The Effect of Digital Reading on Edpuzzle to Improve Reading for Specific Information

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El efecto de lectura digital en Edpuzzle para mejorar la lectura de información específica

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RESUMEN

Este estudio de investigación acción se centró en determinar la contribución de la lectura digital a través de la plataforma Edpuzzle para mejorar la comprensión lectora en 21 estudiantes de quinto año de una escuela básica municipal en Chile. Se llevó a cabo durante siete sesiones en las cuales se utilizaron actividades de comprensión lectora en Edpuzzle para identificar información específica. Los datos se recopilaron a través de las estadísticas proporcionadas por Edpuzzle, una Likert scale, y dos focus groups. Aunque los resultados no revelaron un avance significativo en la habilidad evaluada, la mayoría de los participantes expresaron una percepción positiva sobre su desempeño durante las intervenciones. Por lo cual, estos hallazgos pueden ser relevantes para quienes buscan utilizar plataformas en línea como Edpuzzle para mejorar la comprensión lectora de los estudiantes, ya que, a pesar de la falta de mejoras evidentes, los participantes disfrutaron de las actividades y experimentaron una sensación de logro.

Palabras clave: investigación acción, aprendizaje intencional de vocabulario, percepciones, Edpuzzle, educación primaria.
1. Introduction

Reading is one of the language-receptive skills of paramount importance when communicating and receiving information. Therefore, there are many factors to consider when teaching reading. Berardo (2006) claims that “reading for learning is considered to be the type of reading done in the classroom and is goal orientated” (p. 51). An activity related to reading comprehension may have different purposes but inside the classroom is usually oriented to a specific goal set by the county authorities. According to MINEDUC (2023), in Elementary Education from first to sixth grade, Chilean students should be able to comprehend different types of texts like songs, stories, and articles. Moreover, they should be able to grasp the general idea of a text and identify specific pieces of information. In addition to this, the national syllabus indicates that students need to be able to use strategies like predicting, pre-reading, scanning, and confirming ideas during a reading comprehension activity or task. Therefore, when finishing sixth grade, students are expected to be able to use all the strategies and skills stated above when finishing Elementary Education.

Despite what the Ministry of Education pursues from sixth-grade students in Chile, the reality may vary a lot, especially when considering the few hours of exposure students have in the regular system and the few opportunities to practice the different skills outside the classroom as EFL learners. For instance, Agencia de Calidad de la Educación (2018), depicts how poor the reading comprehension skills of Chilean youngsters was in the 2017 SIMCE test applied to third high school students. Being the mean score of 22 points out of 100. These results express an appalling situation at a national level that needs to be addressed urgently. In the context of fifth graders in a public school in Chile, this situation is not so different. Their reading comprehension skills are feeble. They express how difficult it is for them to comprehend a text as well as to extract explicit and implicit information and the lack of strategies they have. The results of the English tests comply with these statements, as the reading section is always the one with the lowest percentage of correct answers. Apart from the exposure time, the reason for students' poor results is their attitude towards reading activities. They describe them as dull, difficult, hard to answer, and too long. The perception they usually have is mainly negative, generating a high affective filter and, consequently, unfavorable results.

In order to solve this problem, this action research aims to improve these fifth graders’ receptive skills and strengthen them so they can gather the required information to complete an activity, task, or project. To reach this aim, this study will focus on the use of digital reading activities on the Edpuzzle platform to improve reading comprehension skills for specific information. Liu (2012) mentioned the importance of digital reading, explaining that it is expected for children to develop different strategies and develop a great capacity for reading online information. This method is efficient and motivating to use in reading comprehension activities, considering as well how drawn into technology students are nowadays. Moreover, in a study carried out by Pueo et al. (2017) the results of Edpuzzle in the experimental groups of the study, showed meaningful results when compared to the control group that leaned using traditional materials. Hence, the use of this strategy could have a positive impact on the reading comprehension skills of the students to identify specific information and boost other areas of significant importance.

This research seeks to answer the following question: How can the use of digital reading on Edpuzzle support a group of fifth graders’ reading comprehension skills for specific information?

The objectives of this study are as follows:
1. To assess fifth-grade students’ progress in reading comprehension for specific information throughout the intervention using digital reading on the Edpuzzle platform.

2. To analyze learners’ opinions regarding the contribution of digital reading on Edpuzzle to their reading comprehension skills for specific information.

By addressing these objectives, this research aims to provide insights into the effectiveness of using digital reading tools like Edpuzzle to enhance reading comprehension skills among fifth-grade students, thus informing educational practices and interventions in this area.

2. Theoretical framework

2.1. Young learners

There are various definitions of "young learners" within the field of education (Ellis, 2014). However, for this action research, we will primarily draw upon the definitions proposed by Nunan (2010) and Pinter (2006). These definitions offer comprehensive perspectives on the characteristics and educational needs of young learners, which will be valuable in informing the focus and approach of our study.

According to Nunan (2010), the age of younger learners ranges from 3 to 15-year-old learners. Even though some writers divide the ages into smaller ranges, he does not agree with this since children with the same chronological age do not necessarily share the same characteristics. The author divides the groups into younger and older learners, sharing the characteristics of Pinter (2006) for these two groups.

On the other hand, Pinter (2006) explains that younger learners are in their first years of school instruction, they can understand, yet not analyze messages, they are not necessarily aware of their learning processes, and they have limited literacy skills and limited knowledge of the world. Finally, these younger learners show a greater interest in activities related to imagination, fantasy, and movement. In contrast, the author defined older learners as students who are already in the school system and have a school routine. They show interest in more analytical and abstract aspects of the language. Besides, older learners are more conscious about their learning process, and their reading and writing skills are developed properly. Indeed, these students are aware of others’ opinions and realities, and they are more interested in issues that occur in real life (see Table 1).

