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The role of Reading Strategies in the Natural Sciences Learning process: a CLIL proposal

TRABAJO FIN DE GRADO

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Resumen

El presente trabajo consiste un estudio de las distintas estrategias de lectura usadas en un aula de Ciencias de la Naturaleza, en base a la metodología CLIL. Para dicho estudio se han abordado los aspectos teóricos de las mismas y los beneficios que aportan en cuanto al aprendizaje y las competencias presentes en la actual ley de educación. Además, tras una puesta en práctica en el aula, se analizan los datos obtenidos con respecto a la lectura significativa.

Palabras clave: CLIL, estrategias lectoras, ciencias, lectura significativa, estudio práctico.

Abstract

The present work consists on a study on the different Reading strategies used on a Natural Science subject, based on the CLIL methodology. For the presented investigation, different theories have been studied about the strategies and the benefits of their use in the learning process and the key competences stablished on the law. Furthermore, after a practical experience on the school, the results are analyzed based on meaningful reading.

Key words: CLIL, reading strategies, science, meaningful reading, practical study.

1. Introduction

The following lines will present and analyze the different reading strategies used for the natural science lessons in a Spanish bilingual class from 5th and 6th grade of primary education following an empiric and qualitative research.

The theme selected for the proposal has a high relevance because of the impact of reading on the learning process. Even if literacy is not explicit on this subject, it is crucial for the correct understanding of the contents, as almost all the information is given in text format: written paper, video or even pictures must be read and understood to learn the new concepts and be able to connect previous ideas. We will base our foundations on this connection between science and literacy on the CLIL methodology present on the bilingual school we developed the proposal.

Along the work we will refer several times to this method. Content and Language Integrated Learning (CLIL) is a methodology which suggests teaching a content subject in a foreign language and teaching the target language through a content subject. The principles supporting CLIL are based on communication and language in use, including language in the broad curriculum and learning through real-life situations. Bilingual schools working with this combination of literacy (language) and content has proven a long term improvement in language learning, as it gives students opportunities to improve their skills on communication with different activities. (Darn, 2006)

As students grow up, the texts will be more complex, but teachers rarely teach explicitly how to deal with this fact, so a gap can be created and students learning will decrease (Mary Catherine Keating); motivation disappears, negative feelings increase and self-esteem starts to tremble, leading to students leaving school and giving up on reading. In order to avoid that, we will propose a set of strategies that makes reading simple and enjoyable. The students might be able to use them on different subjects to improve their learning process and develop their thinking skills in use.

Thinking skills in use can be understood by making thinking visible; teaching the skills and giving opportunities to use them. They are build up within a cultural context and can have several ideals. Through reading strategies students will develop their thinking routines and disposition to learn internalizing the given tools and automatizing the needed patterns to achieve active learning.

During my intervention, my focus has not been on the correct pronunciation of the words nor on the speed, but on the meaning of the text and its usage (content based reading, Heerman 2002). As I saw that most of the problems in understanding the subject was the English level, I decided to work with strategies that might seem a little childish, but improve the visual competence and the motivation of the students generally; picture guessing, getting information through context, main text structure, etc.

Motivation and visual competence are very important on this stage of education, as it will help them on the future on all different subjects. On one hand, motivation is being proved to be essential for studying (Tohidi & Jabbari, 2011 among others) as it is easier to keep their attention and interest, fomenting autonomous learning and intrapersonal skills. On the other hand, visual competences help to reinforce the possible limitations of language, making the topic attractive and achievable. The combination of both is the best reading tool to lay the foundations for the reading strategies, as they might even use them unconsciously. Making these strategies available to use consciously, can set the lines of scaffolding (Wood et al., 1976)

Reading has two main aspects: emotional aspects (enjoying reading) and mechanical aspects (decoding the text, sounds, pronunciation, meaning and use of text and information). On this work, we will focus mainly on the second one: the mechanical aspect of reading and learning to read from an informative text (in this case, the textbook). This mechanical aspect refers to the way we read and how we get information from a text (decoding). However, according to Waller (1977), "thinking is a necessary prerequisite for reading at any level (beginning or mature), for any of its subparts (decoding or comprehension), and for any purpose (pleasure or information)" (p. 1). What, in the class context, means that the goals we set for the students might then be based on how they use the new information about reading (mechanical aspects) to make study easier and meaningful (emotional aspects).

Finally, I will also try to connect the strategies with gamification[1], making the process of reading and studying more enjoyable and meaningful and working with the motivation

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[1] Many authors have work, develop and define through the years, some of those definitions can be found on the article of Gallego, F. J., Molina, R. and Llorens, F. (2014). *Gamificar una propuesta docente. Diseñando experiencias positivas de aprendizaje.*

aspects of education. As the popular Chinese proverb says, "I hear and I forget. I see and I remember. I do and I understand". Following this hypothesis, I will try to connect the information in the text with experiential moments, so that students can understand better the ideas and implications of the content by playing with it.

Reading as a second language learner

An important aspect on these years, as said before, is that most of the times, reading is taken for granted on high levels of education (second cycle of primary education) and texts start getting more difficult and complex. Normally, the reading skills of the pupils on their mother tongue are already highly developed and they can follow the level we demand them, but second language is not the same. When we compare Spanish and English reading, we can easily find some of the problems that our students will have to face: false friends, exceptions in the studied grammar rules, difficulties in pronunciation, colloquialisms, etc. However, the main problem that students have to face is the differentiation of both languages. This means, stop thinking in Spanish and then translating or translating the English text and then read it.

This will lead into literal translations, which have none or low meaning. As English is dependent on a different structure than Spanish, it is important to work first on a general level (understanding the text) and then move forward into understanding the different verbs or even analyzing the words in order to get more information about the text.

In order to do this, Spanish speakers need to be concentrated and find out the main important words that summarize the complete idea of the text. This can be done through analyzing the format of the text: capitals, italics, bold… as we will see when describing the strategies.

In addition to this, when a kid starts reading, there is a phase on which s/he will need to sound out words, even when reading for his/her self. This is very simple in Spanish, as most of the times words are read as they are written. But in English this also causes some

JENUI. Universidad de Alicante. Available at: https://rua.ua.es/dspace/bitstream/10045/39195/1/Gamificacio%CC%81n%20(definicio%CC%81n).pdf

troubles, as words are not always read as they are written; the resulting bad pronunciation, normally leads to wrong understanding and meaningless and exhausting reading.

