COMPARISON OF THE STRATEGY USE IN READING WITH AND WITHOUT MULTIPLE-CHOICE QUESTIONS

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Abstract – Sinopsis

Reading is a key skill in modern society: not only it is part of a culture, but it even shapes the way we think. However, the understandings, inferences and interpretations of a text vary from person to person. Testing reading is an equally complex process.

Having a task associated with the text at hand may impact the reading process and the strategies used during it. The purpose of this study was to see how these vary when a learner has to only read, compared to when the learner has to face a set of multiple-choice (MC) questions.

For this, nine EFL students in 2nd of ESO – 7th grade were asked to read a B1 level text, five of which had to answer four MC questions, while the other four only had to read; during the task, concurrent verbal protocols were used to determine the reading strategies used, as well as a reading strategy checklist after the task as a form of retrospective data collection.

Results showed that the higher-level learners used more strategies than their lower-level peers, and that the ones that had to answer the MC questions used more strategies, regardless of the proficiency level.

Thus, teaching reading strategies in EFL classes may prove beneficial to boost reading proficiency and text understanding, and adding a set of questions about the text engages more strategies from the learner, further promoting text comprehension.

La lectura es una habilidad clave en la sociedad moderna: no solo es parte de la cultura, sino que incluso modela la forma de pensar. Sin embargo, las inferencias e interpretaciones de un texto cambian de una a otra persona. La evaluación de la lectura es un proceso igualmente complejo.

Tener una tarea asociada al texto puede influir en el proceso de lectura y en las estrategias utilizadas. El propósito de este estudio es ver cómo estas varían cuando un estudiante solo lee, frente a uno que tenga que leer y responder a una serie de preguntas de opción múltiple (OM).

Para ello, nueve estudiantes de Inglés como Lengua Extranjera de 2º de ESO – 7º Grado leyeron un texto de nivel B1, de los cuales cinco tenían que responder a cuatro preguntas de OM, mientras que los otros cuatro solo tuvieron que leer el texto; durante la tarea, se utilizaron protocolos verbales simultáneos para determinar las estrategias de lectura utilizadas, así como una lista con estrategias de lectura como recogida de datos retrospectiva.

Los resultaros mostraron que los estudiantes de nivel más alto usaron más estrategias que los de nivel más bajo, y que aquellos que tuvieron que responder a las preguntas de OM usaron más estrategias de lectura, sin importar el nivel de competencia en inglés.

Así pues, la enseñanza explícita de estrategias de lectura en la clase de Inglés como Lengua Extranjera puede ser beneficioso para la competencia y la comprensión lectoras, y además añadir una serie de preguntas sobre el texto facilitaría el uso de más estrategias de lectura, ayudando a una mejor comprensión general de este.

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1. Introduction and theoretical framework

1.1. Introduction

There is no questioning that reading plays a key role in modern societies. In the past century, thanks to heavy efforts and ongoing campaigns in all areas of the world, literacy has increased exponentially, to reach the current situation in the world; as an example, UNICEF (2019) reports that youth literacy rates, that is, the percentage of people aged between 15 and 24 that are able to read and write, has increased globally from 83 to 91 percent in the past two decades. From important contracts, to children's stories, to daily news or minor shopping bills, "nothing is set on stone", but leaves a paper trail for us to follow and read.

As Pressley states at the beginning of his book (1995, p. 2), "We develop a rich description and understanding of affective and cognitive processes during reading.", so not only is it practical to keep written records of everything, but it is a key element in our understanding and processing of our reality.

When testing reading, we want to know about the reading skills and processes of the test subject as a whole, that is, what strategies do learners use to complete standard reading comprehension tests and how does this compare with reading behaviors in non-testing situations. This is the reason it was decided to carry out this study.

Furthermore, this area of study is valuable for the teaching of reading and the use of reading strategies, as other authors such as Israel's (2015) concluded:

> findings revealed that understanding the phenomenon of strategy utilization in relationship to reading comprehension is a prerequisite to teaching reading comprehension and improving students' reading comprehension as well. (p. 35)

1.2. The reading construct

As has been stated, reading is a key element in modern society. We have reached the point where we are not checking if a candidate is able to prove a certain reading ability, but the progression in this area has inevitably led to measuring people's reading skills on a foreign language in a specific field of knowledge. This is logically done through different tests composed of questions about the subject's understanding from the text;

however, the fact of testing itself does not provide the tester with an insight into the test taker's mental processes. This is the main topic of this work.

It is noticeable the difference between the reading as it is generally understood, i.e. the reading anyone does for pleasure or to obtain information, compared to the reading done in a test setting; the purpose of the reading shapes the way a text is approached or the processes that are engaged in it (Grabe 2014, 10; Rupp et al. 2006, 446). In the latter, one has to understand the text as a whole, as well as the details and supporting information in order to answer the questions correctly and get the best possible mark. Whether these reading tests are high stakes (for example, Cambridge's First Certificate is usually a requirement for many jobs or scholarships) or low stakes (any classroom piece of assessment that has very little impact on a student's final grade), the aim is always to make tests that better portray that individual's reading competence; that means fully understanding what goes from the moment that person starts interpreting the ink marks on the paper, to the moment where they are able to provide an answer to a question, going through the information processing that is done in between the two.

The concept of reading is a complex skill, so much so that it is impossible to contain in a single work or grasped by a single person: from the interaction of reading with other skills, to the involvement of many cognitive processes, it all makes "reading" a vast topic.

As Alderson (2000) explains, the most common distinction in reading is the separation between "process" and "product" (pp. 3-10); the former is what is generally understood by the untrained public as "reading", and encompasses all the decoding and meaning building the reader carries out, whereas the latter refers to the understanding of the text reached by the reader.

Even inside the processing part of reading, Alderson mentions the wide range of attempts made at depicting what "being able to read" is, and its division in sets of subskills. This potential classification seems attractive when it comes to testing reading, as having a fixed list of subskills would make it much easier to operationalize the whole construct of reading into concrete types of questions; however, there is still no agreement in the nature of reading. The "process-product" division is useful as it is wide enough to provide an "umbrella" for all the possible divisions one might be able to make from the reading skill as a whole; however, this same advantage can be called "vague" or "unspecific", as it is not descriptive enough and it is extremely difficult to operationalize,

that is, this division comes in handy when talking about the theory and the construct of reading, but when it comes to making a reading test, it is difficult to put these two into specific questions about a particular text.

Instead of dissecting the concept of reading into single individual skills or competences, trying to see what we do while it takes place might prove more useful towards a better insight into reading. A wide classification of the reading processes is the distinction between "top-down" and "bottom-up" processes. There is extensive research literature on these separately (Goodman 1971, Carrel & Eisterhold 1983, Celce-Murcia 2001), although the problem that arises most frequently is that both are often used complementarily and at the same time by the reader, thus making it hard to study them separately.

Another division of the reading skills, different to the "process-product", is the one established by Grabe (2014), that separates lower and higher-level strategies. The first one refers to the most automatic and basic skills, such as word recognition or syntactic processing of immediate clauses; in contrast, the latter refers to the skills needed for more complex texts, such as main idea formation or the use of inferencing and background knowledge. The author points out that lower-level processing is not easier to learn, nor simpler to use, and higher level is not harder to learn or better.

Both of these divisions are helpful and have pushed forward the understanding and research on the reading skills field, but it is not a complete image of what happens when reading in a second or foreign language. As it has been stated, there is much more subjacent that may influence the reading process, such as background knowledge, the text types, the cultural references or habits, or the knowledge transfer that might happen between L1 and the target language.

About this last aspect, Alderson also speaks about L1 reading proficiency influencing L2 reading processes, but claims that

> second-language knowledge is more important than first-language reading abilities, and that a linguistic threshold exists which must be crossed before first-language reading ability can transfer to the second-language reading context. (p. 39)

This means that for teaching and testing purposes, we should focus more on the linguistic part of the second language reading, and not so much in the reading problems that learners might have, an issue also pointed out further in Alderson's work (op. cit., p.

121). Furthermore, Grabe (2014, 11-12) adds a list of key differences between L1 and L2 reading, such as sheer exposure to L2 texts, background information the learner can rely on, or sociocultural assumptions. Thus, as it is explained in this study's method, the student sample is taken from the same grade and divided into three different English proficiency levels, without taking into account their L1 reading performance.

Even if we decide to focus on the second language reading and test it, one may encounter different problems when asking the test subjects to report on the skills they used for each test element. When it comes to the questions in the reading test that are supposed to measure a certain reading process, often the reader does not report to be engaging the processes that the person who made the exam intended; even more, as Alderson mentions (op. cit., p. 305), it was shown that subjects often used more than one skill at a time, the skill intended did not help them get the correct answer, or they even reported using skills that the test constructor had not identified.

