Her mother, Hannah, also had a full-time job there, making costumes for the dancers.

Alice's daughter Demi started learning ballet as soon as she could walk. 'I never taught her,' says Alice, 'because she never let me.' Now



14 What is Alice Watson's job now?

A dancer

B teacher

C dress-maker

15 Demi had her first ballet lessons

A at a very young age.

B at the National Ballet Company.

C from her mother.

16 Jack helped his wife and daughter by

A moving to a larger house.

B letting them use the living room for dancing.

C making a place for them to practise in.

17 What was the best thing about the *Swan Lake* show for Demi?

A It was her first show with the company.

B All her family were there.

C She was wearing a new dress.

Retrieved from: https://www.cambridgefoundation.jp/pdf/ceq/a2/A2%20Key%202020%20sample%20tests%20Reading%20and%20Writing%20-%20question%20paper.pdf

Part 4

Questions 19 – 24

For each question, choose the correct answer.

18 Hannah says that Demi

A will be a star one day.

B is her favourite granddaughter.

C dances better than Alice did.

William Perkin

William Perkin was born in London in 1838. As a child he had many hobbies, including model making and photography. But it was the **(19)** ..... of chemistry that really interested him. At the age of 15, he went to college to study it.

While he was there, he was **(20)** ..... to make a medicine from coal. This didn't go well, but when he was working on the problem, he found a cheap **(21)** ..... to make the colour purple. At that **(22)** ..... it was very expensive to make clothes in different colours. William knew he could make a business out of his new colour. Helped by his father and brother, William **(23)** ..... his own factory to make the colour. It sold well, and soon purple clothes **(24)** ..... very popular in England and the rest of the world.

19	**A**	class	**B**	subject	**C**	course
20	**A**	thinking	**B**	trying	**C**	deciding
21	**A**	way	**B**	path	**C**	plan
22	**A**	day	**B**	time	**C**	hour
23	**A**	brought	**B**	turned	**C**	opened
24	**A**	began	**B**	arrived	**C**	became

Retrieved from: https://www.cambridgefoundation.jp/pdf/ceq/a2/A2%20Key%202020%20sample%20tests%20Reading%20and%20Writing%20-%20question%20paper.pdf

[1]In recent years, technology has dramatically bolstered the performance of top-level athletes. [2]For example, every four years Olympic swimmers have a new style of swimsuit. [3] In a sport where winning or losing a race is measured in hundredths of a second, some teams are trying new suits modeled after sharkskin. [4]The resulting times for all swimmers, not just those winning medals, have improved significantly. [5]Another instance of how technology has improved performance can be found in the bicycling. [6]Ultra-aerodynamic bicycle designs have resulted in faster splits in the Tour de France as well as in track racing. [7]Mountain bike racing has also been affected by the new designs, as competitors now use lighter-weight, yet stronger frames and pneumatic tires. [8]Rowing, another popular college and Olympic level sport, has also benefitted from new technology. [9]Many of the boats and oars are now being made of carbon-fiber, a light-weight, flexible material that has been shown to significantly improve performance. [10]Innovations in technology have made it possible for athletes in a variety of sports to perform at higher levels than could ever have been imagined in the past.

25. What is the topic of passage A?

A. Olympic athletes

B. world records

C. sports technology

D. aerodynamic bicycle

26. What is the main idea of the passage?

A. Technological advances have improved athletic performance.

B. Olympic swimmers have benefitted from new types of swimsuits.

C. Today's athletes can do more than athletes in the past.

D. Lighter weight equipment affects athletic performance.

27. Which sentence(s) is/are the topic sentence?

A. Sentence 1

B. Sentence 5

C. Sentences 2 and 8

D. Sentences 1and 10

28. Passage A is organized by using:

A. lists

B. examples

C. cause and effect

D. compare and contrast

29. What are the details that support the topic sentence in passage A?

A. Olympic athletes, bicycle races, college rowing

B. sharkskin, Tour de France, flexible boats

C. winning medals, fast track racing, shattering world records

D. new swimsuits, aerodynamic bicycles, carbon-fiber boats and oars

30. Based on the context, what does the word bolstered (sentence 1) mean?

A. decreased

B. improved

C. hindered

D. changed

Retrieved from: https://www.examenglish.com/KET/KET_reading_part5_2020.htm

Annex 2: Survey

"SURVEY ADDRESSED TO THIRD OF BACHILLERATO STUDENTS A-B "

UNIDAD EDUCATIVA LUIS A. MARTÍNEZ

GENERAL INFORMATION:

- This survey is aimed at 3BGU "A" - "B" students of at the Luis A. Martínez Educational Institute.
- For which it is asked to choose an option for each question.
- The survey is anonymous, it is not necessary to write your name.
- The objective is to know if the use of ICT tools would improve reading comprehension

QUESTIONNAIRE

1. **Which of the following media or technological resources does your English teacher use in class?**