Hence, when we start reading in English, we have to focus on these of aspects: pronunciation, tone, rhythm/speed and meaning. It is very hard to get all of it right the first time we read one text so we need timesaving strategies on the lessons, which will give students the opportunity to read and reread the text going through these aspects on their rhythm.

Other important issue, taking into account the emotional aspects, is that the main reading on the lessons is done aloud, so students want to sound perfectly and not be pointed out as the "bad reader". This leads on students forgetting to pay attention to the meaning, not getting the idea of the text and making the reading meaningless.

For all these reasons, the strategies used on the class have to focus on all the word level aspects and sentence level aspects, even if our final goal is getting the meaning out of the text. When a teacher wants to find out if the reader understood the text, the basic tool s/he has is the "summary strategy"; asking the reader to sum up what s/he read with his/her own words. This way, we push students on the direction to the search of meaning.

Finally, the last and most important problem that both, teachers and students of second language, share is finding texts with a simple, known structure which gives the needed information and connects with the students' interests. Giving the students too simple texts is as bad as asking them to work with a very complex essay, as we are giving them the idea that they cannot afford more and they will not be motivated.

Definition of reading and reading strategies
Before we move further on this work, I consider crucial to have these two concepts clear. As there are many possible understandings, on this short section I will explain the ideas on which this document is written.

The main concept might be *reading* and what we understand for it. For the purpose of this TFG, reading can be defined as "the transfer of meaning from mind to mind: the transfer of a message from writer to reader" (Nutall, 2005). So the main objective of reading is getting the meaning of the text, understanding the message that the author(s) want to

share. In order to achieve that, we need to share a common code and, in most cases, share previous concepts on which we can build the new ideas and assumptions (our schemata). The strategies will help us with these aspect, as they will make the code easier to identify and they might activate our previous knowledge, preparing us for the reading as active learners.

A reading strategy is, therefore, a mechanism or tool used by the reader to identify the meaning of the text. All of us use strategies when we read, normally cognitive strategies, as we need to identify some words through context, we can read the main words and sometimes we summarize or paraphrase our readings to make them more accessible and self-assess our reading (did we understand the text?).

Some authors have given their own definition of reading strategy, the approach used on this work is closer to Tabasso and Bouchard, 2002:

> *"Comprehension strategies are specific, learned procedures that foster active, competent, self-regulated, and intentional reading" (Trabasso & Bouchard, 2002, p. 177)*

We also have to take into account that the more we read, the best our strategies will get and the easier it will be to afford new texts. Here a new factor for further investigation and comment appears: reading for pleasure. Practice reading should involve reading books, novels or other texts to enjoy the message (fiction or nonfiction). In relation to this, Margaret Meek, 1986 explains on her book "Learning to read" how we should motivate children to read by giving them appropriate times and areas; such as before going to sleep, having an area designed for the books, with enough light and relax. We might encourage them to choose the books they prefer, giving them ideas if they need them and adapting the materials to their age, development and interests.

2. Competences

In relation with the competences presented on the official document of the degree, the following will be demonstrated by the present work.

General competences
- Inclusion of subjects and activities which allow a basic acquisition of a foreign language.
- Knowledge and understanding of the principles of education and terminology, based on the different theories presented on the degree.
- Application of the knowledge on the teaching-learning practice
- Research and interpretation of essential data.

Specific competences
- Know the main competences presented on the law and how to work with them with the different students
- Understand the value of teachers' work on actual society.
- Use language as a communication and comprehension tool (CLIL)

Why reading strategies in science lessons?

The main idea of this work is based on the CLIL methodology; which combines science and literacy in a way that both are useful for each other. Different researches agree on the relationship between these skills and the need of literacy on science lessons. As Pearson said (2006), "science provides an authentic and engaging context for literacy learning, and literacy learning can support students in learning science". He adds that "facts have to mean something" to be easier to remember. According to this author "Reading and writing are better when they are tools, not goals".

Even more, Pearson pointed out that literacy and science share many common cognitive activities, such as summarizing, posing questions, communicating findings, and drawing inferences and conclusions. He said that because of these synergies between open-ended science activities and reading, the same rubrics can be used to evaluate students' abilities in both domains. "Literacy is more verbal, and science more experiential, but each can be both.".

In relation to this, some museums such as the AMNH (working with the Smithsonian) they are creating specific materials to engage students with scientific contents. The AMNH (American Museum of Natural History) developed in 2016 an instruction on how to combine literacy and science and the strategies used. As in the present work, the goal of the texts is related to content learning in the classroom, using reading strategies as a helping tool for learning.

As Danielle Remsen stated, "the reading that students have to engage in in science is often pretty complex and because of that, we really want to integrate literacy in a way that helps them confront that complexity. […] It's a misconception that science teachers are not literacy teachers also. In order for students to understand the science, they have to be able to gather that information through reading and be able to share that information through writing".

For these teachers, literacy strategies help the students to be aware of their thinking process, as they create routines or patterns by which students operate and go about the job of learning (*Visible thinking*, Project Zero, 2015). They also improve their understanding and implication on the content and make connections based on the different evidences found on a scientific text.

Both, the lessons showed on the AMNH videos and the research carried out by Pearson, proved that the use of literacy skills on science lessons and the combination of both subjects have great results on the students learning. Students connect with the contents, understand them better and take part on their learning process by being aware of the thinking path they follow to learn contents. Also, as Pearson explained, the researches and comparisons made by the students are similar to the real research made by scientists on their experiments.

Furthermore, in order to develop the CLIL methodology, some important aspects must be taken into account. Some of them paraphrased from the CLIL competences grid (2010):

- First of all, that we are working with a foreign language, so we as teachers will be the model for the students and we have to adapt our speech to them. This means adapting to context, use interpersonal skills, adapt it to the target content and teach language by using it to teach (cadence, tone, classroom management…).

- Secondly, school can be the main area where students work with English language, so we must use real materials, bringing not just the language but also the culture to the school.
- Finally, plan and design following the main CLIL ideas adapted to the specific curriculum of the school. This means assure students development by making them autonomous, working with their previous learning and scaffolding language.