It is worth mentioning at this point that, in many instances in the aforementioned work, Alderson uses both "process" and "skill" as very close terms in meaning to each other, especially when reporting about someone else's work or paper; Grabe (2014) uses diverse names, such as "reading abilities" and "reading skills".

In the present study and for the sake of simplicity, we will consider on the one hand "reading process" as the whole inner workings and interactions of the person and the text, from the deciphering of the markings on the paper, to understanding the text as a whole and answering a very detailed comprehension question; on the other hand, "reading skill" will refer to any potential subdivision that can be made of the reading process, e.g. pointing out the main ideas from the text, identifying the intention that the author wants to convey, or skimming, to name a few.

Another terminology problem arises when talking about "reading strategies", as it is not clear what does it refer to: is it a more specific reading competence? Is it a conscious tactic to solve a problem with the text? Or does it refer to every single cognitive ability applied to texts? As Wenden (1987, p. 7) says, the "multiple designations point the elusive nature of the term". This paper intends to see the use of strategies by learners when facing a text in an L2 through their own verbalization, for which we will take Wenden's list of characteristics inductively constructed of a "strategy":

1. Strategies refer to specific actions and techniques; they are not characteristics that describe a learner's general approach.
2. Some strategies will be observable ('asking a question', for instance), others will not ('making a mental comparison').
3. Strategies are problem-oriented. Learners use them to respond to a learning need.
4. Strategies contribute directly (what learners do to control and/or transform incoming knowledge about the language) and indirectly (how learners use their limited language knowledge to communicate or create learning opportunities) to language learning.
5. Sometimes strategies may be consciously deployed under certain conditions, or they can become automatised and remain below consciousness.
6. Strategies are behaviours that are amenable to change. They can be modified, rejected, or unfamiliar ones can be learned.

(adapted from Wenden 1987 pp. 7-8)

This list is in line with Cohen's (1986b, p. 133) description of "reading strategies", highlighting mostly similar features, such as the conscious use of these and the idea that strategies are task-oriented-

Rupp et al. in their work (2006) also refer to these authors, and differentiate the "skills" from the "strategies" in similar terms. The first ones are "automatic internalized reading abilities possesses by learners", unconsciously facilitating comprehension, whereas the second ones are "conscious techniques and tactics deliberately employed" for successful reading (447).

In this work, we will try to look into the comparison in the reading processes and strategies used by subjects, and the difference in these between only reading a text in a foreign language, and when the reading is accompanied by a series of multiple-choice questions that have to be answered.

1.3. <u>Do reading tests test reading?</u>

In the previous section, we have tried to paint a general picture of the concept of reading. Once this framework has been set, another key part of the language learning process is the testing part, the measurement of one's ability to perform in each of the dimensions of a language, and the series of milestones or levels one can reach or certify through this testing.

Generally, in a standard school classroom, all four skills (reading, writing, listening and speaking) will be taught, and students will be tested on them, be it formatively or summatively. These tests are of course prepared by a teacher or a group of them, who have two fundamental preconceived ideas (whether they are aware of them or not): they have an idea of what reading is, and an idea of how this skill should be tested. The problem arises when these two do not match.

The goal of a reading assessment is to predict how well the learner will do in real life reading, but it is worth mentioning that testing this skill itself is the first contradiction we encounter, as very rarely in real life will someone be tested on what they read, something usually done silently and without giving responses or comments about it. Skipping over this hurdle, which is inherent to testing in all areas of language, it is essential for the test tasks to be as authentic and as valid as possible.

The more authentic a test it, the more it allows for its results to be extrapolated to real world reading. Tests are given so that we can measure progress or achievement in a certain course or formative context; in particular, reading tests try to measure how well the reader can comprehend and interpret different types of texts and interact, react, or use them correctly to fulfill their needs or goals. However, it is very frequent that learners are graded on how well they can perform in the test: testing reading has many limitations, which bring strategic competence into play, i.e. the ability to overcome difficulties when communication breakdowns occur (Celce-Murcia, Dörnyei & Thurrell, 1995). If the test-taker cannot answer properly through the understanding of the text alone, they will use other resources to help reach the correct solution, for instance, when someone choses one of the multiple-choice options simply because it was the longest and with no justification from the reading. Most tests try to reduce the influence of strategic competence to a minimum through careful design of the tasks, but it always a part of testing, and learners naturally tend to use any strategy at their disposal to attain the highest score possible. In

particular, multiple-choice questions can sometimes be solved without fully comprehending the text, for example discarding options based on common sense, or choosing the correct one through "key-word matching". Therefore, in the end these types of questions do not always portray accurately the reading comprehension of the test-taker, but rather, as Rupp et al. (2006) hypothesized,

> responding to MC reading comprehension questions in any standardized reading comprehension tests is much more a problem-solving process relying heavily on verbal reasoning than a fluid processes of integrating propositions to arrive at a connected mental representation of a text. (454)

One limitation found in reading tests, and pointed out by Alderson (2000, p. 155) is the limitation of the input genres, as the test-takers are most of the time presented with an expositive text of limited length, whereas the number of written elements that they encounter, process and use in a day-to-day basis is much more varied in terms of length, genre and purpose.

In order to solve this issue, the test designer can set a wide variety of texts so that the learner may show their mastery of reading applied to different genres, situations and intentions, but choosing a text that is authentic, and complex enough to pose a challenge adequate to the learner's level, can become a daunting task in itself. This is why test designers tend to resort to making the input in reading test an expositive piece, so that it may not only have the necessary length and complexity, but so that it may as well be engaging and interesting to the learner, as motivation plays an important role on the process of taking an exam.

Then, operationalizing a reading construct, that is, taking what one thinks reading is, and putting this into "answerable" questions or tasks in a reading test, becomes another validity and authenticity problem. Should a test contain only tasks around reading as a whole? Or should it instead individually target subskills, for instance "identifying the main ideas", "understanding the intention of the text", or "deducing meaning from context"? This latter approach to testing, called "discrete-point" or "analytic" approach, might be seen as flawed, as the sum of the parts does not equal the whole competence of reading; but the first one, called "integrative" or "integrated" approach, might be more difficult to grade or evaluate, although it would appear closer to the reading done in real-life situations (Alderson 2000, p. 207); time allotment, albeit not being intrinsically part of reading, plays a big role in testing, as one method may take longer, or the student might

need more time for one or the other depending on individual differences. Both, analytic and integrated, have advantages and disadvantages.

Up until now in this section, we have talked about reading in a test, that is, processing a particular input knowing that there will be a series of questions or tasks that, in theory, will measure how well the text was understood. There are many different kinds of tasks that can be set around a particular reading piece: gap-filling, multiple-choice, matching (e.g. paragraphs with their headings, or signs with their meaning), ordering text parts, open-answer questions, summarizing tasks, or even free recall tasks, where the reader must retell everything they remember once the reading input has been removed.

Answering each of these questions is arguably a subskill of its own, and even test coaching centers prepare the learners to face these in the exam they will be taking through drilling and strategies to tackle each of these specific tasks. Following the categories described before, these questions can be more analytic, such as the matching paragraphs with headlines, or more integrative, such as the free recall, but still do not encompass the whole construct of reading.

In the present work, we will focus on multiple-choice questions. It is one of the most common types of questions found in all sorts of tests, as it is very versatile and efficient way of gathering data and measuring understanding.

These advantages come with penalties as well (Alderson 2000, p. 211-212). On the one hand, the incorrect options may present the learners with ideas that they might not have thought of before, disrupting their understanding of the text. On the other hand, and possibly even a bigger problem, is the fact that the tester does not know the reason behind the learner's answer to the multiple-choice question: it could have been answered correctly on purpose through the correct understanding of the text, but it might have been that the learner chose the correct option because they discarded the others (because they were too long, they were too obviously incorrect, or other reasons), or they were able to guess it thanks to their background knowledge, or even through sheer luck.

To balance out some of the problems posed by multiple-choice, there are several solutions, although these might diminish the practicality of this type of question. First, increasing the number of choices reduces the chance of the correct solution being guessed haphazardly, for example where the options are all the paragraphs in a text; then, adding a justification part to each answer can help counter the possibility that the test taker

guessed it from outside the text (i.e. if the learner is not able to give an explanation to their answer, they could be penalized). As a whole, the options in this type of task must be uniform, plausible and believable, so that the reader has to pay close attention to the text in order to get the answer from it, and not "work around it".

However, as will be discussed further below in the Conclusion section,

> assessing a certain level of textual comprehension with MC [multiple-choice] questions changes the process itself and induces supplementary processes that are unique to the texting context. (Rupp et al., 2006, 442)

Some reading strategies may appear when the subjects are under test conditions, and not when reading for other purposes; thus, the design of the reading task may have an impact on the interactions between the text and the reader.

After all of this, one must come to terms with the fact that testing reading is as complex as reading itself, and thus there will always be limitations and "threats" to validity and authenticity, as there is no such thing as the perfect test. In the current state of testing, it is safe to say that reading tests do not fully encompass the whole construct of reading, but innovation and research in testing are improving these, an area into which this work hopes to contribute.