<table>
<thead>
<tr>
<th>Table 1.</th>
<th>Younger Learners vs. Older Learners Characteristics.</th>
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<tbody>
<tr>
<td><strong>YOUNGER LEARNERS TO OLDER LEARNERS</strong></td>
<td><strong>These learners are well-established at school and are comfortable with school routines</strong></td>
</tr>
<tr>
<td>Learners are in preschool or the first couple of years of schooling</td>
<td>They have a holistic approach to learning language, which means that they understand messages but cannot yet analyze language</td>
</tr>
</tbody>
</table>
They have lower levels of awareness about themselves as language learners as well as about the process of learning. They show a growing level of awareness about themselves as language learners and the process of learning.

They have no or limited ability to read and write, even in their first language. They may have well-developed skills as readers and writers in their first language and will be interested to learn how to read and write in their second language.

Generally, they are more concerned about themselves than others, and they have limited knowledge of the world. They have a growing awareness about others and the world around them.

They enjoy fantasy, imagination, and movement. They begin to show interest in real-life issues.

They may be familiar with smartphones and tablets and may have used the internet. They are likely to have access to computers and the internet, they may own a smartphone, and they may be regular users of social media and/or regular online game players.

Source: Pinter (2017).

When thinking about how young students learn or acquire a language, Kersten & Rohde (2013) share some ideas by saying “at primary school where there is a fixed curriculum, teaching concepts and methods must be selected carefully and should not be based on explicit teaching of grammar and a pronounced focus on forms (as opposed to a focus on form)” (p. 118).

Considering the definitions given by the authors regarding younger and older learners, it is evident that they learn differently. Hence, the activities and reading passages that they should work with must be different and point to their specific capabilities, needs, and interests.

2.2. Early Language Learning

Friederici (2017) states children learn a language through their immediate environment and begin to communicate with more complex interactions as they grow up and develop new skills. Friederici’s research in neurocognitive linguistics highlights the role of brain networks and cognitive processes involved in language acquisition. She suggests that various stages and processes within a child's brain, including syntactic processing and semantic integration, contribute to the development of language skills.

According to Idrayani (2016), language learning is divided into three different periods, the first from birth to the first year of life of an infant when she/he still has not developed language. Then, from their first to their third year of life, children start producing isolated words or short sentences. Moreover, three to sixth year-olds are meant to be able to produce more complex communications, be aware of the phonological aspects of the language, use a wider range of vocabulary, etc.

Also, Idrayani (2016) mentions some factors that affect the development of the language. First, health. Children may develop difficulties if they present health issues during the first two years of life. Second, intelligence is a factor that supports a faster development of the learning process. Third, the social background of a child, since it is thought that poor families do not have the same learning
opportunities that richer families, therefore, cannot pass on this knowledge. Another important factor is related to family relations and size because healthy relationships and small families are an advantage for children who can receive more attention from their parents. Finally, their personality and relationship with others. Children who share with others and adapt to their context, speak more frequently and improve their speaking skills.

In Europe, there are policies regarding Early Language Learning. For instance, Enever (2011) explains about the policies of Early Language Learning in Europe (ELLiE). Most of these countries set the mandatory age to start language learning from the age of 5 to 7 years old. Students get weekly classes and students with special needs are likely included in the lessons as they should have the opportunity to learn. Regarding the teachers that teach foreign languages, there can be general teachers, who teach several classes plus the FL class. Also, a specialist teacher, an expert on the subject, a semi-specialist teacher, and a non-qualified teacher may know the language but not necessarily know how to teach it.

In Chile, the official language is Spanish, and English is taught as a foreign language (EFL) generally from pre-kindergarten, but it is mandatory in all the country since fifth grade in primary school. According to Pinter (2017), English as a Foreign Language (EFL) is characterized by its instruction as a subject within educational settings lacking an English-speaking environment. Pinter emphasizes that young children possess a remarkable capacity for language acquisition. They can comprehend language more readily, mimic its sounds and rhythms, and exhibit a greater comfort level in speaking and using the language. Importantly, young learners tend to worry less about making mistakes or facing judgment, fostering a more relaxed and conducive learning environment.

This is true, specifically in the group of participants of this action research study as they have demonstrated they feel comfortable speaking and using English inside and outside the classroom, since they were in pre-kindergarten and have continued showing confidence since.

2.3. Reading comprehension in the EFL classroom

Reading comprehension is one of the hardest skills to acquire for EFL learners as they tend to focus on details and try to understand every word to comprehend what they are reading (Elleman & Oslund, 2019).

There are several aspects to pay attention to when reading, for instance, Anderson (2014) mentions that there are three reading models: bottom-up, top-down, and interactive models, being the third one the most representative one that readers use when they encounter a reading. He also explains how the act of reading is defined by the reader, the text, the fluency, and the strategies the reader uses. Besides, the author indicates how important strategies are in the ESL and EFL context. The most important strategies he mentions are metacognitive reading strategies. The top reading strategies that EFL learners use are to pay closer attention when the texts get harder, to re-read, guess the meaning of unknown words, underline, or circle important information, and get back when losing concentration.

As stated by Kusumawardana & Akhiriyah (2022) “EFL learners still lack using metacognitive awareness of reading strategies significantly because of their unknowing and inadequate understanding of what reading strategies to use, and how and when to use them appropriately” (p. 1).

On the other hand, Pinter (2017) explains that reading in a foreign language environment is harder than learning in a second language context. Despite this, learners can use the strategies and knowledge they already have from their first language, although, it will depend on the level of literacy.
each learner has in their L1. The strategies they can transfer are regarding spelling patterns, sounds, and letters.

Kusumawardana & Akhiriyah (2022) define reading comprehension by saying:

Reading is an ability that assists students to comprehend the context of the text they are reading. A good reader can anticipate what will be discussed in the text, connect the material in the text to prior knowledge, ask questions while reading, monitor their understanding of the text, and summarize what they have read. (p. 2)

Furthermore, Kendeou, et al. (2016) state that reading comprehension is a complex activity that involves constructing a coherent mental representation of the text by integrating textual information with relevant background knowledge, using inference-making processes, and considering various linguistic and cognitive factors.