3. Objectives

With the planning shown in this work different objectives will be accomplished related to the professional competences established previously. These objectives refer to my personal teaching skills and the work done with the pupils on the reading aspects related to the communication competence.

As it has been stated before, the work is included on a CLIL program, so the main bases of it will also be taken into account: teaching the target language (English) in context, as a tool language to learn something else; in this case natural sciences, based on the bilingual plan of the school.

Furthermore, the objectives on this TFG have two different and connected views; being one more closely related to the teacher's work and the second one with the students learning:

- Identify and use different reading strategies for the understanding of the natural science texts, making practical connections between Science and Literacy.

- Develop conscious use of reading strategies on the students as a motor for thinking skills and a help on their further knowledge of the target language.

Objectives for the teacher and researcher

- Identify the used strategies crosscurricula and propose different approaches to help the students get involved in the reading activities with a positive attitude and interest.

- Encourage and develop autonomy on the pupils' learning, promoting positive self-assessment and self-concept and developing their learning to learn skills.

- Plan a working proposal for reading improvement through strategies, based on meaningful reading on the target language and following gamification techniques and scaffolding theories.

- Develop the pleasure or interest for reading on the students by providing enjoyable activities.

- Introduce the students to the main CLIL lines, being able to:

  ● Know and use basic interpersonal communication skills

  ● Adjust to social or academic registers of communication according to the demands of the given context

  ● Use the target language to explain, present, give instructions or predict a possible part of the texts (or paragraph) where they could find the information.

  ● Identify different expressions due to formal or informal contexts

Objectives for the students (adapted from Nuttall, 1982, "extensive reading programme")

- Improve the general understanding of a text at first reading: using skimming then appropriate to read what is relevant and help the subsequent comprehension.
- Make predictions on how a text will be like or will talk about, to help speed and understanding
- Use context (reference system, discourse markers…) and non-text information (diagrams, etc.) to supplement the text and increase understanding.
- Not worry if he does not understand every word, except when complete accuracy is important.
- Be aware that their own expectations influence their interpretation and recognize those occasions when the writer's assumptions differ from their own.
- Be aware, when necessary, that he has not understood the text, and be able to locate the source of misunderstanding and tackle it.
- Recognize known expressions on written format and be aware that the sentence can have different value depending on context and formality.

4. Justification

"Reading should not be presented to children as a chore or duty. It should be offered to them as a precious gift." — Kate DiCamillo

On the previous pages of the present work, we have described the ideas and objectives that lead the developed program. On this section we will present the theories used to support our activities and methodologies on teaching reading skills.

The design is based on the CLIL methodology, having English as the target language and natural science as the content subject. The term CLIL was coined by David Marsh, University of Jyväskylä, Finland (1994): *"CLIL refers to situations where subjects, or parts of subjects, are taught through a foreign language with dual-focused aims, namely the learning of content and the simultaneous learning of a foreign language.* (Retrieved from "What is CLIL?", 2009). This bilingual practice involves using the literacy aspects of the content subject as a path towards learning.

The combination of literacy and content learning has demonstrated the need of reading strategies, as information must be searched and understood for documenting the concepts and analyze them. As Neese, B. stated (2017) "teaching reading strategies in an accessible way can help students think actively while they read. When combined with fun reading activities for kids, teachers can develop students' reading comprehension in an engaging fashion.". The benefits of reading strategies are present on several investigations, been even part of the educational law, LOMCE. As well as helping students with struggling texts, they can be considered the motor of the thinking skills, as students have to analyze and adapt their own ideas and internalize the path followed to understand the text (*Thinking routines*, Project Zero, 2015).

Reading strategies have many different approaches. We will focus on this work on the practice of those related to comprehension, understanding reading as getting the message out of a text. In relation to that, we have to add that all the given strategies can be related to the previous knowledge of the students (Vygotsky), connecting the new ideas to the information we know and using the given tools to build up our schemata (*scaffolding*, Bruner). We want the students to be conscious of their thinking when using the strategy to help them with their texts, but also we want them to understand the message as the main part of the text (meaningful reading).

The used strategies will be explained later on in this section, having into account that the design was planned in response to the challenges observed and the resources we had. For this reason, Gamification techniques is the first one explained, as it involves the rest of them in an enjoyable activity and motivates students learning.

Strategies are used as a positive approach to reading, developing motivation and participation on the students. As it was stated on the first pages of the work, motivation and feelings are essential strategies on learning as they activate the brain areas related to long term memory.

The theoretical foundations of the used strategies explained on the next section of the work can be seen below:

Gamification

Reading requires focus and effort from the reader, so it is difficult to have the students engaged on reading at first. The use of gamification makes it fun and easy, so students will be more open to read their texts in order to win the game.

Gamification involves many practices that already take place on many schools. It can be done by playing with the words, making some funny connections to keep students attention and make them laugh, changing an explanation into a guessing game… Even double meanings or wrong pronunciation of known words can tell the teacher who is paying attention. It is also a way to open their minds, let them think on a creative way and find connections between their lives and the different subjects.

Playing with the expressions and vocabulary that they have to learn makes the students remember those better, as they will remember the moment and how they felt. Ones more, it improves motivation and participation of the students, making the lessons dynamic and meaningful. Feelings are related to memory, and therefore learning, in a way that the information learnt on a positive environment is more probable to be part of the long term memory as the regions of the brain responsible of emotions are associated to those responsible of memory. (Gratacós, M., 2006)

Furthermore, "effective gamification promotes problem solving and collaboration. Games allow a safe place for failure, since failure is an essential source of feedback and learning. Few players quit a game after they lose, their first instinct is to play again to

figure how to win the game. We want our students to show grit and continue playing even when learning gets challenging or failure happens. [...] Applying gamification to reading, writing, speaking, and listening enriches the learning experience for students and promotes thinking "outside of the box" for both teacher and students. " (Haiken, M. 2017. p. 2)

The selected games can be as simple as a *memory*, where they have to find pairs or remember a specific order. Or more complex such as a board game with different teams who have to struggle mini-quizzes to win a prize. However, we have to be sure that the main goal of the game is the content, so we have to adapt and plan in advance the lessons using this strategy.