1.4. <u>Using verbal protocols</u>

Once seen the complexity of the reading construct, and the difficulty of measuring reading proficiency, one tool that has proven useful for the study of the reader and their interaction with the text is verbal protocols, that is, expressing out loud the thoughts they have around the reading of the text and answering its questions. This is often referred in Alderson's work (op. cit.), as well as Cohen's.

This data collection procedure can be a good window into the inner process of reading, compared to the insight given by the results of reading tests. One important guiding idea is the one presented by Cohen (1986b): "Teacher observation or even results on reading comprehension tests, for example, may not give an accurate depiction of an individual's reading ability" (p. 131); furthermore, simply observing or making the students read out loud does not compensate for it, and neither does reading silently.

The use of verbal or think-aloud protocols in this work is tied to the one of the main caveats attached to the use of multiple-choice questions: since the tester does not know why the learner chose that particular question, them voicing their reasoning while answering will give some insight into the validity of the questions in our tests.

One key point for our study is the fact that many students, when in a reading test situation, focus solely in the comprehension needed to answer the test items and get the highest possible mark, which in the end results in them

> "no longer proceeding via the text, but rather, around it. Rather than indulging in deep-level processing, they engage only in surface-level processing adequate for the given question." (Cohen, op. cit., p. 132)

This is where verbal protocols come in to complement the gap left by observation or testing: instead of interpreting the results from a reading test, asking directly to the subject about their test taking process can provide a new perspective and yield further information that might have been otherwise inaccessible.

Cohen compiles and comments on several studies using mentalistic measures, and they generally point in the direction that they could be used in other fields of knowledge; not only that, but the author also mentions that "they have a potential application to a broader population than had been predicted by the researchers" (op. cit., p. 137) of those studies.

When reading about mentalistic measures and verbal protocols, it is clear that they are a time-consuming procedure, from the planning of the questions and prompts for the test subject, to the actual recording and data gathering, to its transcription, processing and analyzing; thus, it would seem to be a method unfit for large scale studies.

Therefore, mixing different ages in the study sample would likely provide inconsistent results, so even if children or adults with any level of formal education can participate and data can be gathered from them through mentalistic measures, groups will have to be reduced and homogenous.

Finally, Cohen talks about the relationship between L1 and L2 or foreign language reading, which could also be investigated upon through verbal protocols. The studies he comments on concluded that different strategies are used in first and foreign language reading, and that even if there is not necessarily a strategy transfer between tasks in either of them, the findings suggest a "compensation hypothesis", where the reader would rely on first language strategies to compensate for the lack of their target language proficiency (op. cit. p. 138-139).

A constant that one may find throughout verbal protocol analysis literature is the diversity of the studies: from the sample population, to the instructions and prompts given, or the goal of each work, as Pressley indicates (1995, p. 16-23). This influences the statements given by the subjects, from where it can be seen that language is both the biggest asset and the biggest liability in verbal protocols.

However varied the self-reports in verbal protocols may be, most of them show strategies before, during and after first reading. The strategies applied before reading such as skimming, establishing a goal or deciding what and how to read can influence the subsequent reading, generating expectations and predictions, which are then modified accordingly with the during reading strategies.

"During reading" strategies include reading from the front of the text to the back of it, taking notes or looking for patterns or cues; according to Pressley (op. cit. p. 38), verbal protocols proved to be extremely useful in revealing the ongoing processes before and during reading, showing where the reader stopped to retrieve background information, inferred some information, or where they had any kind of difficulty in comprehension. Between the strategies before reading and the early reading stages, it is possible to find

strategies like macrostructures or predictions, that are corrected along the way as more parts of the text are understood.

Everything is collected at the end, and evaluated with metacognitive mechanisms (op. cit., p. 80). As it stems from self-reports, reading requires a constant awareness of the goals and of the progression of the text; that is why monitoring is also a key part that can be expected in these verbal protocols.

1.4.1. Advantages and disadvantages of concurrent verbal protocols

This type of introspection has a big advantage, and that is the independence of short-term memory: whereas retrospective data rely on the capacity to retain the mental process that was followed, concurrent verbal protocols on the other hand give the researcher the data as it is happening, leaving and filtering nothing through short-term memory.

Also related to the nature of human memory, subjects produce more segments or utterances with this method, and cover more areas. (Kuusela, Paul, 2000, p. 393); furthermore, storing of these processes in the short-term memory might alter the resulting utterances, so concurrent verbal protocols produce unfiltered data on the processing of the task at hand, whereas retrospective gives the opportunity for the subject to "clean up their act", as written in the previously quoted article.

One positive aspect of all verbal protocols is that they can be used in any age range, even though instructions may have to be modified to meet the subjects' age and maturity level, as we will discuss further down below.

Starting with the aforementioned relationship between verbalization and memory, one of the drawbacks with any verbal protocol is that we are only able to record and analyze the processes and strategies that reach consciousness (Kuusela & Paul 2000, p. 388). If the subject chooses an answer, but they are not aware of the reasoning behind it, it is difficult for them to explain their choice, and thus the data collection might be unsatisfactory.

Another downside for this type of approach is the need for training the subjects and the bias caused by the instructions. In the same way questions about text may influence

the way we approach said text, the prompts for a concurrent verbal protocol study can influence the report produced by the subject, especially, as White et al. note (2007, p. 99-101), when dealing with younger subjects, whose metacognitive processes are still in development.

Further bias in the subjects' introspection can come from the language demanded by the researcher. It can be considered that making the subject report in the L2, English in this paper, can hamper or slow down the cognitive process of self-reflection; the opposite, that is, asking to report in the L1, can impact negatively in the L2 performance, as the subject would have to be switching back and forth between one language in the text, and the instructions and reporting in a different one.

In the same sense, one has to take into account the age of the participants. Firstly, in order to choose a reading passage that is on par with the subjects' level, and to make sure that the instructions are also understandable, so that they do not become another obstacle in the process of collecting the data. Secondly, Israel (2005, pp. 59-65) divides the learners into four categories of "comprehenders" (early, novice, skilled, and expert) and describes them with a set of capabilities; those categories are not based on age, as "Research was able to report many skilled readers at the primary grades who could be identified as skilled comprehenders but still not expert comprehenders most likely due to worldly experiences.". Thus, age is a factor that should be taken into account in throughout data gathering in verbal protocols.

One more drawback that can be attributed to this approach is the intrusiveness of it; since concurrent verbalization openly exposes processes that are usually private, the subject might feel the need to act according to what they think is publicly acceptable, or express that they were doing what they consider that they are supposed to do, thus corrupting the actual recount of their reading process:

> As a whole, concurrent verbalizing may cause subjects to process information differently from thoughts mulled over privately. Also, while presenting their decision making to the experimenter, the subject may behave in what he or she believes to be more a socially desirable manner. (Kuusela, Paul, 2000, p. 391)

We have presented in this section both the positive and negative aspects of verbal protocols. In summary, verbal protocols' strengths outweigh its limitations. By helping us analyze the interaction between the text and the reader in different reading settings, this methodology can shed light in the way students approach a text when they are simply

reading or when they have to answer questions, where they have comprehension problems most frequently, and what do they usually do when they come across these; this is highly valuable information for English as a Second/Foreign Language teachers, as accounting for the influence questions have on the reading process can prove helpful in improving the teaching of reading, and even encourage others to take up the explicit teaching of more effective reading strategies. As for the way this study in particular addressed the concerns around this methodology, refer to section 3.2 in "Mitigating the drawbacks".

1.5. Objectives

As has been stated along this paper, the research question is: what actual strategies do foreign language learners use to complete standard reading comprehension tests and how does this compare with reading behaviors in non-testing situations?

There are two hypotheses in this research:

– H_1: Higher-lever learners use more strategies than lower-level learners in the same setting.

– H_2: The learners that read without questions use fewer reading strategies, but use the same ones more frequently.

2. Review of published studies

2.1. Published study review #1

Chamot, A. U., Keatly C., Barnhart, S., El-Dinary, B., Nagano, K., & Newman, C. (1996). *Learning Strategies in Elementary Language Immersion Programs*. Center for International Education, US Department of Education. ERIC.

One study first study that went in the same line as this one is the report on a three-year study of language immersion programs in the US, quoted in White (2007, p. 100, in Cohen, 2007).

It studied Spanish, French and Japanese immersion program for students aged between 6 and 10 years old in schools in a Washington D.C.'s suburb. The participants came mostly from native English-speaking families. This report comprises three sub-studies: one describes the learning strategies used by students in reading and writing, the second is about the students' self-efficacy study, and the third is about teacher interviews and workshop evaluation. The general objective of this long-term project was to investigate the use of strategies of elementary school children learning a foreign language in an immersion setting.