   Computer ☐

   Smartphone ☐

   Tablet ☐

   Projector ☐

   Educational software ☐

2. **When analyzing a reading, this is**

   Easy for you ☐

   Difficult ☐

   Confused ☐

3. **Does Your English teacher use reading comprehension activities?**

Totally agree ☐

Agree ☐

Neutral ☐

Disagree ☐

Totally in disagreement ☐

4. **When you read a text your reading is excellent?**

Totally agree ☐

Agree ☐

Neutral ☐

Disagree ☐

Totally in disagreement ☐

5. **How much time do you spend reading?**

Everyday ☐

Every weekend ☐

Twice a week ☐

Hardly ever ☐

Never ☐

6. **When you read, do you use strategies such as: summarizing, highlighting the most relevant, or making a concept map?**

Totally agree ☐

Agree ☐

Neutral ☐

Disagree ☐

Totally in disagreement ☐

Annex 3: Validation of the Pre- Test

UNIVERSIDAD TÉCNICA DE AMBATO
FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN
POSGRADO
MAESTRÍA EN PEDAGOGÍA EN LOS IDIOMAS NACIONALES Y EXTRANJEROS MENCIÓN INGLÉS, COHORTE 2019
Avda. Los Chasquis y Río Pavamin, Ambato - Ecuador

FORMATO PARA LA VALIDACIÓN DE CONTENIDO DEL INSTRUMENTO PERTENECIENTE A LA INVESTIGACIÓN:

"THE INTEGRATION OF ICT'S IN READING COMPRENHESION IN STUDENTS OF THIRD OF BACHILLERATO LEVELS A-B AT UNIDAD EDUCATIVA LUIS A. MARTÍNEZ"

Objective: To investigate the effectiveness of ICT's and reading comprehension in high school students

AUTOR/A: GRACE MATILDE CADENA ESCOBAR

Señale mediante un ✓, según la validación para cada pregunta:

1D- DEFICIENTE **2R- REGULAR** **3B- BUENO** **4O- ÓPTIMO**

1D- DEFICIENTE **2R- REGULAR** **3B- BUENO** **4O- ÓPTIMO**

PARAMETROS / PREGUNTAS	Pertinencia de las preguntas del instrumento con los objetivos				Pertinencia de las preguntas del instrumento con las variables y enunciados				Calidad técnica y representatividad				Redacción y lenguaje de las preguntas			
	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O
Pregunta 1				✓				✓			✓					✓
Pregunta 2				✓				✓			✓					✓
Pregunta 3				✓				✓			✓					✓
Pregunta 4				✓				✓			✓					✓
Pregunta 5				✓				✓			✓					✓
Pregunta 6				✓				✓			✓					✓
Pregunta 7				✓				✓			✓					✓
Pregunta 8				✓				✓			✓					✓
Pregunta 9				✓				✓			✓					✓
Pregunta 10				✓				✓			✓					✓
Pregunta 11				✓				✓			✓					✓
Pregunta 12				✓				✓			✓					✓
Pregunta 13				✓				✓			✓					✓
Pregunta 14				✓				✓			✓					✓
Pregunta 15				✓				✓			✓					✓
Pregunta 16				✓				✓			✓					✓
Pregunta 17				✓				✓			✓					✓
Pregunta 18				✓				✓			✓					✓
Pregunta 19				✓				✓			✓					✓
Pregunta 20				✓				✓			✓					✓
Pregunta 21				✓				✓			✓					✓
Pregunta 22				✓				✓			✓					✓
Pregunta 23				✓				✓			✓					✓

Pregunta 24				✓				✓			✓					✓
Pregunta 25				✓				✓			✓					✓
Pregunta 26				✓				✓			✓					✓
Pregunta 27				✓				✓			✓					✓
Pregunta 28				✓				✓			✓					✓
Pregunta 29				✓				✓			✓					✓
Pregunta 30				✓				✓			✓					✓

Observaciones:

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_____

Realizado por:

Lic. Grace Matilde Cadena Escobar

180376597-1

Validado por:

Rosa Luzuriaga Guerrero
C.I. 1802985976

UNIVERSIDAD TÉCNICA DE AMBATO
FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN
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Avda. Los Chasquis y Río Payamin, Ambato - Ecuador

FORMATO PARA LA VALIDACIÓN DE CONTENIDO DEL INSTRUMENTO PERTENECIENTE A LA INVESTIGACIÓN:

"THE INTEGRATION OF ICT'S IN READING COMPRENHESION IN STUDENTS OF THIRD OF BACHILLERATO LEVELS A-B AT UNIDAD EDUCATIVA LUIS A. MARTÍNEZ"

Objective: To investigate the effectiveness of ICT's and reading comprehension in high school students

AUTOR/A: GRACE MATILDE CADENA ESCOBAR

Señale mediante un ✓, según la validación para cada pregunta:

1D- DEFICIENTE **2R- REGULAR** **3B- BUENO** **4O- ÓPTIMO**

1D- DEFICIENTE **2R- REGULAR** **3B- BUENO** **4O- ÓPTIMO**

PARÁMETROS / PREGUNTAS	Pertinencia de las preguntas del instrumento con los objetivos				Pertinencia de las preguntas del instrumento con las variables y enunciados				Calidad técnica y representatividad				Redacción y lenguaje de las preguntas			
	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O
Pregunta 1				✓				✓			✓					✓
Pregunta 2				✓				✓			✓					✓
Pregunta 3				✓				✓			✓					✓
Pregunta 4				✓				✓			✓					✓
Pregunta 5				✓				✓			✓					✓
Pregunta 6				✓				✓			✓					✓
Pregunta 7				✓				✓			✓					✓
Pregunta 8				✓				✓			✓					✓
Pregunta 9				✓				✓			✓					✓
Pregunta 10				✓				✓			✓					✓
Pregunta 11				✓				✓			✓					✓
Pregunta 12				✓				✓			✓					✓
Pregunta 13				✓				✓			✓					✓
Pregunta 14				✓				✓			✓					✓
Pregunta 15				✓				✓			✓					✓
Pregunta 16				✓				✓			✓					✓
Pregunta 17				✓				✓			✓					✓
Pregunta 18				✓				✓			✓					✓
Pregunta 19				✓				✓			✓					✓
Pregunta 20				✓				✓			✓					✓

UNIVERSIDAD TÉCNICA DE AMBATO
FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN
POSGRADO
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Avda. Los Chasquis y Río Payamin, Ambato - Ecuador

FORMATO PARA LA VALIDACIÓN DE CONTENIDO DEL INSTRUMENTO PERTENECIENTE A LA INVESTIGACIÓN:

"THE INTEGRATION OF ICT'S IN READING COMPRENHESION IN STUDENTS OF THIRD OF BACHILLERATO LEVELS A-B AT UNIDAD EDUCATIVA LUIS A. MARTÍNEZ"

Objective: To investigate the effectiveness of ICT's and reading comprehension in high school students

AUTOR/A: GRACE MATILDE CADENA ESCOBAR

Señale mediante un ✓, según la validación para cada pregunta:

1D- DEFICIENTE **2R- REGULAR** **3B- BUENO** **4O- ÓPTIMO**

Pregunta 24				✓				✓			✓					✓
Pregunta 25				✓				✓			✓					✓
Pregunta 26				✓				✓			✓					✓
Pregunta 27				✓				✓			✓					✓
Pregunta 28				✓				✓			✓					✓
Pregunta 29				✓				✓			✓					✓
Pregunta 30				✓				✓			✓					✓

Observaciones:

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_____

Realizado por:

Lic. Grace Matilde Cadena Escobar
180376597-1

_

Validado por:

Mg. Lina Mariela Sanchez Sailema
CI: 180333879-5

Annex 4: Validation of survey

UNIVERSIDAD TÉCNICA DE AMBATO
FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN
POSGRADO
MAESTRÍA EN PEDAGOGÍA EN LOS IDIOMAS NACIONALES Y EXTRANJEROS MENCIÓN INGLÉS, COHORTE 2019
Avda. Los Chasquis y Rio Payamin, Ambato - Ecuador

FORMATO PARA LA VALIDACIÓN DE LA ENCUESTA PERTENECIENTE A LA INVESTIGACIÓN:

"THE INTEGRATION OF ICT'S IN READING COMPRENHESION IN STUDENTS OF THIRD OF BACHILLERATO LEVELS A-B AT UNIDAD EDUCATIVA LUIS A. MARTÍNEZ"

General Objective: To investigate the effectiveness of ICT's and reading comprehension in high school students

Specific Objective: To analyze the effectiveness before and after the application of ICT's to develop reading comprehension.

AUTOR/A: GRACE MATILDE CADENA ESCOBAR

Señale mediante un ✓, según la validación para cada pregunta:

1D- DEFICIENTE **2R- REGULAR** **3B- BUENO** **4O- ÓPTIMO**

PARÁMETROS / PREGUNTAS	Pertinencia de las preguntas del instrumento con los objetivos				Pertinencia de las preguntas del instrumento con las variables y enunciados				Calidad técnica y representatividad				Redacción y lenguaje de las preguntas			
	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O
Pregunta 1				✓				✓				✓				✓
Pregunta 2				✓				✓				✓				✓
Pregunta 3				✓				✓				✓				✓
Pregunta 4				✓				✓				✓				✓
Pregunta 5				✓				✓				✓				✓
Pregunta 6				✓				✓				✓				✓

Observaciones:

_____
_____
_____
_____

Realizado por:
Lic. Grace Matilde Cadena Escobar
180376597-1

Validado por:
Mgs. Lady Patricia Espíndola Cáceres
C.I. 1803736782

UNIVERSIDAD TÉCNICA DE AMBATO
FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN
POSGRADO
MAESTRÍA EN PEDAGOGÍA EN LOS IDIOMAS NACIONALES Y EXTRANJEROS MENCIÓN INGLÉS, COHORTE 2019
Avda. Los Chasquis y Rio Payamin, Ambato - Ecuador

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General Objective: To investigate the effectiveness of ICT's and reading comprehension in high school students

Specific Objective: To analyze the effectiveness before and after the application of ICT's to develop reading comprehension.