In relation to reading, gamification can be understood in two ways:

- The game itself as the target text; questions, clues, rules and instructions, comments of classmates and dialogs in the group. Also the vocabulary used, which might be related to the topic. Here more specific games are included: cards, board games, competitions… One example can be a reviewing game about the unit based on the "Jeopardy", where students have to find the correct answers to the questions, maybe looking for the information on their texts (scanning will be used), guessing a given word on a text (context) or interpreting a given graph (key information and skimming).
- Games used by the students to understand specific parts of the text or to remember expressions. Here more easy games such as comparison, jokes, double meanings, connecting games, puzzle games, etc. will be included. One example might be playing with complex words in a text by dividing them, saying them without vowels, acting them out, use them in a "Time's Up" game… instead of just reading the full text and looking for those words on the dictionary.

Prediction

Prediction refers to making hypothesis about what will the text be about, according to the topic we are introducing. The predictions made on the text are done following different

schemata and should be assessed and changed along the text. Some aspects on the document can give us some clues for the prediction, but first we use more visual inputs, such as covers, images, capitals and bold letters.

In order to work with this strategy, we can give the students some templates with closed questions to guide their work. Predictions can be done also orally, but for beginners writing the hypothesis will help them to have a clearer idea of it (when writing it, we have to reflect on what we want to say and organize our ideas).

By asking the students to predict what the text will be about, mostly at the beginning of the unit, we get them to activate their prior knowledge, encourage them to make a personal connection to what they will be reading, and get them actively involved with comprehending the text's themes (Beers, 2003, pp 74-78). It is then easier to keep their attention and focus on the task to answer the questions they have ask on their predictions.

"The pre-reading strategy allows students to predict what they think will happen in the text as they make inferences, see casual relationships, compare and contrast, practice sequencing, and draw on their prior experiences" (Beers, 2003, p. 94)

After reading, we can answer the hypothesis with statements from the book, in order to prove the students that the information was really there and making it more visual by underlining the text.

Context

Guessing by context is a common strategy in complex texts. It consists on using images, words you know and other visual information of the page to know the unfamiliar words or expressions. It can also refer to guessing the correct meaning of a polysemous word (different meanings) depending on what the text was talking about, where is it published or written and even when, as language evolves with time. It is highly related to the first strategy, as they are the two main tools we use unconsciously when we want to understand a text. Even more, contexts can make an expression change meaning, can make us change from formal to informal or just the opposite and it can make metaphors or examples make sense.

By using context strategies, "students become armed with an inventory of ways to access unknown words to help gain deeper meaning of the text. Without awareness of the types of

context clues, students are at a disadvantage to decipher meanings for themselves. [...] Teaching this skill supports self-agency so students can define unfamiliar words independently." (Glass, 2017)

On one side, the visual information and the published format help readers find out important aspects of the text such as topic, point of view and credibility of the text. For example, if we read a text on a white paper, with no context (is it a magazine, a novel, a school work…?) normally we spend the first paragraphs looking for an explanation of what is the text about. Then, we can focus and try to get the message. However, if the text is on a magazine and it has some pictures around, we can easily identify the topic and we just need one or two lines to focus on the message, the information we will get from the text and what type of information it will give.

On the other side, context can also refer to the text itself: how is the text written. As in the previous strategy, while reading, we can change our hypothesis or readapt out schemata with the new information. This new information is the one that builds up the text and it is organized on a certain way for a reason. In words of De Beaugrade and Dressier (1981):

"un texto *tiene sentido* porque el conocimiento activado por las expresiones que lo componen va activando, valga la redundancia, una continuidad de sentido", y al contrario, "cuando los receptores detectan la ausencia de continuidad, el texto se convierte en un *sinsentido*" (Beaugrande and Dressler, 1981: 135). Cited by Burguet, F. (2014) on *Trampas (12). Sin contexto no hay sentido.*

Questions and previous knowledge

Asking the students some questions, to help them remembering what they already know, before reading the text will help them to connect their previous ideas with the new concepts. It activates the schemata on the students' minds, introducing them to the context and, therefore, allowing them to focus on the key aspects of the text.

Following this strategy, we do not want the students to predict, but to use the information they have form previous studies. They may compare and contrast information, having an active/critic view of the text's information, but they are not asked to make hypothesis, as they are given the topic and the questions will lead them to the information. The main

goal of the strategy is having active students with a will to read; giving reading the importance it has as a learning tool.

Some activities used on this strategy are:

- Introduce the topic and ask them to create some questions before reading. ("On your own", Adler, 2003)

"Asking the right questions allows good readers to focus on the most important information in a text". At the same time, "generating good questions may also lead readers to focus on problems with comprehension and to take actions to deal with these problems." (Texas Educational Agency, 2002)

The aim of the strategy (create on students the will to read) is approached by giving the text a purpose; making it useful, meaningful and easier. The students will read the text looking for the answers and getting, therefore, the most important information from it (we can only find, when we know what we are looking for).

- Ask the students the "comprehension" questions about the text before reading it.

If they know the answers to some or all of them, we can write some notes and then compare them with the text. If they do not know the answers, we can talk about what kind of information is asked, for example:

- If the question is about a person, the students will look for capital lettres, names, or even keywords about the given information.
- If the question asks about a percentage, a date or specific datta, students will read looking for numbers or symbols.

Most of the times, the information is internalized or understood faster, as students ignore the extra information of the text which is not relevant for their research. This makes skimming easier, as we will see later on this work.

Practical introduction

A practical introduction to the topic makes it easier for the students to set their minds and focus on the content of the text (Hands-On science). Practice involve metacognitive strategies and reflections on learning ("Thinking about thinking", Adler, 2003). Through practical experiences, we are setting the context for reading, highlighting the main lines of the text message. At the same time, a practical approach to the topic means making things visual, so new concepts can attach to the visual idea we have and multiple intelligences (Gardner) are taken into account.

A simple example will be a circuits lesson; students already know what circuits are, but performing a practical introduction will set a clear image on their brain, the text will help them to "put words" on that image they have.

Even more, this strategy is highly connected to paraphrasing. As they will have to explain what they have done in the practice using the information they have but with their own words. Paraphrasing is, together with summarizing, one of the key competences that students will have to acquire to understand a scientific text and be able to work with it (Remsen, 2017).