In the introduction, there are similar ideas about learning strategies as the ones that have been presented so far in this work, such as the idea that they are conscious tools used by the learners, the fact that these strategies can be taught, and that better performing students use strategies more appropriately than their lower performing classmates.

I would like to draw the attention to the first sub-study. In there, the researchers divided the subjects in two: half of the students were reported by their teachers to be highly effective learners, while the other half were rated to be low effective learners; from every grade, there were three high performing students and three low performing. In our study, the population is divided in a resembling manner, although we use three categories (high-average-low); similarly, we consulted the EFL teacher of these students to make this distinction.

It is interesting to point out that in that first sub-study of the report, they elaborated a protocol for the testing: there is a warm-up and a practice part for the think-aloud; then, the interview is about reading and writing: the subjects had to read an excerpt of authentic children's literature in the target language and writing a story from a picture cue.

The relevance of this study lies in its similarities with the present paper. On the one hand, the goal of both is in the same area of study: to analyze the strategies used by foreign language students in reading. Furthermore, the procedure is similar, i.e. think-aloud protocols, a versatile tool that allows to measure the interaction of the reader and the text. Finally, that report had to face similar challenges and provide solutions for them, such as the difficulty of finding age-appropriate tasks for their primary students, or show how a think-aloud works.

On the other hand, there are several key differences between Chamot et al.'s report, and this work. Firstly, they worked with primary students, which implies some challenges of its own; then, that was a three-year long study with a much bigger population of different age, therefore it is expected that their results were more relevant and accurate. On our side, the population is limited to six students of the same age in a much shorter period of time.

In their results, it is worth noting that they analyzed the strategies used in reading and writing, and then compared the strategy use in between both skills. For example, it is notable that linguistic knowledge was a big part of reading for most students, whereas in writing that was not so common, and other strategies such as planning and elaboration gained importance. In a similar fashion, inferencing was relevant for reading, while it was barely used in writing.

In our study, it is expected that reading and answering questions leads to similar results as the report mentioned here, i.e. more use of linguistic skills, while reading without questions is expected to shift the weight towards strategies based on background knowledge, classified as "prediction" and "inferencing" in Chamot et al.'s report.

2.2. Published study review #2

Gu, P.Y, Hu, G., & Zhang L. J. (2005). Investigating Language Learner Strategies among Lower Primary School Pupils in Singapore. *Language and Education*, 19(4), 281-303.

This article, similarly to the previous one in this section, studied the use of reading strategies by primary students, as well as pointing the gap in the language learning strategy field, as, according to the authors, most of it revolves around adults or young adults. The study's main goals are to see if the think-aloud protocols can be used in lower primary students, and test if there are any difference in the learning strategy use in that stage of education.

In Gu et al.'s study, the subjects were 18 primary students aged between seven and nine years old from an average public Singaporean school. The students were, similar to the present study, selected by their teachers according to their performance in English, and classified in "top, middle and bottom" class grades. Students were mostly bilingual.

The method of choice in that study was "probed introspective verbal report", and there were four tasks: a listening comprehension, a reading, and two writing tasks (one based on a set of pictures, the other was a writing on a topic chosen out of three offered). In the process, the researchers planned a warm-up, recorded audio and video of the think-aloud reports, and analyzed the results.

The authors do point out that not all of the subjects completed all four tasks. Interestingly, in the article they highlighted the importance of training of the subjects in the retelling of how the experiment was carried out, the reason being many of the games used to model thinking aloud for the children "turned out to be a disaster" (op. cit. p. 287).

The article then reproduces four excerpts of the interactions and the think-aloud reports of four different subjects from different levels. In the discussion section, they confirmed the initial statement that verbal protocols can be used in young children, even if their cognitive and metacognitive processes are still in development. One issue brought up in the discussion is the asymmetry in the roles during the experiment, called the "Power imbalance between adult and child" (op. cit. p. 296); this might stem from the fact that they are very young learners and might feel intimidated during the process, or failure in the task may seem a serious issue for the subject, and the article even mentions the sociocultural differences around the way society views teachers.

As for the conclusions, the study highlighted some patterns among the verbal protocols gathered, such as the older students using more strategies than their younger counterparts, or the high-achieving subjects using more strategies and more efficiently than the low-achieving; that study also aimed at proving that verbal protocols are a productive strategy when collecting data from a younger population than what was previously done in other studies.

Gu et al.'s work has several similarities with the present one. First, the students were classified into three categories (high, average and low achieving) according to their English Foreign Language teachers. Then, in order to probe into the processes during the tasks given, the researchers used verbal protocols to analyze the strategies being used. We expect to gather similar conclusions as well, namely, that higher achieving students use more varied strategies than their lower achieving classmates.

However, there are some key differences in comparison with our work, the most noticeable being the fact that data was gathered from lower primary students in Singapore, while in this work the students are from secondary education in Spain. That study was much wider in the sense that they had four tasks (one reading comprehension, one listening comprehension and two writing production exercises), whereas in this paper we only with reading comprehension.

This last fact, the diversity in the tasks, is one of the strong points in Gu et al.'s work, since it allows for comparison in the use of strategies in different language skills, and thus its conclusions are more relevant and, in general, it is of greater use to teachers and to the field of language learning strategies.

On the opposite side, the authors turned the weaker areas of their study into a strength by exposing them openly and showing how they tried to solve them. For instance, they acknowledge the issues around verbal protocols (it being too intrusive or the dependance of them on the subject's verbal ability) and the problems of gathering data from young students, such as the pressure the pupils might feel in front of the researcher, the little data they could produce, or other more trivial or circumstantial problems such as the noisy venue they were recording in. They do point out along the study that it is a pilot study, and so their findings would need more data to back them up.

2.3. Published study review #3

Savić, V. (2014). Investigating reading skills of Serbian young learners learning English as a foreign language. In Enever, J., Lindgren, E., & Ivanov, S. (Eds.). (2014). *Conference Proceedings from Early Language Learning: Theory and Practice*, 110-116. Umeå University.

In this article, the author also focuses the research in reading comprehension strategies. The study was carried out in several schools in Serbia. The population is much wider than the above-mentioned studies, with 502 Serbian students of English as a Foreign Language from six public schools.

In there, the objective was double: one the one hand, to find out how does the reading proficiency of Serbian EFL learners relate to the scores from the ELLiE study; on the other hand, and the more relevant objective for our work here, to see the strategies used by these same learners when facing an unfamiliar written text.

The approach was a multimodal one, using both quantitative and qualitative data. For the first research question, tools from the ELLiE research were used, and the scores compared. As for the probing of the strategies used, a questionnaire and written think-aloud protocols were used, in order for the subjects to explain the choices in the previous ELLiE test. Interestingly, the background questionnaire and the think-aloud reports were conducted in Serbian.

In the discussion, the results show that the Serbian students got scores a little above the average of the ELLiE research. As for the second research question, the author reports that the written think-alouds "offered a more in-depth insight into linguistic and strategic competences of Serbian young learners" (op. cit. p. 114), which is one of the main advantages that we mentioned in this work when discussing the verbal protocol method.

The results showed that, even if in the quantitative part of the research the Serbian students scored high, they do not have a strong strategic competence, as most students chose to ask a teacher or classmate when encountering an unfamiliar word, whereas very few chose to skip it. It also came to a similar conclusion as the previous studies reviewed here: the students that scored the highest grades in the first test used more strategies and used them more frequently.

That article combines the performance of a group of students, and their learning strategy use, which helps reinforcing the idea that the higher performing students use

more of these methods and more frequently, thus the implication they draw is that teaching learning strategies will not only prove beneficial for their foreign language progress, but it should be included into young learner reading programs. Furthermore, that study's sample was 502 students, which builds a strong argument in favor of the teaching of strategies in EFL classes.

The article uses both a written verbal protocol and a checklist of strategies. Both methods, the writing and seeing all the strategies at once, may allow for the subject to reflect upon the reading they have just done and rephrase or, as we mentioned previously, "clean up their act", all of which might have skewed the results, so there should have been measures to mitigate this, such as making the self-reporting oral, or give the checklist after the verbal protocol is finished.

Some aspects of Savić's work are very close to this paper. For example, the fact that the population was aged between 10 and 11 years old, which is much closer to our own than the first two papers reviewed. It also focused on reading, unlike the previous research seen until now. Besides, the method for the second research question is very close to the present work, using both verbal protocols and a checklist to gain a more in-depth insight into the reading processes.

Something particular about this method is that the verbal protocols were written; it is not clarified, however, if these self-reports were written by the subjects during or after the reading, or if they were simply transcribed and edited by the researchers.

On the contrary, Savić's study also aimed at measuring the reading proficiency of Serbian young EFL learners, something we are not looking for in the present study. For that, three complementary data collection methods were used (ELLiE test, checklist and written verbal protocol), compared to our only two (checklist and verbal protocol). All in all, it is a significant and recent study with a wide sample population that provided some insightful discussion into the teaching of learning strategies in EFL classes.