Considering these and other problems, several strategies have been used to teach reading comprehension skills in an EFL context. This research proposes the use of digital reading to identify specific information.

2.3.1. Reading comprehension to identify specific information

Reading comprehension can be divided into different purposes like comprehending the general idea of a text, reading for detail, identifying specific information, etc. This study will focus specifically on reading comprehension to identify specific information, generally used with the implementation of the scanning strategy.

According to Banditvilai (2020), reading comprehension as a scanning strategy is defined as:

Scanning is a reading skill that allows the reader to locate specific information quickly. With scanning you already know before you begin what sort of information you are searching for. The purpose of scanning is to get specific information. Scanning is especially important for improving your reading. Many students try to read every word when they read, so they read very slowly. Scanning can help students learn to read and understand faster. Therefore, it can be concluded that strategies and critical thinking are crucial to finding specific information within the text successfully. (p. 46)

Similarly, some authors exemplify the use of the scanning technique to identify specific information. Some different stages and benefits are mentioned in the following paragraphs. Dewi (2022) explained different stages that can be followed to implement the scanning technique, such as “(1) Understand what you are looking for, (2) Analyse the content in the text, (3) Anticipate the information that will appear, (4) Read every paragraph at once, (5) Read the entire text” (p. 73). Therefore, it is evident that scanning should be taught and follow a structure like the one presented.

Moreover, Dewi (2022) mentioned the benefits of this scanning by saying “the application of this strategy is very helpful for the development of students in learning to read in class … help pupils become more focused and efficient in their reading comprehension” (p. 73).

Aritonang et al. (2018) name the advantages of using scanning in reading comprehension activities by saying:

There are some advantages of scanning. These are as follows:

a. Scanning helps the students only try to locate specific information.
b. Scanning helps the students to follow the linearity of the passage.
c. Scanning helps the students to use their time efficiently.
Based on the statement above, reading using scanning can help the students to get information from the book and the students can use the time efficiently. (p. 103)

Additionally, Edvieanto et al. (2019) numbered a series of benefits that were found after using the scanning technique to improve reading comprehension. The benefits are the following:

1. The use of scanning technique can improve the students’ reading comprehension. 2. Scanning technique is easy to apply for students and teachers in teaching and learning activities, especially in reading comprehension. 3. Teaching process using scanning technique can save in time. 4. Students are expected to easily absorb information from other subjects. 5. With the scanning technique of increasing student activeness, it can be seen from the feedback of students in each answer question. (p. 163)

Accordingly, there are several benefits that this technique may provide to reach a better performance when facing a reading comprehension task.

2.3.2. Reading comprehension in the Chilean classrooms

Reading comprehension in Chile is one of the lowest skills developed by students in their first language. This issue directly affects reading comprehension in a second language since students do not have enough strategies or abilities to transfer to the L2 reading process.

In 2020 there was a study carried out in Chile that focused on the motivation and comprehension that third, fourth and fifth-grade students had regarding reading in Spanish, their first language. This study by Orellana et al. (2020) involved 1,070 students from public and private schools. It showed that the motivation that students had at the beginning of the school year had a great impact on the improvement of their reading comprehension skills. Also, it was proved that the self-concept that the students had of their capabilities, had a strong influence on their performance over time.

The Agencia de Calidad de la Educación (2018) showed concrete data on the performance third high school students had on SIMCE, a standardized test applied to 137 public high schools in the country. The score range was from 0 to 100, being the average score of the country of 22 in the reading section. Students were expected to reach an A1 level or an A2-B1 level of English according to the CEFR. The objectives for the A1 levels were two. First, to comprehend brief and simple texts related to themselves, their family, or their environment. Second, to comprehend texts and identify explicit information accompanied by visual support. The objectives to reach an A2-B1 level were the following: to recognize the main idea of a text about daily topics and to comprehend texts related to daily topics that have simple or medium-level complexity.

According to the results, 68% of the students reached an A1 level of English, while 32% of them reached an A2-B1 level. Therefore, it can be assumed that the level of English and reading comprehension of most of the Chilean population is at a beginner’s level in the third grade of high school, a level expected for students finishing primary school that is four years earlier.

In fifth grade, students are expected to achieve three learning objectives related to reading comprehension: objectives 5, 8, and 9. According to MINEDUC (2023), these three objectives are as follows: First, students should demonstrate comprehension of texts containing commonly used vocabulary for greetings, inquiries, information provision, following instructions, expressing

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1 SIMCE: Sistema Nacional de Evaluación de Resultados de Aprendizaje (National System for the Assessment of Learning Outcomes).
preferences, quantities, possession, etc. The second objective involves students expressing preferences and reacting to texts by relating them to personal experiences. The third objective requires students to utilize strategies during pre-reading, reading, and post-reading activities. These strategies include making predictions, organizing information, re-reading, etc. Objectives 5 and 9 are of utmost importance in fifth grade as they have continuity until students reach the second year of high school.

2.4. Reading on digital media

The way people read has been changing along with the new generations. E-books appeared together with artifacts like Kindle, interactive books, read-aloud stories, etc. Different ways to present and watch, listen, or read stories have appeared and it is important to try these new technologies inside the classroom.

Although there are authors such as Wolf & Potter (2018) and Carr (2020), among others, who mention how important it is to read on paper and how digital resources might be negative for people, there are others who see and prove there is a world of possibilities in digital reading. For example, Ganito & Ferreira (2016) depict the importance of being able to move and carry around a book anywhere at any time, being connected and sharing ideas and opinions with others at the same time physically or virtually. Besides, they mention that if a person has read printed books, it is very likely that he/she will read digital books.