Read and re-read

In words of Herman, E. (2014), "rereading is a key skill in becoming a good reader. Readers need acknowledge when what they read has not made sense to them. When students reread they slow down and pay attention to the words and meanings more carefully."

As adults and experienced readers, we use rereading when facing technical texts or when a paragraph is hard to understand on a text. Sometimes it is because we are not sure of having get the correct message, others it can be because we did not understand anything. Also, it is easier to read the second time, because we read it slowly.

When this strategy is practiced on a classroom, it helps student focusing on meaning. Normally, the first time they read, they focus on pronunciation or speed, so it takes a second reading to focus on meaning and maybe a third one to understand the information. For these reasons, we should use different activities to assure that students read the text

more than one time: cooperative working such as pair reading or peer assessment worked the best on the studied group, as they assessed each other.

We can have different activities working with this strategy:

- Read, rate and reread

This idea is adapted from Beers, K. (2000) and consists on asking the students to read a text once. Then, rate their understanding of the text (1-10) and ask themselves some questions about what they did not understand. This is repeated three times, the questions that are left unanswered at the end, will be discussed in class. The students will have a template similar to the prediction one, as seen in the picture:

	Understanding Rating (Scale 1–10)	Questions	Answers
1st Reading			
2nd Reading			
3rd Reading			

Figure 1. Beers, Kylene. Reading Skills and Strategies: Reaching Reluctant Readers. Elements of Literature Series: Grades 6 – 12. Austin: Holt, Rinehart and Winston, 2000. p. 31

- Reread difficult passages

Rating is not very common on experienced or what we could call "real reading". However, adults use rereading very often. But instead of reading the complete text, we read some passages that we did not understand or did not make sense. Most of the time it is because we misread words or skipped a punctuation mark that makes the difference.

On the school context, we can reread to find out information that we missed the first time reading or in order to understand an explanation that was not clear. If we are using rereading for studying, we should highlight that important word (normally additions or negative forms such as "some", "and" or "not").

Summarize, assess and paraphrase

Summarizing is a way on which we monitor and value our comprehension of the text. "It requires [readers] to determine what is important in what they are reading and to put it into their own words" (Adler, 2003). It also helps us organize the principle ideas and connect them, eliminating the unnecessary information, and it makes easier going back to the text looking for the information we need in a fast overview.

The difference between simple paraphrasing and summarizing is that paraphrasing preserves all the meaning and details, whereas a summary omits details and preserves only the main ideas. However, the learning outcomes are very similar: active engagement with the material, improved memory and understanding and making the idea your own (adapted from Harris, 2014).

Along the story of education, these strategies have been used worldwide with different names. The main reason is that they allow the students to show (not just the teacher and classmates, but themselves) that they understood the reading. It can be done written or orally, but the main idea must be respected: make a long paragraph (or text) short and easy enough to understand it at ones (Keating lessons). The better we understood the text, the more significant will be the scheme or summary, that is how we will assess ourselves to see if we need to reread the information (metacognition).

At the same time, paraphrasing makes it accessible for possible doubts in the future. Making it visual by using a mind-map makes it easier and faster to review. And assessing the reading makes it meaningful. For these reasons it is highly recommendable to ask the students to create their own diagrams, mind maps and schemes, to prove what they know, help them to analyze information and give them different tools to make study significant and simple (learning to learn).

As it is seen, the three strategies are connected and can be done during or after the reading, focusing on each sentence, paragraph or the complete text. The idea of assessing ourselves is asking if we got the message from the text or not and how can we get it. It helps readers to think about thinking and identify their difficulties, finding new routes towards the solution (Adler, 2003).

Keywords or skimming

Skimming is a way to read a text fast and paying attention only to the keywords. However, it is sometimes mistaken for scanning, which is a different strategy, more related to the key information. Scanning is used when we read a text to find out specific information, then, we do not need to read the complete book, just the specific chapter and paragraph that we need and look for the specific content we want. This is what we call scanning the text for information ("Skimming and scanning", 2011).

Skimming, on the other hand, does not give you specific information, but a general idea of what is the text about and the main lines it follows. It is useful for investigations, deciding what text to read, etc. On the classroom context it can be a tool to decide what reference to work with during a documenting phase or having a general idea of the unit when it is introduced for first time.

Ones we have the general idea; we can start reading the text looking for the most important concepts which made us chose the text. There might be words we do not understand, but we will just underline them and try to go on. In science, however, it is common to see that these words are the keywords we need to understand the text, so we cannot get the whole message without them, then we should explain those keywords as teachers before the reading, to enable the students to work autonomously later on.

On this aspect, Shapiro, D. (2006) cited on her article "Science and Literacy - A Natural Integration" some important Pearson's thoughts about the learning of vocabulary and keywords:

> *Part of the science/literacy interface involves teaching students to use the language of science. Pearson advises teachers not to avoid technical language, but also not to focus too much on teaching definitions of words: "Definitions don't make it…If you're teaching the science well, teaching the words will happen naturally." He stressed the importance of providing many contexts for students to encounter scientific language so that they can learn to use it and own it. Scientific terms can be embedded in a hands-on activity, he added.* - Shapiro, D. (2006)

Finding the unknown words and looking for their meaning is also a very used strategy, as it improves vocabulary. The problem is that normally, students forget to place the word back on context when they look for the meaning after reading the text. The result is that

they might understand the text the first time, but when they have to build up a new sentence with the word, they don't know how to do it, so when they try to explain what is the text about they can fail to introduce the new words. Nevertheless, it is a utile strategy when there are specific expressions that are necessary for the unit and must be learnt by hard (such as technical words) and we can ask them to include them on summaries, paraphrasing and other activities held on the lessons.

Skimming allows students to get the main lines of a text in few time, which is useful when reviewing for an exam or comparing concepts. Even on other areas it is a useful strategy as they might have to choose a book on the library, a magazine or a mathematical problem to solve. Having first the main idea can help them to make hypothesis on the text structure and use it to build up the information on their minds in order to understand it easier.

Word attack

Word attack consists on interrogating an unknown word to find out its meaning and use on the sentence. This time, the strategy is working with word reading; decoding skills, where the goal is to understand a word itself by finding out how was it formed.