2.4. Published study review #4

Block, E. L (1992) See how they read: comprehension monitoring of L1 and L2 readers. *TESOL Quarterly*, 26(2), 319-343. TESOL Inc.

This article also explores reading strategies through think-aloud protocols, specifically comprehension-monitoring processes in students of English, both as first and second language. The population in this case was 25 college students in their first semester; they also were classified in two categories: 16 were considered proficient readers in English (8 native and 8 non-native speakers of English), and 9 were non-proficient readers (of whom 6 were non-native and 3 were native English speakers).

The goal of the study was to shed some light in how reading proficiency in English, whether the person is a native speaker or not, and the use of comprehension-monitoring processes, are tightly connected. In the study, the participants had to read a piece from an introductory psychology textbook titled "Talking to Babies". Interestingly, the author explicitly mentions that the text contained no "'planted' inconsistencies or errors" (op. cit. p. 324). The analysis of the self-reports produced by the subjects shows that there were two main types of problems: monitoring a reference problem, where the reader did not know what a particular word was referring to, and monitoring a vocabulary problem, where the reader did not understand the meaning of a word.

Specifically, for the discussion of the reference problem, the author focused on the sentence "And this may be as important a function as language learning and communication", where the problem was caused by the unknown referent of "this"; for the meaning problem, the author chose the sentence "All the world's languages, from English to Urdu, share one special language: baby talk", where the issue was caused by the unknown meaning of "Urdu".

In the conclusion of that study, it is shown in both problems, that the proficient readers generally identified where the problem was, and what was the issue quicker than their less proficient counterparts. The article proceeds to describe the verbal protocols collected for each of the issues classifying them in "proficient native English speakers", "proficient ESL readers", and "less proficient readers".

One of the more notable traits of Block's study is the fact that it includes people with different L1s in its population, allowing for the comparison of reading strategies in English from both sides. It is interesting that all proficient readers share many thought

processes and find similar solutions for the referent and meaning problems. This diverse population means that the conclusion, that "the differences that existed in monitoring [processes] seemed due more to reading proficiency than to the language backgrounds of the readers" (op. cit. p. 335) is valid for both types of readers (native and non-native); this could impact the way reading and reading strategies are taught in groups with mixed learners. It would have been helpful, however, to know more about the procedure and the prompts used in the study, as it is not mention in which language the students were self-reporting, or the specific instructions given to them.

Block's work shares a common methodology, namely verbal protocols, in the study of reading strategies. The text is the same for everyone, although it only treated specific types of problems encountered by the subjects throughout the text. Population is also an important difference between that study and ours, both in age and number of participants.

This study shows that reading strategy use depends on the proficiency on the reader, and establishes three phases and six steps in the solution of problems that readers come across in a text; the results of this study are even more insightful taking into account that both L1 and L2 readers were included.

3. This study

3.1. Introduction

The verbal protocol approach was chosen because, as it has been stated previously, reading is not a homogenous process that can easily be tracked individually, let alone in several people:

> The product of reading is very variable from person to person, as the understandings, interpretations, and inferences taken from the same text depend on the previous knowledge, strategies and experiences of the reader. (Alderson 2000, p. 5)

It has been used in several other reading studies, as shown in the previous section, and even in marketing and customer's product choice research to see the impact and influence of advertisements.

This approach was deemed appropriate to delve into the research question, as it has several advantages that make it ideal for the study of reading strategy use, although it also carries several disadvantages, all of which were discussed previously in section 1.4. Moreover, the review of international studies carried out by Israel (2015) led her to reach the conclusion that studies that take the verbal protocol methodology tend to obtain valuable information, and that studies that combine both concurrent and retrospective are the most reliable, but she suggests leaning more toward concurrent (op. cit., p. 113).

3.2. Approach: concurrent verbal protocol

For this particular study, concurrent verbal protocols were chosen as a means to answer the research question, and we will see the positive and negative aspects of concurrent verbal protocols particularly, and verbal protocols as a whole.

This approach is in the more global "introspection" category of tools, and it has been used in other fields of knowledge, from psychology, to market research, to experimental sciences, in order for the researcher to gather information about the reasoning, motives or thoughts leading to a subject's decision. Cynthia White *et al*. (in Cohen, Macaro, 2007, pp. 93-116) discuss this method in the context of research into language learning strategies, as well as Andrew Cohen (in In Wenden, A. & Rubin, J., 1987, pp. 31-42).

Then, Hannu Kuusela and Pallab Paul (2000) went into more detail on the comparison specifically between concurrent and retrospective verbal protocols.

However, one considers worth mentioning that these verbal protocols are intended to analyze the interaction of the reader and the text when they have questions to answer about it compared to when they do not have anything to answer. This study is not supposed to measure the reading skill. We will focus on the "reading process" and the use of reading strategies (Alderson p. 308).

3.2.1. Mitigating the drawbacks

Many of the problems with verbal protocols that we have discussed so far in section 1.4 can also can be seen in Gu et al.'s chart (2005, p. 283); in that same chart, they also present the solutions the authors used to counter the problems they found carrying out their work. Many of the problems and solutions they reported are shared as well in here and explained.

One of the problems usually attributed to verbal protocols is the fact that we can only record and analyze what reaches the subjects' consciousness; furthermore, young students are still developing all their cognitive abilities, and may be even less aware of the tools they are using. For this problem, we are including a simple set of instructions, an example and a reduced checklist with strategies for reading (see section 3.3. Tools), so that the subjects may recognize easily what they are doing during their reading, expecting that when they see something they did on the list, it is brought into consciousness.

This same tool will be of use to balance the second drawback mentioned before about the training of subjects. Presenting in a simple way the task, modeling for them and offering a "menu" in which they can recognize things they were doing during reading eliminates the need for prior training of the subjects in answering verbal protocols.

As for the issue of the influence of the language used in the verbal reports, the subjects have the freedom to choose which one (Spanish or English) they prefer to use, in order to overcome the lack of metalinguistic knowledge of the subjects in the L2. It can be argued that the tools were redacted in English; however, in anticipation for this type of problem, the instructions were short and clear, the strategies had small

explanations for each in the checklist given to students, and the researcher was present at all times to clarify any doubts the subjects might have when using it.

Finally, about the issue of subjects "cleaning up their act" when speaking out loud and saying what they think they should be answering, we trust in the subjects' honesty when answering the questions, as we will provide a calm atmosphere, assuring them that their grades will not be affected in any way by the performance in this study, and that their data will be stored anonymously.

3.3. <u>Methodology</u>

In this section, the subjects, research instruments, and data collection procedures are briefly described. Many of the items and tools are added at the end of this work in the "Annexes" section.

For this study, the sample population were 9 students in 2nd of ESO – 7th grade from a high school in Pamplona. They were classified as 2 high level students, 2 average, and 2 low level students, as assessed by their own EFL teacher according to their performance. All of them were native speakers of Spanish, and studying English as their L2. We did not take into account their L1 proficiency, because, as Alderson (2000, p. 25) mentions, "Knowledge of the second language is a more important factor than first language reading abilities".

The independent variable in this study were the text and the instructions given about the task and the study; the dependent variables were constituted by student themselves and the reading skills they used.

3.3.1. Procedure

The students were divided into two groups of three, with one from each level in every group; group A would only read the text without questions, and group B would read the text (see Annex), having to answer some multiple-choice questions after it. The students were introduced to the task, clarifying that it would not impact their class marks in any way and their answers would be kept anonymously.

First, the researcher modeled what thinking out loud is with a short sample text (see Annex). Then it was the subjects' turn to verbalize their thoughts while reading (and answering the questions for group B), all while being recorded. Finally, they were given the checklist of strategies to close and review what they said in the think-aloud, or to elicit any further comments if the researcher felt the student wanted to say something else but was not able to verbalize it at the appropriate time.

3.3.2. Tools

<u>Checklist</u>

This reading strategy checklist was elaborated following three elements, two of which are from academic publications, and then the author's own criterion. First, Cohen's article (1986b, p. 135), takes Sarig's very thorough classification, called "Reading Move Types and Comprehension-Promoting Examples". It establishes a taxonomy of reading strategies in four categories of moves: Technical-Aid, Clarification and Simplification, Coherence-Detecting, and Monitoring Moves. It is a very thorough and comprehensive checklist, far beyond the practicality we needed for this study, but very useful to set a general frame for eventually producing a more reduced and easier to use checklist.

Then, Lynn Erler and Claudia Finkbeiner (in Cohen 2007, pp. 189-190) take from Hosenfeld (1977) the strategies that successful high school foreign language students had reportedly used. This is in line with the findings from similar studies reviewed above, in which the more successful or higher performing students tend to use similar methods. Rather than being a checklist, it is an indication useful to fine tune and concentrate Sarig's list into something more manageable.