Moreover, Kelly (2016) highlights several advantages of digital reading, such as its accessibility; every reader can find a book, article, or other material anywhere in the world by accessing the internet. He also points out the customization together with the interactivity that digital reading has. Every user can choose the font, the size, the background, the sharing options, along with many other features. They have the option to change every aspect to their liking. In addition, the portability is another plus that reading on a digital platform has. They can take many books, series, magazines, or any type of reading anywhere in one single small device. Finally, the cost of these pieces of reading, they are usually cheaper, easier to find, and they may even be available for free.

Furthermore, the author Liu (2012) explains that “readers (especially younger readers) are likely to gradually develop the screen-based reading behavior, and to increasingly use a variety of strategies (e.g., browsing and key-word spotting) to cope with the information-abundant environment” (p. 92).

Consequently, it is a good sign that students try to develop the use of strategies when reading, considering that the aim of the study is to improve reading comprehension to identify specific information, a subskill aligned with the use of scanning strategies, very much used in digital reading.

2.5. Edpuzzle

Edpuzzle is an online platform that helps teachers make or choose videos to include in their lessons. There are video lessons created by other teachers and every user can choose and edit any video to present in their lesson. Within these videos, there is the possibility to add questions, audio, or notes. Moreover, teachers can select and assign a video to their students and check the progress and results of their performance from his/her account (Edpuzzle, 2023).

In research carried out using Edpuzzle as a tool inside the classroom, Pueo et al. (2017) reached the best results of the three experimental groups, the one in which the participants used the platform
within the class, followed by the group that used the platform at home as a flipped classroom, ending with the lowest scores, the group that did not use the platform and only answered a questionnaire about the same topic. It is expected that this study may reach similar results.

Bazurto & García (2021) made a study using Edpuzzle as a flipped classroom instrument to improve a group of students’ reading comprehension. According to their findings, there are several advantages that the platform offers to help teachers. For instance, it is mentioned that the features presented in the webpage aided to identify student’s strengths and weaknesses. Moreover, teachers could see which parts of the reading comprehension task were comprehended and which parts needed more work. Therefore, the needs of the students could be addressed by the instructors and the skills could be improved.

In research conducted by Fabillar (2022) using the Edpuzzle platform to improve fourth graders’ reading comprehension skills, he claims the following: “In the process, they got the chance to raise the level of their reading ability and their reading comprehension levels. They also got the opportunity to raise their class achievement. Also, through the Edpuzzle App, they gained venues to take pleasure in reading and appreciate its value” (p. 4).

Edpuzzle will be used as a tool to work on students’ reading comprehension along the interventions to analyze the contribution this platform may have on students’ results and their opinions regarding this method and how attractive it was for them.

3. Method

3.1. Type of Research

The present study employs action research methodology, which involves finding a problem, reflecting upon it, planning on solutions, and taking actions to keep reflecting and modify the actions when necessary to finally reach conclusions on the effect that the investigation had on the problem. As Burns & Richards (2012) state that this is systematic and involves observing the results, reflecting, and modifying the plan if necessary. In this context, the teacher-researcher identified serious problems in the reading comprehension skills of a group of fifth graders and plans to address them using digital reading on the Edpuzzle platform.

3.2. Description of participants

This action research was carried out within a group of 21 fifth graders from a public primary school in Chile. Their age ranges from 9 to 11 years old. These students have been receiving instruction in English since they were 4 years old in pre-kindergarten classes. They are a very enthusiastic group who feel very comfortable during the English lessons and meet all the requirements for the grade. Moreover, the student’s parents are caring and involved in their learning process and have a high value in using English as a tool to have more opportunities in everyday life activities. They supported their children’s participation in this study by signing a consent letter.

These students have English lessons twice a week, summing up 160 minutes, and follow the national curriculum and the textbook delivered by the Ministry of Education. Furthermore, there are seven students with special education needs, three of them with a permanent condition and the other
four with transitory needs. One of the participants has significant problems acquiring literacy abilities and cannot read in the first language. Therefore, his performance in English is highly limited.

The sample selected for this study is a purposive sample, defined by Gliner et al. (2016) as a “nonprobability sampling technique in which participants are handpicked from the accessible population so that they presumably will be representative or typical of the population” (p. 149). This sample was chosen because they struggle to comprehend written texts like most of the school population, but they are easily available and have a good disposition to learn, engage in new activities, and use technology.

3.3. Stages of the action research

The action plan consisted of a first session presenting the action research and the use of the platform. Moreover, this plan included the implementation of two intervention stages, being the first stage of four sessions and the second stage of three more sessions to gather more data and reach more reliable results. Each session consisted of pre-teaching the vocabulary of the lesson, then do the reading tasks on Edpuzzle and finally filling an exit ticket to check the comprehension of the vocabulary and the story. After the seven interventions, the Likert scale questionnaire and the two focus groups interviews were administered (see Table 2).