"Word-attack strategies help students decode, pronounce, and understand unfamiliar words. They help students attack words piece by piece or from a different angle. It includes the use of picture clues, sound out the word, look for chunks in the word, connect to a word you know, reread the sentence, keep reading and use prior knowledge" ("Reading and word-attack strategies", 2003)

Wall of words

Finally, all units will have a word bank with all the keywords of the topic, other words we have learned and important expressions we found out. The proposal for teachers using this strategy is to make this a common "wall of words", even on higher levels, because it gives importance to vocabulary, help us to reuse new concepts and expressions on our writings, relate different texts with similar constructions, etc.

Words' walls are very common on the younger levels and it is very hard to see it being use on higher levels. However, there are several professionals who talk about the benefits of this material in the class. For example, Jennifer Cronsberry (2004) states that "word wall activities encourage active student participation. Gestures, such as pointing to key

words during a lesson, offer visual reinforcement which can be very helpful for students. Word wall activities engage students while they learn key vocabulary, whether it be learning to explain a word, to compare it to other key concepts, or to spell it". On the same document Cronsberry explain some of the benefits of this practice, including "meaningful teaching, visual cues and increased student independence", three values which we want to achieve on the strategies proposed on this document.

The proposal involving this strategy is combining the different subjects and creating a wall of words which includes the expressions learnt in English, Science, Arts... or any other held on the target language. They can be classified according to when to use them, by meaning or by word class by using different colors. The main idea is to have a resource which is "alive"; changing, adding and working with it constantly. Words can be added on any moment or we can select a period and day for each student to add his/hers own, but words have to be useful along the units.

This wall might be used to create activities and games (gamification, see above) to remind the students its utility. It is not just a decorative element in the classroom but a tool we can use when reading, writing or explaining. Therefore, it has to be present on the classroom in a place where the students can see it and are allowed and encouraged to do so when they are working along on in groups (using the vocabulary for their discussions will help them to discuss in the target language).

<u>Things to have into account</u>

In addition to this brief introduction on the different strategies, I think it is important to add the basic rules we have to follow when using them on our lessons based on the Reading Rockets advices about classroom strategies. We want the students to realize how to use reading strategies, what to use them for and how to deal with them. However, they might be seeing them for first time, so all the strategies must be model before we ask the students to use them.

Modeling will help students to build confidence and self-esteem, so that they feel safe to act, because they know what to do. Guiding them through the process and working with them will improve the results and the autonomous working. As I introduced before, self-esteem and autonomy are unconditionally linked to reading, and therefore, learning.

A good model, together with a correct explanation, is what will make the strategies useful, available and utile. It will improve the use of more strategies, such as self-assessment or re-reading (trying to find out why their work is/is not as the given model).

As second language learners, the use of the language is limited mainly to just the school context, making it artificial. Our role in the classroom is changing this artificial idea of the language and offering them a context. Previously on this document is said that the selected texts may came from real documents. This can be difficult, as the majority of the scientific texts are too technical and we have to adapt them to our students' level. However, there are many adapted materials that will work; from documents, to games and videos. Students must feel part of their learnings, so we can ask them to investigate and create their own documents and compare them later on, just as a scientific will do. This is giving a real context to the language and the learnings.

Having a strong connection with the language and the method used is a path towards thinking improvement; we do not want the students to do, but to learn and use the information they are given.

In order to make connections we have to take into account the different levels on our class to adapt our designs, giving the students different opportunities to prove what they learned. Finally, we have to create connections between the school and their social context; families, neighborhood, access to resources, etc.

5. The design

Context

All the proposals of this work are related to the last years of Primary Education. More precisely to the natural science subject of 5th and 6th grade on a Bilingual State School of Palencia. The school follows cooperative techniques as well as integration programs, so those strategies involving group work and interpersonal skills are more successful and skills are developed on this are on both languages. I will deal with literacy inside the science units based on the ideas I introduced on the previous paragraphs. Most of the given texts will, therefore, have a similar topic; Matter and Energy.

The group of students I am working with are 20 native Spanish speakers, having English as their second language since Elementary school. However, a questionnaire showed that they rarely read in English for pleasure or information outside school. They have some magazines from the English class, but most of their English reading is classroom related. This makes it hard to connect with them and make them realize about the utility of the second language, as English seems to be part of the "school world" but not of the "real world". Connecting school and real world is not just useful but necessary for the learning process as it connects their life experiences with the learning and it is easier to build up new knowledge on their previous ideas (Vygotsky, 1978 and Bruner, 1976). At the same time, it is easier for the students to get involved in the learning process and feel part of the project, not just because of the grade. This connection means arguing and learning about their context, so they might start paying attention to some aspects of their environment and build up their connections, hypothesis and new learnings. (Bouillion, L. M. and Gomez, L. M, 2001).

Maybe because of the small connections between *real world* and *English school world*, I found out that one of the most common problems on the group is the lack of vocabulary and expressions. As it was formerly highlighted, some important aspects of the language such as false friends, colloquialisms and technicalities are the main stones on the learning path of the students when reading and writing. They are not used to technical texts and usage of images, graphics and data to support the reading or they are not aware of their reading strategies to apply at a given situation, because of their failing fear (giving the wrong answer). Due to these problems, most of them get stuck on the words they do not

recognize (it can be that they do not recognize the written from even if they know and use the word orally), not moving on with the text and, consequently, not getting the main information or idea of the paragraph.

In order to improve the seen challenges, as there are students from different backgrounds, we are going to work with different levels, thoughts and previous ideas. All these previous concepts are those which build up our schemata (Nutall, 2005); the mental pre-concepts we have on our minds from which we make predictions, connections and relationships between the concepts we have to deal with.

These schemata are built up from experience, so each student has a different one. Even those living on the same area, as they might have different values at home or different personal relationships. Following the inclusive and integration ideas of the school, we will encourage each kid to use their own schemata to build up a common branch where we can all relate the new concepts. This should not be difficult, as schemata have to be dynamic, connecting all the information and changing the previous ideas if needed along the text. Nevertheless, as a class, all the students' thoughts will be valued and the interesting information will be added to others scheme, giving diversity a high value.