Finally, following the author's own criteria, some of the "moves" from Cohen's article were removed, and others have been bound together, e.g. "paraphrasing" in the original classification consisted of five different types of paraphrasing, but in this checklist, they were put in the same category. The tenth strategy, "Consulting a dictionary, teacher or classmate", was added, as it appears in the reviewed literature, and is considered to be a highly employed strategy among foreign language learners across all ages and levels of education Below is the final checklist used in this study, and in the Annexes is the one handed to students.

1. *Marking elements in the text.*

2. *Skimming: reading quickly through the text.*

3. *Scanning: reading for detailed comprehension.*

4. *Jumping or skipping words/parts of the text (called "Desertion of a 'hopeless' segment of text" in Cohen 1986b p. 135)*

5. *Paraphrasing: reword something in the text mentally, orally or written.*

6. *Identifying key information.*

7. *Using previous knowledge.*

8. *Organizing/Changing reading course: "First I'll read everything, then this part, then skip this, then mark this…)*

9. *Repeated reading of the same part.*

10. *Consulting a dictionary (physical/online), teacher or classmate*

11. *Other:*

Texts

The text used for the study was taken from Cambridge's Preliminary English Test *PET 4 with answers* book (see Annexes 6.2 and 6.3). The material was chosen because of its B1 level and after consulting the EFL teacher of the subjects; it still presents some challenges for higher-level students at this age, while being affordable by the lower-level ones. Besides, it is a sample test published by Cambridge, which ensures that the text is validated for the appropriate grade.

The questions about the reading were four multiple-choice questions, with four options each. This was chosen for several reasons, in essence, the same that make this type of question is very frequent in all types of reading comprehension. It is a format that allows to check the comprehension of a text in a quick way, and the results are easily managed; then, it is a very flexible format in terms of what can be demanded from students, as Rupp et al. mention (2006, 452). The fact that they are widespread, practical and flexible make multiple-choice questions an ideal tool for this study.

3.4. <u>Results</u>

In Annex 6.4 is a chart compiling the results obtained during the verbal protocol interviews. As explained during the previous sections, there were 9 students were classified into higher, medium and lower level according to their performance in English as a Foreign Language, assessed by their teacher. Some of them had questions to answer about their reading, whereas others only had to read. As for the "strategies used" column, the numbers refer to the checklist shown in the previous section and Annex 6.1. Finally, the last column refers to notes taken by the researcher.

If we focus on the high-level students (subjects 1, 2 and 6), the two who had to answer the multiple-choice questions used more strategies than the one only reading. It is worth noting that this last one decided to read out loud the text, whereas the other did not verbalize the text in front of them.

Subject n.	Level	Questions	Strategies used	Notes
1	Higher	N	1, 2, 7 11: Read out loud	
2	Higher	Y	1, 3, 5, 6, 8, 9 11: Highlight important words both in the questions and in the answers; read short pieces out loud	
6	Higher	Y	1, 2, 3, 5, 6, 8, 9	High-capacity student

Chart 1: Higher-level learners

The first subject read out loud for themselves, but it was almost inaudible for the researcher and in the recording. The second one reported actively marking key words in the reading and the questions, so that they could go back to the text looking for similar words and thus deduce the answer faster and more accurately. The third subject (number 6 in the list) did a similar self-report as the previous ones, but when completing the checklist after the task, at first they did not check the "Marking elements in the text" strategy as something they had used because "I don't normally mark things on the text"; this could point towards the fact that, since they had to answer questions about the

reading, marking or highlighting parts of it helped them answer, even if it is something unusual in them when simply reading.

Moving on to medium-level learners (subjects 3, 5, and 9), out of the three that were interviewed, only one of them had the reading with questions.

Subject n.	Level	Questions	Strategies used	Notes
3	Medium	N	3, 5, 8	Didn't do anything with the text
5	Medium	Y	1, 3, 5, 6, 9, 10	
9	Medium	N	1, 2, 3, 5, 8, 9	

Chart 2: Medium-level learners

In this group, it can be seen that all of them used "Scanning" (strategy 3) and "Paraphrasing" (strategy 5); however, none of them skipped any words (strategy 4) nor used previous knowledge (strategy 7), something which might suggest that the learners were not familiar with the text, as we discuss in the next section.

Finally, if we take a look at the lower-level subjects (numbers 4, 7, and 8), they used less reading strategies overall when approaching the task than the rest of the sample of students, whether they had to answer the multiple-choice questions about it or not.

Subject n.	Level	Questions	Strategies used	Notes
4	Lower	Y	2, 4, 7, 8	Answered the questions, but didn't do anything else with the text
7	Lower	N	3, 5, 9 11: Read aloud, pause when reading numbers	Didn't do anything with the text
8	Lower	Y	3, 6, 10 11: Read aloud	

Chart 3: Lower-level learners

Here, the learners used less strategies overall, but they were more varied across subjects, as the only one in common is "Scanning" in subjects 7 and 8. This could suggest

that lower-level learners do not have a specific strategy when approaching a reading task, whether it has questions or not.

It is also interesting to establish comparisons across levels. Something that stood out, regardless of level and having to answer questions or not, is the fact that most students chose to read the text out loud as a reading strategy: many either asked if they had to read out loud from the start, or began reading out loud from the start, stopped, and asked if it was necessary; when told it was completely optional and up to them, they actively chose to do so, or continued with that strategy. One subject even reported reading aloud even in test situations to better comprehend the text at hand, although at an inaudible volume in order not to disturb their classmates.

It is noticeable, for instance, that higher-level students reported using more strategies than their lower-level peers, even when the latter had to answer the set of questions and the former did not. We can start to see that questions may be of help when understanding the text, as it could prompt the use of other or more strategies, but it depends also on the general level of the student.

As expected, the students' scores on the multiple-choice questions varied with their proficiency level: both high-level students that answered the questions got all of them correct, whereas the lower-level subjects were not as accurate in the task, corroborating that the estimation of the EFL teacher regarding the subjects' level was accurate.

Subject	Level	N. of questions answered correctly
2	Higher	4 / 4
4	Lower	2 / 4
5	Medium	3 / 4
6	Higher	4 / 4
8	Lower	0 / 4

Chart 4: Scores of subjects that answered MC questions

4. Conclusion

Reading in one's native tongue or a foreign one is a key skill in cognitive and personal development, as well as in modern societies, from school to professional life. That is why teaching reading in school is a step in providing the essential tools for the learners to develop their full potential. As it has been explained along this paper, reading is a complex construct that is taught and tested at school; when approaching a reading in a foreign language, learners use different strategies to better comprehend it, and the set of strategies used changes depending on the purpose of the reading.

This work was carried out in order to analyze the use of reading strategies of Spanish EFL learners in 2nd of ESO – 7th grade when they have to answer a series of multiple-choice questions, and contrast it with reading without having to answer any questions. The objective was to test if having to answer a series of questions in a reading influences the way these students approach a text.

As seen in the "Results" section, having to answer questions prompted the use of a wider number of reading strategies. Furthermore, higher-level students used more strategies than the lower performing students in both situations (with and without questions).

There were two hypotheses posed in this research. As for the first one, about higher-level learners using more strategies than their lower performing peers, it was shown that this type of learners used more reading strategies when attending to quantity alone.

Then, as it was discussed in section 1.3, some strategies may be more commonly found in a test setting rather than in "everyday reading", such as the "marking elements in the text" that we put in our checklist. For example, subject 2 marked the key words in the multiple-choice questions and then went back to the text to find the piece of text on which to base their answer. This is not something done for instance when reading a novel for the pleasure of it, so it becomes clear that there should be a difference between "average reading strategies" and "reading test-taking strategies".

As for the second hypothesis, about questions prompting the use of more reading strategies, it can be seen from the chart 5 below that, as a general occurrence across all

proficiency levels, having to answer questions made the subjects use more strategies than when they were facing the text alone.

Strategy use by subject			
READING W/ QUESTIONS (5 subjects)		READING W/O QUESTIONS (4 subjects)	
Subject 2	1, 3, 5, 6, 8, 9	Subject 1	1, 2, 7
Subject 4	2, 4, 7, 8	Subject 3	3, 5, 8
Subject 5	1, 3, 5, 6, 9, 10	Subject 7	3, 5, 9
Subject 6	1, 2, 3, 5, 6, 8, 9	Subject 9	1, 2, 3, 5, 8, 9
Subject 8	3, 6, 10		

Overall strategy frequency			
S1 → 3/5	S6 → 4/5	S1 → 2/4	S6 → 0/4
S2 → 2/5	S7 → 1/5	S2 → 2/4	S7 → 1/4
S3 → 4/5	S8 → 1/5	S3 → 3/4	S8 → 2/4
S4 → 1/5	S9 → 3/5	S4 → 0/4	S9 → 2/4
S5 → 3/5	S10 → 1/5	S5 → 3/4	S10 → 0/4

Chart 5: Frequency of strategies used by subjects both with and without MC questions

If we focus on the frequency of particular skills, some of them stand out when the subjects had to answer questions, whereas others were used mostly when only reading. This chart shows some interesting trends and comparisons that can be established between subjects on both sides.