AUTOR/A: GRACE MATILDE CADENA ESCOBAR

Señale mediante un ✓, según la validación para cada pregunta:

1D- DEFICIENTE **2R- REGULAR** **3B- BUENO** **4O- ÓPTIMO**

PARÁMETROS / PREGUNTAS	Pertinencia de las preguntas del instrumento con los objetivos				Pertinencia de las preguntas del instrumento con las variables y enunciados				Calidad técnica y representatividad				Redacción y lenguaje de las preguntas			
	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O
Pregunta 1				✓				✓				✓				✓
Pregunta 2				✓				✓				✓				✓
Pregunta 3				✓				✓				✓				✓
Pregunta 4				✓				✓				✓				✓
Pregunta 5				✓				✓				✓				✓
Pregunta 6				✓				✓				✓				✓

Realizado por:
Lic. Grace Matilde Cadena Escobar
180376597-1

Validado por:
Mgs. Paola Ximena Galeas Lema
1803484797

Annex 5: CARTA DE COMPROMISO

Ambato, 20 de Mayo del 2020

Doctor

Víctor Hernández del Salto

PRESIDENTE DE LA UNIDAD DE TITULACIÓN DE POSGRADO FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN UNIVERSIDAD TÉCNICA DE AMBATO

Presente.-

Dr. Mario Fernando Cevallos, Rector de la Unidad Educativa Luis A. Martínez, me permito poner en su conocimiento la aceptación y respaldo para el desarrollo del Trabajo de Titulación bajo el Tema: "THE INTEGRATION OF ICT'S IN READING COMPREHESION IN STUDENTS OF THIRD BACHILLERATO LEVELS A-B AT UNIDAD EDUCATIVA LUIS A. MARTÍNEZ", propuesto por la estudiante Lic. Grace Matilde Cadena Escobar portadora de la Cédula de Ciudadanía : 1803765971, de la Maestría en Pedagogía en los Idiomas Nacionales y Extranjeros Mención Ingles Cohorte 2019, de la Facultad de Ciencias Humanas y de La Educación de la Universidad Técnica de Ambato.

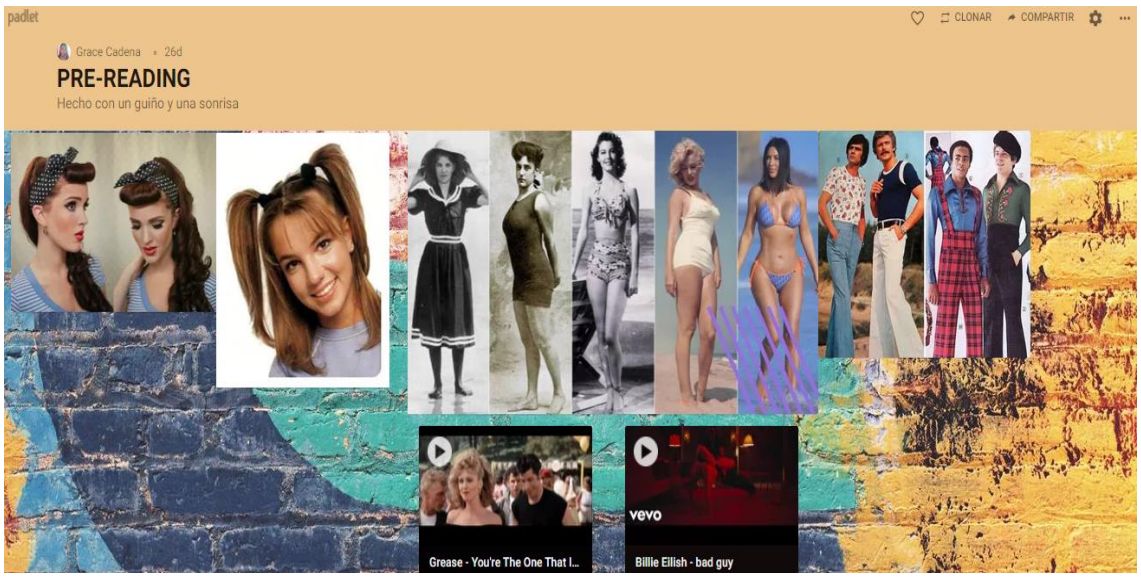
A nombre de la Institución a la cual represento, me comprometo a apoyar en el desarrollo del proyecto.