At the same time, we have to take into account that reading strategies are connected to the listening and writing competences as well as learning to learn. We can talk about reading an image, a video or even a game, understanding this reading as getting the information that the author(s) wanted to share. Having this in mind, I will work with different text formats, adapting the materials to the diversity of the class: multiple intelligences (Gartner, 1993).

Learning to learn competence is used because our lessons development and final goal will always be content based; we want the students to learn about science, using reading and English for that goal. For this reason, we are asking them to make their own schemes and mind maps, write and read in English, build their own word bank, etc. so that they can see English in context as a useful learning tool. At the same time, ones they acquire the strategies that work best for them, they can use them on many other contexts and languages, helping them to work autonomously and giving them the resources to find solutions for their problems.

Guessing information through context, finding key words on the text, paying attention to difficult or new words and its real use, etc. are some of the mechanical strategies we want them to achieve. Noticing that they already know most of them on their mother tongue, the main aim of the program is to make them realize that they use strategies so that they do it consciously on different areas, leading their learning process.

Developed design

In order to develop the competences listed on the previous pages, the design needed to connect science and literacy and face the challenges of the studied group. The focus was centered on the necessary reading skills which enables students to understand a text, on which the main challenges were:

- No systematic evidence of the reading strategies used
- Lack of interest and pleasure for reading from the students
- Lack of enjoyment on the reading tasks

Trough different strategies and techniques we tried to solve these challenges and improve the thinking awareness of the students. However, most of the times we did not use just one of the strategies but a combination, as all of them rely on previous ideas and attitude towards the information (what do we expect to find in the text). Most of the strategies are present on the Spanish curriculum (2016) on the [Spanish] language and literature, but we are going to integrate this with the literacy aspects of science lessons.

On the following table you can see a brief summary or recompilation of the different strategies that will be analyzed, the main outcomes of each one and the text level it refers to. Also, the moment of reading on which it can be used, following the "Summary of metacognitive strategies by level" table (Israel, 2007).

STRATEGY	OUTCOMES	TEXT LEVEL	MOMENT on which it is USED
Gamification	Meaning, understanding and fluency/pronunciation	Word and sentence level	Planning and monitoring (before and during reading)
Prediction	Meaning and self-assessment	Text level	Planning (before reading)
Context	Meaning	Text level	Monitoring (Before and during reading)
Questions and previous knowledge	Fluency	Text level	Planning (before reading)
Practical introduction (visualize)	Fluency and meaning	Text or sentence level	Planning and monitoring (before reading)
Read and re-read	Meaning	All	Monitoring (during reading)
Summaries, schemes and mind-maps	Meaning and text structure	Sentence level	Monitoring (during/after reading)
Evaluate understating – explain with your own words	Meaning	Text or sentence level	Evaluating (after reading)
Asking out the word (word attack)	Meaning of words	Word level	Monitoring (during reading)
Wall of words / word bank	Meaning and context of the words	Word level	Planning, monitoring and evaluating (before, during and after)
Skimming (Keywords)	Text structure, details	Word level	Monitoring (during reading)

Figure 2. Summary grid of the used strategies

We started with **Gamification techniques** which will include the different strategies, in order to improve the lack of interest and enjoyment of the students. Those techniques were developed progressively; first we started introducing humor on the explanations, then small games and reviewing activities and finally bigger games using the cooperative work of the school.

Two big playing moments can be highlighted on the developed units. One was a "Jeopardy" game with questions and quizzes on different important topics, asking students to paraphrase the text book, which they could use if needed to assure their correct answers. The second one, also in groups and working with roles and interpersonal skills routines, was a "Pasapalabra" (or "Round of words") with different types of introductions to the word: diagrams, fill in the gaps, questions, etc.

The first one took place during the unit, as a helping reinforcement of new knowledge and activating prior ideas that they had to connect. The second one was more complex and was done at the end, as a reviewing activity before the exam in order to organize their ideas and giving the connections to assure they built up their schemata.

Results showed that students were willing to read, looking around the book and using scanning and paraphrasing for their answers. Participation and motivation increased notoriously and those with lower English level, took part and were integrated with the use of the roles cards (speaker). Several comments and arguments among the students were heard and they used the texts for their arguments and data search.

Along the unit, we used the different strategies, introducing them when the students could use it and encourage them to value their works and find out what works best for their learning. The first strategy we worked with was **prediction**, as it is related to the scientific method and it was easier to show the students the need to have a previous thought on mind in order to look for certain information on a text. We made students aware of their thinking process while using this strategy by asking them to write down the predictions and compare them later on with the information form the text.

We worked this strategy consciously with the first text of the unit, as an introduction, focusing on the visual elements and some key words. We asked the students what they thought was the topic according to the most repeated word and the pictures around the text. We asked them what was the main color of the pictures and why and finally we

asked them to find one number and one name without reading. With all that information they had to make their predictions about what the text was about, the most important aspects of the unit and the relation with the title of the unit.

The resulting ideas were very close to the real text, after discussing them and putting them in common, reading the text was easy and the main idea clear. At the same time, as the predictions are made before reading and they are asked not to read it, we will create on the students a will to read by telling them that they can't, as we are assuring them that the answers we are looking for can be found on the text.

	HYPOTHESIS	True /False	STATEMENT form the text
1			
2			
3			
4			

Figure 3. Template example for Prediction

In relation with this strategy, we also introduced the use of **context** as a predicting tool and a visual help to introduce ourselves on the information and make quick connections with our previous knowledge. During the intervention on the school, the main utility of context was as a guide for students on the content questions; using similar expressions and images than those in the informative text to help the students remember what they

are asked. Students read the structure of the question, the images on it and used that information to build up their answers. That made them feel safe and trust on their knowledge, also as we worked on the strategy, they know that they can and should use this contextual information as a reading and writing tool, helping them building up their thinking.

As it was explained on the previous section, context is used to give texts a sense. Working in the classroom we empowered that sense by connecting the information with their social context. Ones it is connected with their real experiences, texts are easier and more interesting to read, as we can make information ours. 100% of the students showed more implication on those texts with stronger links with their life experiences. Also 90% of the students included diagrams and illustrations to help them explain their writings when they were asked to develop one topic on their own words.

In order to analyze and improve the lack of interest or will to read, we used **questions** to activate **previous knowledge** along the unit. We showed the students that they already know a lot of information and they have to improve those ideas with the new concepts.