<table>
<thead>
<tr>
<th>Session</th>
<th>Aim of the Session</th>
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<tbody>
<tr>
<td>Session 1</td>
<td>By the end of the session, students will be able to comprehend how the research will be carried out and how Edpuzzle platform works</td>
</tr>
<tr>
<td>Session 2</td>
<td>By the end of the session, students should be able to identify specific information about the characters’ feelings on a story on Edpuzzle (See activity: <a href="https://edpuzzle.com/media/6466ce8b9d2e9e433fe0e16a">https://edpuzzle.com/media/6466ce8b9d2e9e433fe0e16a</a>)</td>
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<tr>
<td>Session 3</td>
<td>By the end of the session, students should be able to identify specific information about objects or people’s features in a story on Edpuzzle (See activity: <a href="https://edpuzzle.com/media/6461a26d0a358b431561e45c">https://edpuzzle.com/media/6461a26d0a358b431561e45c</a>)</td>
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<tr>
<td>Session 4</td>
<td>By the end of the session, students should be able to identify specific information about events in a story on Edpuzzle (See activity: <a href="https://edpuzzle.com/media/6461a844c9aba6431f8e51cf">https://edpuzzle.com/media/6461a844c9aba6431f8e51cf</a>)</td>
</tr>
<tr>
<td>Session 5</td>
<td>By the end of the session, students should be able to identify the sequence of events in a story on Edpuzzle (See activity: <a href="https://edpuzzle.com/media/6461a8bafce20642ea1700cb">https://edpuzzle.com/media/6461a8bafce20642ea1700cb</a>)</td>
</tr>
<tr>
<td>Session 6</td>
<td>By the end of the session, students should be able to identify specific information about the characters’ personal information in a story on Edpuzzle (See Activity: <a href="https://edpuzzle.com/media/64c3d3e5b89cdb41ab21e4b9">https://edpuzzle.com/media/64c3d3e5b89cdb41ab21e4b9</a>)</td>
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</table>
### 3.4. Data collection techniques

Three instruments were used to gather data to achieve the objectives of the study: Edpuzzle statistics, a Likert scale, and a focus group. Edpuzzle statistics were used to assess fifth-grade students’ progress in reading comprehension for specific information throughout the intervention using digital reading on the Edpuzzle platform. The data the platform provides is very specific, and it shows the general level of achievement of the whole class group, the results per question, and the performance of each participant at any time. Therefore, following the progress of each subject should be untroublesome. Moreover, the number of questions by each activity will be the same so that the performance of the students can be easily tracked, and the results can be analysed congruously.

The Likert scale and the focus group were used to analyze learners’ opinions regarding the contribution of digital reading on Edpuzzle to their reading comprehension skills for specific information. The Likert scale used in this study aims to collect information about the students’ opinions after being exposed to the digital reading technique carried out during this research and check whether the results were positive and what perceptions the participants had. This instrument was created by the researchers and validated by 3 language experts. It included three different dimensions: the use of the platform Edpuzzle, digital reading on Edpuzzle to work on reading comprehension and digital reading on Edpuzzle for reading comprehension for specific information (see Appendix 1).

Finally, two focus groups were conducted, each consisting of four participants. The sample selection aligns with Tomal & Hastert (2010) definition of a focus group, which he describes as typically comprising about five to ten individuals interviewed in a comfortable, nonthreatening environment. While the interviewer may pose questions to the group, participants often freely express their feelings and perceptions, with the interviewer recording their responses (Tomal & Hastert, 2010, p. 51). The focus group was designed by the researchers and validated by three language experts.

The researchers decided to Spanish for the Likert scale survey and focus group discussions to enhance validity, reliability, and ethical integrity by ensuring accurate responses, acknowledging cultural context, and participants’ needs.

### 3.5. Data analysis techniques

The analysis of the results from the quantitative and qualitative instruments used in this study was done using descriptive statistics divided into average and percentages, and a content analysis.
The results from the activities from the Edpuzzle platform were analysed as quantitative information based on the number of correct answers per student in each of the sessions, to check the progress they presented. The analysis of these data was done through descriptive statistics defined by Gravetter & Wallnau (2014) when saying that this type of analysis has the purpose to collect, analyse and interpret the different data in order to reach conclusions and decide what to do with the results obtained.

Moreover, Likert scale results were analysed by processing the information obtained from each of the participants. This data collection tool is also considered to provide quantitative information as the one mentioned above. The results were translated into statistics, checked for normality, and went into the process of a significance test.

On the other hand, the qualitative information gathered in the focus group was analysed using content analysis, dividing the results into different themes and subthemes, together with the frequency of answers and quotes as examples. Wilkinson & Birmingham (2003) explain that:

To conduct a content analysis, the data (the text of an interview, speech or focus-group discussion) are coded or grouped into categories which are tested for their reliability and validity (whether or not they accurately represent what is being said, in a transcript for example). These categories or codes will include words or themes, word senses, phrases or whole sentences. Once coded, the textual data are interpreted and the results of the analysis provided. (p. 68)

4. Findings

This action research was guided by two objectives aimed at identifying the contribution of digital reading on Edpuzzle to support fifth graders’ reading comprehension skill for specific information. The following subsections address each of these objectives.

4.1. Fifth-grade students’ progress in reading comprehension for specific information

The instrument used to analyse the progress of the students were the results of Edpuzzle reading activities presented in the platform. Each activity consisted of 10 multiple-choice and open-ended questions and the highest score was of 100 points. During the action plan, the interventions sessions were divided into two stages, the present results depict the performance of the participants in stage 1 consisting of four interventions (Table 3).

<table>
<thead>
<tr>
<th>Participants</th>
<th>INT 1</th>
<th>INT 2</th>
<th>INT 3</th>
<th>INT 4</th>
<th>Mean</th>
</tr>
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<tbody>
<tr>
<td>P1</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>P2</td>
<td>40</td>
<td>73</td>
<td>75</td>
<td>35</td>
<td>55.75</td>
</tr>
<tr>
<td>P3</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>75</td>
<td>41.25</td>
</tr>
<tr>
<td>P4</td>
<td>40</td>
<td>37</td>
<td>60</td>
<td>30</td>
<td>41.75</td>
</tr>
<tr>
<td>P5</td>
<td>50</td>
<td>40</td>
<td>40</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td>P6</td>
<td>30</td>
<td>28</td>
<td>20</td>
<td>30</td>
<td>27</td>
</tr>
</tbody>
</table>
In Table 3, it can be seen that participant 2 was able to reach a level above 50 points along the four interventions sessions and participant 10 reach exactly 50 points. Therefore, only two of the 13 students showed a favourable progress after the four sessions of stage 1 of the actions plan. It is noticeable that four students performed under 30 points, being participant 1 who showed the lowest score of 15 points out of 100.