Particular que comunico a usted para los fines pertinentes. Atentamente.

Dr. M. Sc. Mario Cevallos B. RECTOR
1802352938
032821774
0984677669
mfcbigca@hotmail.com

Annex 6: Padlet (Brainstorming)

Technological tool that was used to show images and videos related to the topic, encouraging students to predict the theme.



Link: https://es.padlet.com/gracepau012015/58y5nmrdlkq08crp

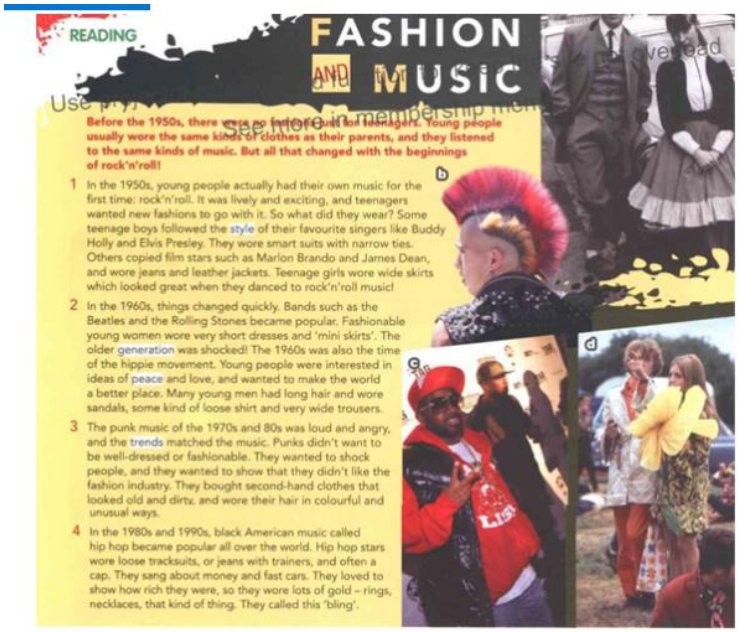
Annex 7: Mentimeter (Predict Topic)

Technological tool that served as a brainstorming tool for students to write about what they think the topic is about.

Link: https://www.mentime-ter.com/s/cc8e9bdae3a366d5332a0418b9ac56db/ac66ed34b326

Annex 8: Practice Reading – Fashion and Music

Reading taken from the official Cambridge website, book Prepare Level 5, used in the 2nd session for control group students to improve their reading comprehension using technological tools.



READING

FASHION AND MUSIC

Before the 1950s, there were no fashions just for teenagers. Young people usually wore the same kinds of clothes as their parents, and they listened to the same kinds of music. But all that changed with the beginnings of rock'n'roll!

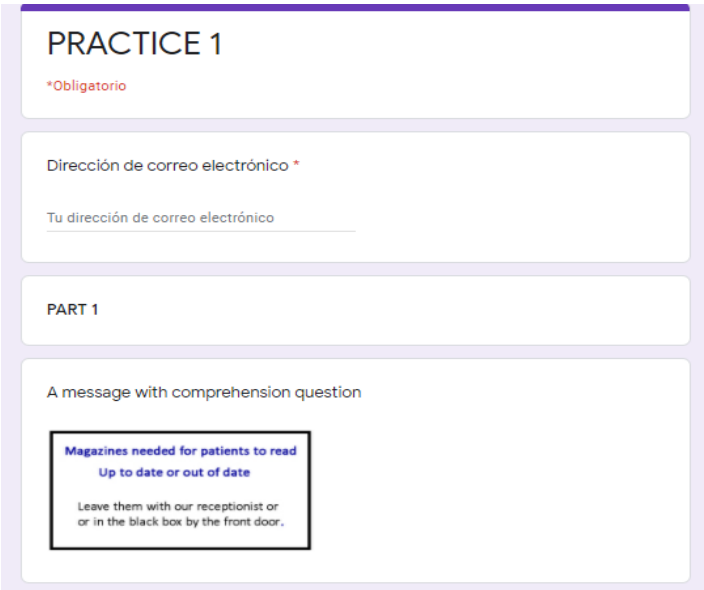
1 In the 1950s, young people actually had their own music for the first time: rock'n'roll. It was lively and exciting, and teenagers wanted new fashions to go with it. So what did they wear? Some teenage boys followed the style of their favourite singers like Buddy Holly and Elvis Presley. They wore smart suits with narrow ties. Others copied film stars such as Marlon Brando and James Dean, and wore jeans and leather jackets. Teenage girls wore wide skirts which looked great when they danced to rock'n'roll music!