For instance, strategy 3, "Scanning", was very common in both settings. On the one hand, it was expected to find this strategy among the most used when answering multiple-choice questions; in the same way as the findings in Rupp et al. (2006, 469), it can be hypothesized that test-takers divide the text into smaller pieces that correspond to each of the questions, leaving aside the macrostructure of the text, i.e., the learner scans for details that guide their choice of answer.

On the other hand, most of the subjects that were only reading also reported having used this strategy; it is possible that this has been conditioned during the regular EFL

learning time, since in the classes, materials and textbooks, all of the readings are accompanied by a set of questions, which guides and even conditions the students into using this type of strategies.

Strategy 6, "Identifying key information", was very common when the learners had to answer questions about the text, but it was not used at all when there were no questions. This falls in line with the expectations that, when the purpose of a reading is to answer a set of questions, the learners modify their approach to it by choosing different strategies; in this case, multiple-choice questions seem to shape the comprehension process in a particular way, where the reader segments the input following the questions given, as one of the subjects did during her reading, where she matched key words from the questions and searched for them in the text in order to get the correct answer.

On the other side of the spectrum lie strategies number 4 ("Jumping or skipping words or parts of the text") and number 10 ("Consulting a dictionary (physical/online), teacher or classmate"), both of which were used by one of the learners answering questions, and they were not used at all by the other group.

The results mostly fall in line with the studies reviewed in section 2. For example, comparing our results with Block's article (1992), it is possible to see that reading strategy use depends on the proficiency on the reader: as that author concluded, higher-level learners use more strategies, and on our study, we found out that they tend to be more aware and verbalize more the reading strategies they use. However, Block's research included both L1 and L2 readers, which provided a different perspective into this area of study.

Savić (2014) looked at the strategy use of Serbian EFL learners, and reached a similar conclusion: the students that scored the highest grades in the first test (a general English test) used more strategies and used them more frequently. Interestingly, Savić pointed out that students tended to use more often strategies such as "asking a classmate or a teacher", rather than skipping words; however, in our work, there was no strategy that clearly stood out in each of the proficiency categories of the students.

When comparing the results obtained and Gu et al.'s study (2005), the same idea as before is reinforced; what is even more meaningful is that in that article and our study,

think-aloud protocols were successfully used with younger students of second or foreign language to obtain data about their inner reading processes.

Then, Chamot et al.'s paper (1996) was a long-term study with primary students. Despite some important differences in the methodology, verbal protocols were also used in it, and it yielded similar results as the present study, that is, strategies based on linguistic knowledge were more common, and planning strategies were shown to not be so common; however, in here we did not consider the use of writing skills, which proved to have a different set of skills

This work has a few limitations, from the point of view of more mechanical aspects of research, to other issues more related to the validity of the data or the study itself.

Firstly, there were some limitations concerning the research process and data gathering. Given the fact that it was carried out during school hours, it was difficult to find a quiet venue for the verbal self-reports to be recorded appropriately; furthermore, the interviews were done during final exams period, which meant that it was necessary to schedule the research around these finals, as well as the fact that some teachers did not want to participate as they were busy with their classes. Finally, in this study the time and the resources were limited to the internship period in this school, which conditioned the length of the study and the interviews that it was possible to carry out.

These limitations were overcome thanks to the inestimable help of this work's director, Dr. Paul Miller, professor and researcher at Universidad de Navarra; it is necessary to mention as well the help of the teachers at the Navarro Villoslada high school, Ms. Nieves Hernández, the English teacher that helped with the organization of the interviews, and Mr. Gabriel Rubio, the tutor that guided my internship at this school.

Secondly, there are some limitations with the study and the methodology itself, some of which were already discussed in section 1.4.1. As Alderson (2000, pp. 333-334) points out, verbal protocols as a tool to gather information about the inner processes of learners require that these receive some form of training or modelling, as they are not used to verbalize their decision-making processes or thoughts.

This tool is also confronted with the validity of self-reports produced because, as it has been discussed previously, verbalizing the chain of thoughts during a reading or any other language activity might influence the outcome: the subject has more time to evaluate the strategies they are using, or they might change their self-reports (for example when answering a question about a reading), as explaining out loud their thought processes gives more time for self-reflection and self-correction; it is also possible, as we commented above (section 1.4.1) that the subject may also feel the pressure to say what is correct or what is expected from them, causing them to "clean up" their act and further altering the quality of their self-reports and interviews.

However, these limitations are inherent to this methodology, and there are measures that the researchers can take in order to outweigh them, as has been shown during this work; moreover, the benefits of the think-aloud protocols surpass these constraints, as this tool proved useful in testing the research hypotheses set at the beginning. Thanks to this method, it was shown that, in line with previous research, higher-level students use more strategies, and that questions tend to encourage more strategic reading and better understanding of the text.

Even if the interviews and the research was carried on successfully, the results were not as consistent as it would be desired. Firstly, due to the size of the population, nine students selected at random from an English class of 2nd of ESO – 7th grade. This number of subjects allows from limited extrapolation, unlike for example Savić's study (2014), where the population consisted of 502 students, which gives greater validity to that work.

Secondly, the physical and practical limitations of this research have influenced the consistency of the results. For instance, it was only possible to interview 9 students, three of each proficiency level, which means that there were 5 students who read and answered the questions, while 4 only had to read, which may potentially be reflected in the frequency of strategies used in each of the two settings.

Then, as a common occurrence in this area of research, is the motivation of the subjects. It is not mentioned in any of the articles or papers reviewed in section 2 "Review of published studies", and it does not appear very often in the literature in the topic. The data in this type of work may be highly subjective, given the nature of the subjects; young learners may feel more attracted to or interested on one area of knowledge, be it because

they are more skilled in that area, or simply because of personal preference. Either way, in studies such as the present one, where subjects are chosen at random, there is a possibility of finding a student that does not engage specially well in the task or experiment. This risks skewing the data or influencing the performance in the experiment, simply put because they "just don't like English".

During this research, it was noticed that motivation is a key factor in all areas, from learning and testing, to the research of it all. The motivation of the learner toward the subject in general, and toward the text at hand in particular, is a factor that has to be taken into account: actual learning outcomes and test results may be affected by this, because a student is not very likely to read a text such as the ones often presented in-class (or the ones chosen for this study, for that matter) out of their own initiative. For example, as can be seen in chart 5, only one of the subjects in each of the settings used the "previous knowledge" strategy, which could suggest that they were unfamiliar with the text.

If the learner is interested in the text, we hypothesize that they will dedicate more attention and engage more strategies in order to get the most out of it, whether there are questions in it or not. As it has been shown above, mechanisms have been put in place to balance the limitations of the study, but motivation in the participation of the study and the EFL subject itself, as any human factor, is a variable difficult to measure and control.

This study, and the ones reviewed in it, come to show that it is possible to use this method and replicate the experiment, in order to broaden the population and gain better insights into the reading processes and strategies.

In particular, for type of study, it would be necessary to set up a better and more quiet venue for the recording of the self-reports; then, it would be desirable to have a bigger population, in order to get more consistent results. For the same reason, it would be interesting to do the same procedure in other courses and ages, to see if and how much the results vary, given the fact that all our subjects were between the ages of 12 and 13.

The general direction of this work points toward some general implications and guidelines for the classroom. Fairly often, academic research is unconnected from the

actual ongoing teaching-learning process, or it may be difficult to apply that research and its findings to the day-to-day workings of a language acquisition class.

In this work, the objective was to analyze what strategies were used in reading in English as a Foreign/Second Language, comparing an only-reading situation, and a test setting where the learner had to answer four multiple-choice questions about the text.

In general, having to answer questions prompted a more attentive reading and a wider use of strategies in the learners, although this effect was less noticeable in lower-level subjects. This reading strategy use facilitates comprehension: marking or making notes on the text, rephrasing (whether it is mentally or in written form), consciously rereading a passage or organizing one's reading order can help reading comprehension. For instance, as we mentioned in the previous section, subject n. 6 reported that they do not normally mark things on the text, but it seems that in this instance they did in order to better answer the multiple-choice questions about the text.

Therefore, a higher and wider reading strategy use indicates a better grasp and understanding of the text, and better reading in general. The results here suggest that better strategy use in reading results in better comprehension, thus one of the main implications is that we should implement the explicit teaching of reading strategies in the EFL classes, in order to improve the reading performance.

As for suggestions for future research, it would be desirable to expand the present work with more subjects, in order to draw a bigger picture of the reading strategies in this grade; moreover, the same method and process could be used to test it in other EFL learners of different ages, to view the progress in reading strategies, if any.