![Progress along the interventions](image)

**Figure 1.**
Progress of results along the intervention

Figure 1 shows a progress along the interventions. Checking the mean scores and proving that intervention 1 has a mean of 30 points while intervention 4 has a mean score of 44.6 points being the difference between them of 14.6 points.

<table>
<thead>
<tr>
<th>Participants</th>
<th>INT 5</th>
<th>INT 6</th>
<th>INT 7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>60</td>
<td>70</td>
<td>70</td>
<td>66.6</td>
</tr>
<tr>
<td>P2</td>
<td>40</td>
<td>70</td>
<td>20</td>
<td>43.3</td>
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<tr>
<td>P3</td>
<td>50</td>
<td>80</td>
<td>60</td>
<td>63.3</td>
</tr>
<tr>
<td>P4</td>
<td>40</td>
<td>70</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>P5</td>
<td>30</td>
<td>70</td>
<td>60</td>
<td>53.3</td>
</tr>
<tr>
<td>P6</td>
<td>40</td>
<td>40</td>
<td>30</td>
<td>36.6</td>
</tr>
<tr>
<td>P7</td>
<td>45</td>
<td>90</td>
<td>60</td>
<td>65</td>
</tr>
</tbody>
</table>
We can see that out of the 12 students who participated in all the three interventions of stage two, four out of the total of students were able to reach a score under the passing score that is 100 (Table 4). Contrary to the findings from the first stage were twelve out of the thirteen students got mean scores over 50.

When contrasting the results from stage one and two, we can see a great difference and a higher percentage of results over 50 % of approval.

![Progress along the interventions](image)

**Figure 2.**
Progress along the interventions 5 to 7

After analysing Figure 2, we can see that there is not progressive improvement, even though, the students showed a better performance during intervention 6. Despite this, the final intervention is the one that shows the lowest results of the second stage.

<table>
<thead>
<tr>
<th>Participants</th>
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<th>SD</th>
<th>INT 7</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>-11,1538462</td>
<td>20</td>
<td>-17,3076923</td>
</tr>
<tr>
<td>2</td>
<td>35</td>
<td>-6,15384615</td>
<td>60</td>
<td>22,6923077</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>-11,1538462</td>
<td>40</td>
<td>2,69230769</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>8,84615385</td>
<td>20</td>
<td>-17,3076923</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>-11,1538462</td>
<td>40</td>
<td>2,69230769</td>
</tr>
<tr>
<td>6</td>
<td>30</td>
<td>-11,1538462</td>
<td>30</td>
<td>-7,30769231</td>
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<td>7</td>
<td>50</td>
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<tr>
<td>8</td>
<td>40</td>
<td>-1,15384615</td>
<td>35</td>
<td>-2,30769231</td>
</tr>
<tr>
<td>9</td>
<td>70</td>
<td>28,8461538</td>
<td>40</td>
<td>2,69230769</td>
</tr>
</tbody>
</table>
Table 5 compares performance between intervention 1 and intervention 7. While some participants improved, others showed little change or decline. The mean scores shifted from 41.15 to 37.31, indicating a slight overall decrease, with varied individual responses highlighted by the standard deviations.

4.2. Learners’ opinions regarding the contribution of digital reading

By the end of the intervention, the participants received a Likert scale to rate their experience using the method proposed by the study. The descriptors were the following: Muy en desacuerdo (strongly disagree), en desacuerdo (disagree), No sé (don’t know), de acuerdo (agree), Muy de acuerdo (strongly agree).

![Figure 3](image-url)

It can be seen in Figure 3 that in the statement “La aplicación fue fácil de usar” (the application was easy to use), 67% of the students marked the option “muy de acuerdo” (strongly agree) while another 16% chose “de acuerdo”. Finally, 17% decided for the option “no sé” (I don’t know).
Regarding the second statement (Figure 4), namely “las actividades que hicimos en la plataforma fueron de mi agrado” (the activities we did in the platform were enjoyable), most of the participants, corresponding to 56% of the preferences expressed that they strongly agree with the statement, 28% of them agree, 11% do not know and a 5% disagree.

According to the third statement (Figure 5), 33% of the respondents agree to continue using the platform for reading activities, 28% of them strongly agree with the statement, another 28% do not know, 5% disagree and 6% strongly disagree.
In the fourth statement (Figure 6), the participants had to give their opinion regarding the sentence “sé de que trataban las historias que trabajamos en Edpuzzle” (I know what the Edpuzzle stories were about), 45 % of them answered “muy de acuerdo” (strongly agree), 33 % agreed with the statement, 11 % marked they did not know and another 11 % said they strongly disagreed with this.

Regarding the students’ improvement in their reading comprehension skill, 44 % of them say they do not know while 28 % of them agree with the statement that mentioned they improved and 17 % of the participants strongly agree. On the other hand, 11 % of the participants disagree with noticing improvement (see Figure 7).
In statement number 6 (Figure 8), when students were questioned about whether they think they can understand texts in English more easily now, 39 % agreed, 33 % do not know, and 17 % strongly agree. On the contrary, 5 % disagree and 6 % strongly disagree with this quote.

In statement 7 (Figure 9), the participants were asked if the Edpuzzle activities helped them to identify specific information when reading, 44 % chose the option “no sé” (do not know), 39 % chose the option ”de acuerdo” (agree) and 17 % marked “muy en desacuerdo” (strongly disagree).
Regarding statement 8, 39% of the respondents strongly agree with being able to answer specific information correctly along the sessions, together with 33% who strongly agree. There is a 17% that does not know and 11% disagree with this (see Figure 10).

Figure 10.
Statement 8

Figure 11, with the statement “ahora puedo reconocer información específica mucho más fácil en cualquier texto” (now I can recognize specific information more easily in any text), 50% chose the option “no sé” (do not know), while 22% chose the option “muy de acuerdo” (strongly agree) and another 22% picked the statement “de acuerdo” (agree). On the opposite side, 6% of the students marked the option “en desacuerdo” (disagree).