2 In the 1960s, things changed quickly. Bands such as the Beatles and the Rolling Stones became popular. Fashionable young women wore very short dresses and 'mini skirts'. The older generation was shocked! The 1960s was also the time of the hippie movement. Young people were interested in ideas of peace and love, and wanted to make the world a better place. Many young men had long hair and wore sandals, some kind of loose shirt and very wide trousers.

3 The punk music of the 1970s and 80s was loud and angry, and the trends matched the music. Punks didn't want to be well-dressed or fashionable. They wanted to shock people, and they wanted to show that they didn't like the fashion industry. They bought second-hand clothes that looked old and dirty, and wore their hair in colourful and unusual ways.

4 In the 1980s and 1990s, black American music called hip hop became popular all over the world. Hip hop stars wore loose tracksuits, or jeans with trainers, and often a cap. They sang about money and fast cars. They loved to show how rich they were, so they wore lots of gold – rings, necklaces, that kind of thing. They called this 'bling'.

Reading and exercises using the processes and strategies of reading.



PRACTICE 1

*Obligatorio

Dirección de correo electrónico *

Tu dirección de correo electrónico

PART 1

A message with comprehension question

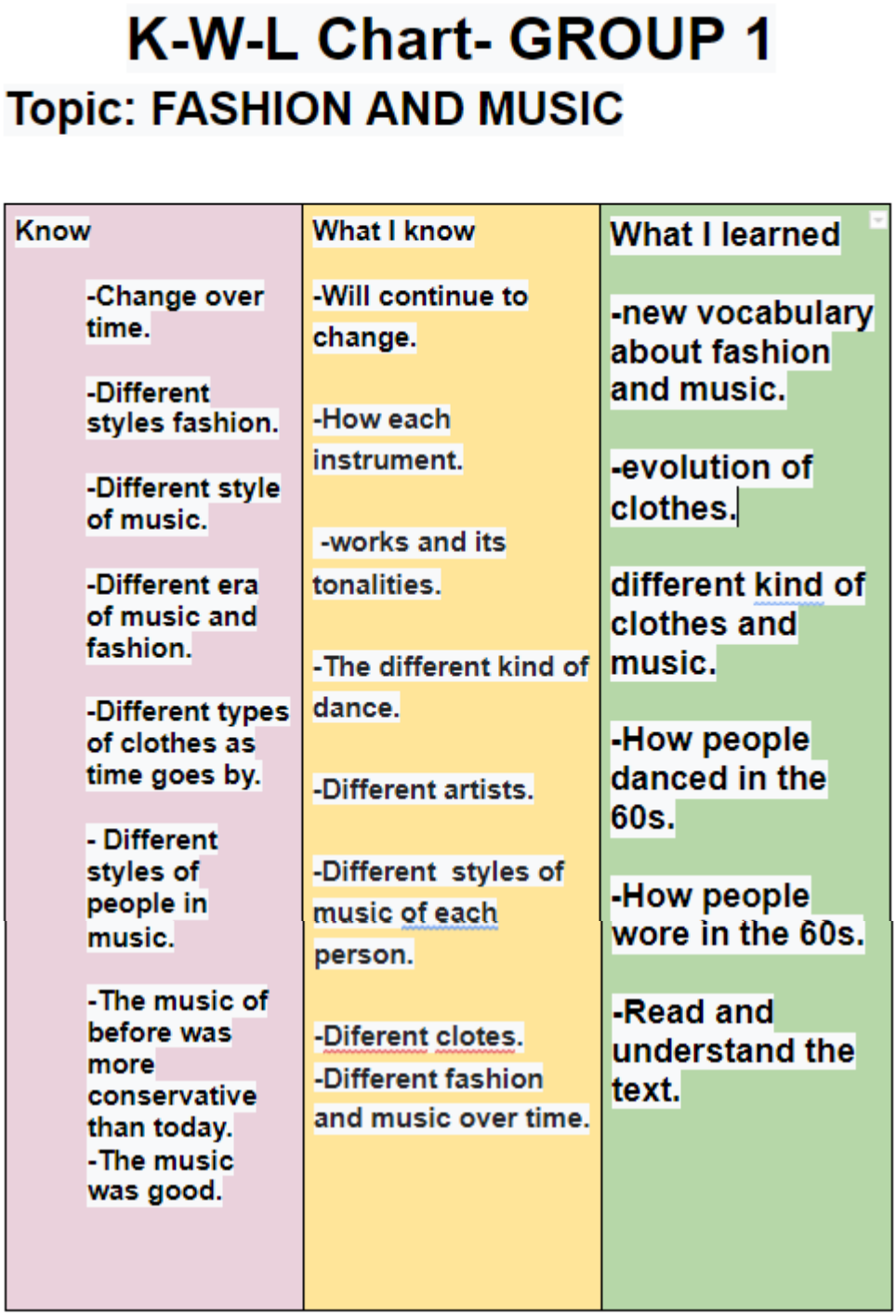
Magazines needed for patients to read
Up to date or out of date

Leave them with our receptionist or or in the black box by the front door.