Then, going beyond this paper, it would be interesting to see if, in the same context (native Spanish learners of English), the teaching of reading strategies in an explicit manner during a set amount of time could improve the reading proficiency.

Using concurrent verbal protocols is a time-consuming procedure, but it is worth investing the time and the resources given the amount and quality of data that it provides, be it for the reading processes in this case, or in any other teaching and learning processes. On the opposite side sits the use of checklists and retrospective verbal protocols, since they allow for a faster and more practical gathering of data, even if, as discusses previously, data reported by the subject might be corrupted.

Combining both, as it was done here, makes data collection a more practical process, while still keeping the quality of the self-reports while the reading takes place. This makes this method more practical, allowing for bigger populations in future studies. We consider this an asset of this work, and something that can hopefully contribute to the use of verbal protocols in the study of reading strategies in the language acquisition field.

5. Integration in the IB program

This study can be applied to the IB curriculum as well. The IES Navarro Villoslada, the school where this study was carried out, is also an IB school, integrating the Diploma program and regular Spanish national curriculum in the 11th and 12th grades for six years now.

A second or foreign language is one of the key elements of this curriculum, from the Primary Years to the Diploma Program; being able to communicate fluently and adequately in another language is considered a key skill for the complete development of the learners in this program. It can also be applied to all of the seven attributes of the IB Learner Profile.

Language acquisition resides mainly around the "communicators" trait, but in this work, it can be seen that it is necessary to develop other attributes in the learners, such as knowledgeable, thinkers, and reflective.

First, one of the impacts of this study for the classroom is that there should be explicit reading strategy teaching in order to improve reading performance; knowing that reading itself can be studied and improved upon is a key component in the learning of an additional language. If the learners are taught reading skills and how to apply them, it can be expected that they will be better at reading, thus starting a circular process: the better they read, the more they read, which in turn improves reading.

Then, the "thinkers" and "reflective" traits go hand in hand in this study, as they are merged in learning how to learn. As it has been mentioned above, being conscious about one's own reading processes helps the learner in their progress, self-assessing strengths and weaknesses. In Language Acquisition, it is key to monitor one's own progress, and one way it can be done is with the verbal protocols used here: reflecting during a reading task can be helpful in learning how we read and the reasoning behind the answers we give to certain questions.

As it is mentioned in the MYP Language Acquisition Guide (IBO, 2020), the objectives are to learn language, learning *through* the language, and learning *about* the language (emphasis added); one objective that is involved in all of the areas and is implied in the IB curriculum but not listed specifically, is learning to learn, in our case, learning how we read.

In this study, we focused on Criterion B: "Comprehending written and visual text", or reading comprehension, as it is usually called. Given the transdisciplinary nature of the IB curriculum, we think that this study can contribute especially to this criterion B, but also to the rest of the Language Acquisition subject, and even extend on to other subjects.

This can be seen in the MYP Language Acquisition Guide, when talking about the Approaches to Learning (ATL), where one of the categories is "Self-management skills", specifically "Use appropriate strategies for organizing complex information." This is close to the ideas explained across this paper: strategies are consciously done to better process a written input, and should be used across subjects and objectives in a curriculum.

This is why this paper integrates with the IB program: promoting self-management in reading and learning to learn is part of this study as well as being key in that curriculum, besides relying on the thinking and reflective IB profile attributes. Furthermore, the achievement descriptors found in Criterion B are related to reading strategies, such as identifying main ideas and supporting details, and understanding the text as a whole, or the reading strategies used in this paper could help the learner achieve higher levels in this Criterion. Moreover, since reading is also an important part of the learning process in every subject, learners will benefit from this reading strategy awareness.

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7. Annexes

7.1. Instructions and checklist of reading strategies given to students

Subject n.: _____   Course and level: _____

Questions in the text: Y / N

Mark the strategies you used when reading "The shoemaker".

STRATEGY	USED?
1. Marking elements in the text (f.ex. highlighter, circling).	
2. Skimming: reading quickly through the text.	
3. Scanning: reading slowly for details.	
4. Jumping or skipping words or parts of the text	
5. Paraphrasing: reword something in the text mentally, orally or written.	
6. Identifying key information.	
7. Using previous knowledge.	
8. Organizing/Changing reading course: "First I'll read everything, then this part, then skip this, then mark this…)	
9. Repeated reading of the same part.	
10. Consulting a dictionary (physical/online), teacher or classmate	
11. Other:	

7.2. Model text and questions used by the researcher

John Fisher, a builder, and his wife Elisabeth wanted more living space, so they left their small flat for an old 40-metre-high castle tower. They have spent five years turning it into a beautiful home with six floors, winning three architectural prizes.

'I love the space, and being private,' Elizabeth says. 'You feel separated from the world. If I'm in the kitchen, which is 25 metres above the ground floor, and the doorbell rings, I don't have to answer it because visitors can't see I'm in!'

'There are 142 steps to the top, so if I go up and down five or six times a day, it's very good exercise! But having to carry heavy things to the top is terrible, so I never buy more than two bags of shopping from the supermarket at a time. Apart from that, it's a brilliant place to live.'

'When we first saw the place, l asked my father's advice about buying it, because we couldn't decide. After paying for it, we were a bit worried because it looked awful. But we really loved it, and knew how we wanted it to look.'

'Living here can be difficult - yesterday I climbed a four-metre ladder to clean the windows. But when you stand on the roof you can see all the way out to the sea on a clear day, and that's a wonderful experience. I'm really glad we moved.'

1. What is the writer trying to do in the text?
A) Describe how to turn and tower into a house.
B) Recommend a particular builder.
C) Describe what it is like to live in a tower.
D) Explain how to win prizes for building work.

2. From this text, a reader can find out:
A) Why visitors are not welcome at John and Elizabeth's house.
B) Why Elizabeth exercises every day.
C) Why Elizabeth asked her father to buy the tower.
D) Why John and Elizabeth left their flat.

3. Which of the following best describes Elizabeth's feelings about the tower?
A) She wanted it as soon as she saw it.
B) She likes most things about it.
C) She has been worried since they paid for it.
D) She finds it unsuitable to live in.

4. What problem does Elizabeth have with living in such a tall building?
A) Her visitors find it difficult to see if she is at home.
B) She feels separated from other people.
C) She cannot bring home lots of shopping at once.
D) It is impossible to clean any of the windows.

7.3. Subjects' reading piece and questions

Hill Bird is a shoemaker who cannot make shoes fast enough for his growing number of customers - and he charges more than £300 for a pair! Customers travel hundreds of kilometres to his London shoe clinic or to his workshop in the countryside to have their feet measured. He makes shoes for people with feet of unusual sizes: very large, very small, very broad or very narrow. The shoes are at least as fashionable as those found in ordinary shops.

Mr. Bird says: 'My problem is that I cannot find skilled workers. Young people all seem to prefer to work with computers these days. We will lose the necessary skills soon because there are fewer and fewer shoemakers nowadays. I am 45, and now I want to teach young people everything I know about making shoes. It' s a good job, and a lot of people want to buy beautiful shoes specially made for them.'

He started in the business 19 years ago and now he employs three other people. His customers pay about £500 for their first pair of shoes. He says: 'Our customers come because they want comfortable shoes which are exactly the right size.' Extra pairs of shoes cost between £320 and £450, as it takes one employee a whole week to make just one shoe.

1. What is the writer trying to do in the text?
A) Describe where Mr. Bird find his staff.
B) Encourage people to wear comfortable shoes.
C) Advertise a job selling expensive shoes.
D) Show Mr. Bird's worries about his trade.

2. What can readers find out from this text?
A) How many customers Mr. Bird has.
B) How to make shoes like Mr. Bird.
C) How to get to Mr. Bird's London shop.
D) How much Mr. Bird's shoes cost.

3. What's Mr. Bird's opinion of young people?
A) They want too much money.
B) They are difficult to train.
C) They prefer other jobs.
D) They don't work hard enough.

4. Customers choose Mr. Bird because his shoes:
A) Are the most fashionable.
B) Fit perfectly.
C) Look very unusual.
D) Are traditional in design.

7.4. <u>Data in chronological order</u>

Subject n.	Level	Questions	Strategies used	Notes
1	Higher	N	1, 2, 7 11: Read out loud	
2	Higher	Y	1, 3, 5, 6, 8, 9 11: Highlight important words both in the questions and in the answers; read short pieces out loud	
3	Medium	N	3, 5, 8	Didn't do anything with the text
4	Lower	Y	2, 4, 7, 8	Answered the questions, but didn't do anything else with the text
5	Medium	Y	1, 3, 5, 6, 9, 10	
6	Higher	Y	1, 2, 3, 5, 6, 8, 9	High-capacity student
7	Lower	N	3, 5, 9 11: Read aloud, pause when reading numbers	Didn't do anything with the text
8	Lower	Y	3, 6, 10 11: Read aloud	
9	Medium	N	1, 2, 3, 5, 8, 9	