The participants also took part in a focus group interview, and the results were examined using content analysis (see Table 6).
Table 6.
Dimension 1. The use of Edpuzzle

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
<th>Frequency</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>The use of Edpuzzle</td>
<td>Their opinion about the app</td>
<td>2</td>
<td>“Ayuda a reforzar idioma” (S1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>“Es buena para aprender” (S6)</td>
</tr>
<tr>
<td></td>
<td>Platform characteristics</td>
<td>1</td>
<td>“Puedes ir viendo si te equivocaste” (S1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>“No se puede cambiar la respuesta” (S2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>“Se activan los subtítulos” (S8)</td>
</tr>
<tr>
<td></td>
<td>Platform continuity</td>
<td>1</td>
<td>“Me gustaría para jugar” (S4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>“Sirve para aprender más inglés” (S9)</td>
</tr>
</tbody>
</table>

During the questions for the first dimension, the participants expressed a positive attitude towards the platform by mentioning that it is beneficial to learn English and reinforce the use of the language, they like it to play and learn more. When asked about the benefits and disadvantages, the students mentioned that they liked being able to see if the answer was correct or not. On the other hand, they would have liked to be able to change the answer after reading more thoroughly. Another disadvantage they named is that sometimes the subtitles in Spanish were activated automatically.

Table 7.
Dimension 2. Digital reading on Edpuzzle for reading comprehension for specific information

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
<th>Frequency</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital reading on Edpuzzle</td>
<td>Benefits in reading comprehension</td>
<td>2</td>
<td>“Ayuda a reforzar idioma” (S1)</td>
</tr>
<tr>
<td>for reading comprehension</td>
<td></td>
<td>2</td>
<td>“Ayuda a entender más el idioma inglés” (S2)</td>
</tr>
<tr>
<td>for specific information</td>
<td></td>
<td>1</td>
<td>“Te ayuda a concentrarte y prepararte” (S7)</td>
</tr>
<tr>
<td>Improvement along the interventions</td>
<td></td>
<td>3</td>
<td>“Fui entendiendo porque podia ayudarme en el texto” (S2)</td>
</tr>
</tbody>
</table>

Regarding the second dimension of the focus group interview (see Table 7), the students were asked about their improvement in reading comprehension for specific information. The respondents mentioned that the reading activities helped them to develop their language skills, understand more, and they also helped them concentrate. Additionally, three students claimed that they had a feeling of improvement along the interventions because they could find the answers in the text more easily.
In the final set of questions, the groups were asked about how beneficial this method regarding the use of strategies was (Table 8). In terms of the benefits to understand other texts different from stories, they said the activities helped a little to catch better the information. Regarding the positive impact they could have in other subjects, two participants mentioned that their reading fluency improved in the first language and another student mentioned that reading in Spanish was easier now because words in English were more difficult to read.

5. Discussion

Considering the contribution that this study had on fifth grade students reading comprehension skills to identify specific information, it can be seen from the results that students had a fluctuating performance along the period of implementation and the results do not present statistical significance. According to Pinter (2017), it is hard for EFL to learn a second language, but they can transfer abilities from their first language to support their process. It can be inferred by the results that this group of learners may not have enough competences in reading in their first language to apply to the language they are learning. Moreover, Orellana et al. (2020) explained how the motivation students had before reading had a meaningful impact on their performance. As it was explained before, these fifth graders tend to have a negative or reluctant opinion of their capabilities which may interfere on their results.

On the opposite, Kelly (2016) names several advantages of reading on digital media. It can be assumed that the advantages of using the platform Edpuzzle for reading activities were not enough to result on improvement on the reading comprehension skill of the participants. Additionally, Pueo et al. (2017), Bazurto & Garcia (2021) and Fabillar (2022) obtained positive and meaningful results in the studies they carried out using Edpuzzle as a tool to improve their subjects’ reading comprehension. Despite their experience, it was not the case of the present study.

Regarding the fifth grader’s opinion about the contribution of the method for their reading comprehension to identify specific information, most of them found the activities meaningful and had a sense of improvement. They mentioned how they noticed that they were able to understand and find specific information more easily along the sessions when saying “Fui entendiendo porque podía ayudarme en el texto”. In the focus group interview three students had the same feeling. Also, 76 % of the students responded agree or strongly agree when they were asked if they knew what the stories they read were about. Moreover, 39 % agreed and 33 % strongly agreed on the statement “Pude responder las preguntas de información especifica correctamente a lo largo de las sesiones”. This means they thought they were able to perform better.
On the contrary, there are questions on the Likert scale where students seemed hesitant. For instance, in the statement “Las actividades de Edpuzzle me ayudaron a identificar información específica al leer” 44% of them marked the option “no sé”, similar to the answers to the question “Ahora puedo reconocer información específica mucho más fácil en cualquier texto” being 50% of the respondents. The ones who expressed they did not know. Even though, during the focus group interview two students expressed that they were able to read more fluently after the interventions.

Similarly to the participants’ positive feedback on the use of Edpuzzle activities for reading comprehension are the findings that Bazurto & García (2021) shared in their study assuring their confident sense of improvement that the participants of their study reached.

The results of this action research may be meaningful for those seeking to use and online platform such as Edpuzzle to work on learners’ reading comprehension skill. Although the results did not show improvement, it was clear that the students enjoyed the activities and had a feeling of achievement.

The lack of improvement of the learners may have occurred for several reasons. For instance, there were constant distractors in the computer room where the activities were carried out. Some students were talking, asking for help, people were entering or exiting the room, etc. Also, there were internet connection issues in some computers, this made some students anxious, and it worked as another distractor for others participant that were around. The proximity of the student in the room was another drawback because some of them would copy some answers or would get distracted with what the nearby classmates were doing.