Link:https://docs.google.com/forms/d/1EdkFyADqK8MpWcilVYBkLcvwuUBPZ_-ccYwtiC1xiAs/edit

Annex 9: KWL Chart

Document filled out by the students about what they already knew about the topic, what they would like to know, and what they learned during the class.



K-W-L Chart- GROUP 1

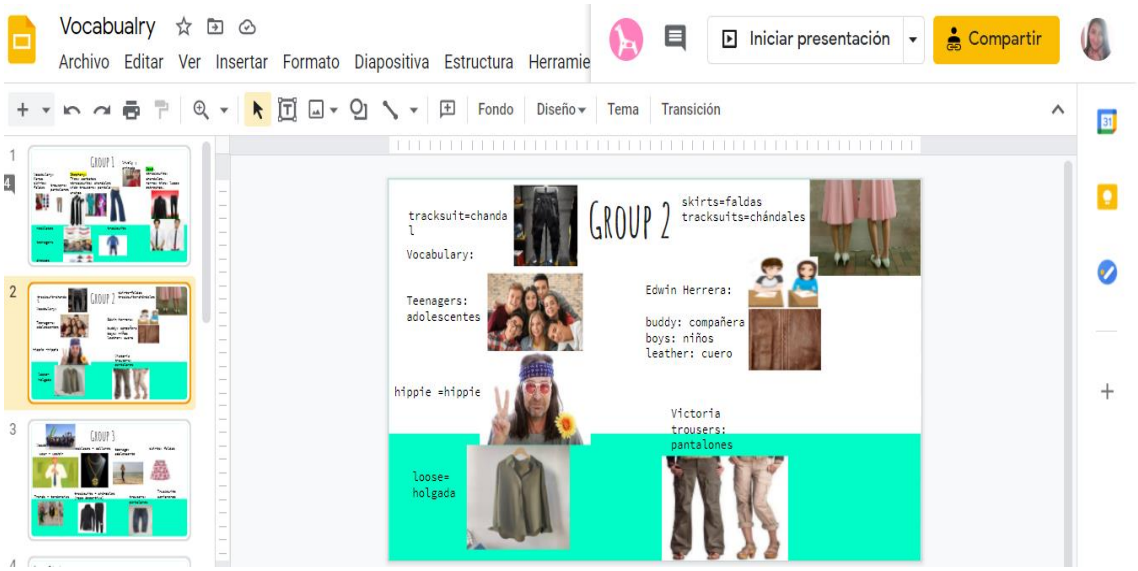
Topic: FASHION AND MUSIC

Know	What I know	What I learned
-Change over time. -Different styles fashion. -Different style of music. -Different era of music and fashion. -Different types of clothes as time goes by. - Different styles of people in music. -The music of before was more conservative than today. -The music was good.	-Will continue to change. -How each instrument. -works and its tonalities. -The different kind of dance. -Different artists. -Different styles of music of each person. -Diferent clotes. -Different fashion and music over time.	-new vocabulary about fashion and music. -evolution of clothes. different kind of clothes and music. -How people danced in the 60s. -How people wore in the 60s. -Read and understand the text.

Link: https://docs.google.com/document/d/1XufYKuCP5EXwPh_x-huNr6fhDbMbMCSvTcGJr4oDbO8/edit

Annex 10: Google Slides

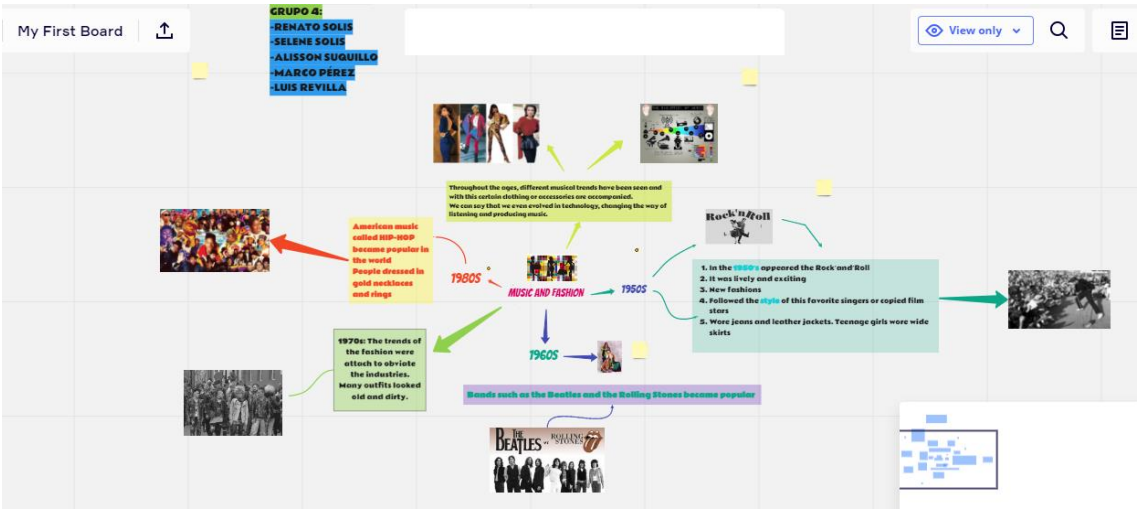
Section where students, in groups of 5, wrote down vocabulary, new words they did not understand and then looked up the meaning, and added a graph to help them remember each new word.