In addition, some students had a negative attitude before starting the activities on Edpuzzle or wanted to finish as fast as possible to be able to visit other webpages or play online games. This may have had an impact on their result since they were not concentrated or committed enough to complete the activities thoroughly.

Besides, it is relevant to mention that the difficulty of the objective in each activity was exponential. It was clear by the results that the students presented a lower level of achievement in those classes where the aims required higher order abilities. Perhaps, the results of the study would have reached better results if the level of difficulty of each session was the same. Along with this, if the space was more private and had fewer distractors, there may had been a difference. Moreover, it could have been positive to have post-activities that were more attractive and less disturbing for students like online games related to the topic, board games, role-plays, etc.

The limitations of carrying out this study in other contexts may depend on the students’ characteristics and age, how willing they may be to use technology and webpages to work on reading comprehension, since there are people who see the internet only as a place for socializing and not as a learning tool. Moreover, there is also to consider the access to computers and a stable internet connection. It is necessary that each participant has a computer to carry out the activities and does not lose connection to watch the videos and complete the answers. Furthermore, having a smaller sample size would be beneficial, as the monitor could pay closer attention and have more control over the participants’ performance and the correct development of the activities.

6. Conclusions

The study aimed to identify the contribution of digital reading on Edpuzzle to support fifth graders’ reading comprehension skill for specific information. Therefore, the results regarding the contribution
of this method were determined using quantitative and qualitative data that helped to answer the specific objectives of this action research.

Regarding the quantitative information gathered through the Edpuzzle statistics, there were no significant results that could support the conclusion of this method to have meaningful results in the fifth graders’ reading comprehension to identify specific information. During the first four interventions, two students got an average score of over 50% correct but there can be seen a progress along the intervention, answers while during the second stage, meaning sessions 5 to 7 students reached an average score of over 50% of correct answers. Despite this, there is not a progressive advance along the second stage of the research and when comparing the first and the final intervention, the standard deviation results suggest no meaningful impact on the students’ performance for reading comprehension for specific information.

In terms of the quantitative data collected for the finding of this action research, the students’ opinions were mostly positive while most of the answers strongly agree and agree reading the use of the platform, their reading comprehension, and their ability to find specific information. For example, there were positive answers when the students were asked if they would like to continue using the platform, if they thought the platform was easy to use and if they liked the activities. There were also high percentages of agreement regarding them knowing what the stories were about. Similarly, 56% of the participants agreed or strongly agreed on the sentence that stated they could understand stories in English better now and were able to answer correctly along the interventions. The fifth graders only showed themselves hesitant by answering “I don’t know” in the statement that stated they can find specific information more easily now.

Regarding the students’ opinions in the focus group interviews, the answers were mostly positive as well, they mentioned that they liked the platform, it was easy to use, it was good to learn English. Also, they liked being able to see if their answers were correct. On the opposite, they mentioned that something negative was not having the possibility to change an answer and that sometimes the subtitles were activated.

It can be assumed by these results that even though the participants of the action research were not able to improve their performance progressively when reading to identify specific information, their opinions, and perceptions regarding the use of these method were positive and they expressed a sense of accomplishment along the sessions.

Bibliography


**Appendix 1. Likert Scale**

<table>
<thead>
<tr>
<th>muy de acuerdo</th>
<th>de acuerdo</th>
<th>no sé</th>
<th>en desacuerdo</th>
<th>muy en desacuerdo</th>
</tr>
</thead>
<tbody>
<tr>
<td>😊</td>
<td>😊</td>
<td>😞</td>
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</table>

**Dimensión 1: The use of Edpuzzle**

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<th>😊</th>
<th>😞</th>
<th>😞</th>
<th>😞</th>
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</thead>
<tbody>
<tr>
<td>La aplicación fue fácil de usar.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Las actividades que hicimos en la plataforma fueron de mi agrado.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seguiría usando esta plataforma para actividades de lectura.</td>
<td></td>
<td></td>
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</table>
Dimensión 2: Digital stories on Edpuzzle for reading comprehension

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<th>☻️</th>
<th>☹️</th>
<th>☻️</th>
<th>☻️</th>
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</thead>
<tbody>
<tr>
<td>Se de que trataban las historias que trabajamos en Edpuzzle.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mi comprensión lectora mejoró después de las actividades en Edpuzzle.</td>
<td></td>
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</tr>
<tr>
<td>Después de realizar actividades de lectura en Edpuzzle, considero que comprender textos en inglés es más fácil.</td>
<td></td>
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Dimensión 3: Digital stories on Edpuzzle for Reading comprehension for specific information

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<th>☹️</th>
<th>☻️</th>
<th>☻️</th>
</tr>
</thead>
<tbody>
<tr>
<td>Las actividades de Edpuzzle me ayudaron a identificar información específica al leer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pude responder las preguntas de información específica correctamente a lo largo de las sesiones.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ahora puedo reconocer información específica mucho más fácil en cualquier texto.</td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Appendix 2. Focus group questions

Dimensión 1: The use of Edpuzzle

1.- ¿Cuál es su opinión sobre la aplicación Edpuzzle?
2.- ¿Qué características de la plataforma fueron sus favoritas?
3.- ¿Les gustaría que siguiéramos usando esta plataforma para actividades en inglés?

Dimensión 2: Digital stories on Edpuzzle for reading comprehension for specific information

1.- ¿Consideran que este tipo de actividades son beneficiosas para mejorar su comprensión lectora?
2.- ¿A medida que avanzaron en las clases ¿Fue más fácil identificar información específica en las historias? ¿Cómo lo notaron?

Dimensión 3: Use of strategies

1.- ¿Creen que estas actividades les ayudaron para poder identificar información específica en otro tipo de textos como noticias, artículos, etc?
2.- ¿Han notado que estas actividades les ayudaron a mejorar su comprensión lectora en otras asignaturas?