Link: https://docs.google.com/presentation/d/1beSr4FoVDYORKFzcX9Lxvc-3jq_frsiRRPi6-286F-Y/edit#slide=id.p

Annex 11: Mind map

Through the Miro tool, students made a graphic organizer of what they understood about reading, using main ideas, main ideas that help them remember the most important things about reading.



Link: https://miro.com/app/board/o9J_lZzMHLY=/

Annex 12: Work Plan

Work Plan	
Session 1	**Pre- reading** -Teacher projects several imagines using pallet to brainstorming about music, clothes and hairstyles which are currently in fashion and out of fashion Padlet: https://es.padlet.com/gracepau012015/58y5nmrdlkq08crp -Teacher asks students what they are wearing and what fashions they like. -Teacher engages students to participate in order to predict the topic -Students write the possible topic in Mentimeter: https://www.menti.com/93msfwir6e The teacher explains to the students that through the KWL chart, they will be able to write down what they know before about the topic, what they would like to learn and what they learned during the reading. They will be given the access link so that they can work in groups, the access link is KWL: https://docs.google.com/document/d/1XufYKuCP5EXwPh_x-huNr6fhDbMbMCSvTcGJr4oDbO8/edit
Session 2	**While – reading** -Teacher gives out link of the reading activity -Teacher presents the topic

	-Teacher tell students to look at the photos and ask “What can you see?”, and match each paragraph to one of the photos. -Teacher instructor students to skim the reading for answering some questions: ●How did girls wear in 1950? ●Did Beatles become famous in 1970? ●How did punk music in 1970s and 80s? ●How did punk prefer to wear? ●When did hip hop music appear? ●What did hip hop singers wear? ●When did appear mini skirts? ●What ideas did young people have in 1960? -Teacher makes groups of people in Zoom -Teacher gives the students the link on google slides so that they can write the new words they find in the text (10 minutes) Link: https://docs.google.com/presentation/d/1beSr4FoVDYORKFzcX9Lxvc-3jq_frsiRRPi6-286F-Y/edit#slide=id.p -Teacher asks student to scan the passage (5 minutes) in order to answers the questions (Part 1) -Teacher asks students to compare answers. -Teacher checks new vocabulary.

	-Teacher asks students to read briefly again and elicit the key words in the questions and options and tell students to look for these ideas in the text (Part 2) -Teacher says students to work in the same groups and match the highlighted words in the article to the meanings (Part 3) Reading's link: https://docs.google.com/forms/d/1EdkFyADqK8MpWcilVYBkLcvwuUBPZ_-ccYwtiC1xiAs/edit
Session 3	**Post Reading** Teacher tells the students that in the mime group work, they will make a concept map using the Miro tool, so that they write main ideas about the text they just read, so that they can make a summary in a more attractive way and that it is easy to remember what the reading was about. Teacher asks students to read the three sentences, and discuss the meaning of kind in each one. -Teacher put students into pairs to write a sentence using each of the phrases, and share some ideas as a class and invite other students to say whether kind has been used correctly. Follow – up (if time) -Teacher tells students to work in pairs and choose a question that they would like to talk about. (Talking point)

	-Teacher allow students to note down some ideas in answer to their question. So, they will write a small paragraph about the question that they chose.

Annex 13: Urkund Report

Ambato, enero 12 2020

Doctor
Víctor Hernández del Salto
PRESIDENTE
UNIDAD ACADEMICA DE TITULACIÓN
FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN
UNIVERSIDAD TÉCNICA DE AMBATO
Presente.

De mi consideración:

Por medio de la presente pongo en conocimiento el reporte del URKUND del trabajo de investigación con el tema **"THE INTEGRATION OF ICT'S IN READING COMPRENHESION IN STUDENTS OF THIRD OF BACHILLERATO LEVELS A-B AT UNIDAD EDUCATIVA LUIS A. MARTÍNEZ",** elaborado por la señora estudiante: Grace Matilde Cadena Escobar mismo que evidencia un 0% de similitud, como se puede observar en la captura de pantalla siguiente:

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Atentamente,

ELSA MAYORIE
CHIMBO CACERES

Dra. Elsa Mayorie Chimbo Cáceres, Mg.
Director