Two activities took place following this strategy:

1. Introducing the topic and asking the students to create some questions before reading. (Following the "what I know, what I want to know" and after reading "what I learned" ideas). Students were guided if the questions were too poor or moved from the topic, but creativity was taken into account. They shared the questions with their partners and then read the text trying to answer their questions. More than 50% found their answers and integrated the new learning along that they, having it as a base for the rest of the unit, they became experts on that aspect. The idea is that "only seekers find", so they needed to prepare their questions to work with the text.

2. Introducing the topic by asking the students the "comprehension" questions they will have to answer later. First they gave their ideas, using the knowledge from previous experiences and their predictions about the text. When we did not have a clear answer, we talked about what type of word or expressions might we be looking for. All the students gave better answers after reading the text, when the questions had been asked and analyzed in advance. Also, their readings were faster, as they knew what information they are looking for.

From the two techniques used, the second one was the one which worked the best with 6th grade students and the first one for 5th graders. However, both groups had generally more specific and faster responses when the strategy was used.

As we are working with gamification techniques, "Hands-on science" or practical activities are a crucial aspect. The strategy might be considered as **activating prior learning** through games, demonstrations and role-playing in order to visualize the given information.

As we were working with matter and electricity, we asked the students to be conductive cables, moving electrons along a circuit to realize that if the circuit is not closed, the electrons stop moving when they reach the end of the wire. In relation to matter, students were asked to move and place together pretending to be atoms on each state of matter.

Acting out these concepts helped them understand the text later on. They compared themselves with the pictures shown in the book and they explained in their own words (paraphrasing) what is going on inside the cables or the atoms of matter. The results were clearly positive; playing with kinetic and visual intelligences activated different connections on their minds and they could explain the two situations easily.

Now that have given images to the words and placed words to the images, improving interest and enjoyment on the students, we wanted to center again on the systematization of the strategies. In order to make them aware of the existence and use of these tools.

In order to focus on the meaning of the text, getting the message out of the words, we used **read and re-read** strategies. Showing the students that it is normal to read a text more than once to understand the whole meaning. We followed the thinking activity and spoke it out as a model for the students.

We read a paragraph and if something did not make sense or was not completely clear, we went back and ask ourselves "did I read right?", then read back the line and state if we were or not right. Students were told to use it when they read too fast and do not understand it. 85% of the times students reread in a correct way and could understand the message. In those cases, students who still read it badly, the teacher read it for the class giving intonation and paralanguage a higher importance.

In general, after three readings, focusing on certain complex paragraphs, the information is clear and understood. Also, with more readings, memorization is improved and it will be easier to study it.

After the first reading, we can ask questions or rate our reading. On the internship, the rate was done orally.

Once the idea is clear, we can link rereading with **paraphrasing and summarizing** strategies. We used the information on the text, reading it as many times as needed, to reorganize the information to make shorter lines with easier words for us, making the text ours.

Students were so afraid to use their English, that written results were very poor. All of them (except two exceptions) used the same words for their mind maps, having too much information on them and useless connectors which made mind maps useless and not neat. However, orally they were able to paraphrase the ideas they understood and list the main concepts expressed on the text.

Finally, the last strategy used in relation to text message was **skimming**, used as a tool to decide what reference to work with during a documenting phase or having a general idea of the unit when it is introduced for first time.

Results showed that students did not used it previously, they read directly the text without this first overview looking for key ideas. After it was introduced, the research held by the students on the internet were more accurate. They focused on the summaries of the web pages before adding the information to their presentations and they compared briefly the given information to see if it agreed to that one given by the textbook.

Skimming was proved to be useful when they had few time to create a presentation or review before a test. It was a representative majority of girls using skimming to go through the webpages and choosing the best one and a majority of boys using it to quickly analyze the information of the textbook to see if it was similar. Nevertheless, the results were not as good as we expected, as they were not connected directly to the challenges we were analyzing.

For this reason, we moved on towards word level strategies, as we saw that the lack of vocabulary was the main responsible of their challenges: some students thought they

could not afford the text, because they were bad readers and they could not move on when they found an unknown word.

This problem with **keywords** resulted on students not using their word banks, so we decided to give them strategies to guess the meaning of unknown concepts by context, word class and formation, etc.

Word attack had weak engagement of the pupils at the beginning. Their previous experiences with vocabulary and definitions made them skeptical about the real utility of word attacking. However, along the unit, they started to be conscious on the use of the strategy and by the end of the unit some students achieved very good guessing of new concepts. The work was done mostly autonomously after giving them the model on how words are formed. Then, along some lessons, vocabulary questions were asked and they started to show good results. With more practice, they will be able to give better definitions, but right now, more than 50% of the class can guess new words by their formation (which was linked to the prefixes and suffixes unit on the Spanish language subject).

Finally, with all the new words, the plan was setting a common **wall of words** or word bank, visible for all the students and along the subjects. However, we did not have time to do so and vocabulary was just highlighted during the lessons and asked to be added on the individual word banks.

Case study

In order to analyze the real results of the design, we will follow the development of these skills on a specific student from 5th grade.

Laura[2] started with low expectations on herself and poor English level. She does not have access to English language outside the school and her reading skills on her mother tongue are also very low. She has a strong lack of vocabulary and text structure and very low self-esteem regarding her school related skills.

The goals were: improving her attitude towards English language and reading by making it useful and fun; and make her aware of her already developed skills.

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[2] Name has been changed to keep privacy and identity rights of the student safe.

Due to her perseverance and hard work, she achieved very good results on the final tests. However, the most representative improvement was on autonomy. Laura used to be very insecure on her work, but, at the end of the intervention, she started to rely more on her skills, calling for help when questions were not clear.

Gamification and practical introduction were the strategies giving the best results. She worked with her team with good interpersonal skills and good relationship, learning with and from her classmates. The participation in the class was already very good, but it was done mostly in Spanish. With the use of the keywords, she has now started to include some English expressions on her explanations, paraphrasing texts with the help of her working group.

Games, practice and repetition helped her enjoy reading by improving motivation. Aloud reading went better, re-reading when needed and finding out the meaning of keywords using the worked strategies.

Laura followed the given templates and structures, which gave her autonomy and the good results she achieved helped her have a better image of herself.

Skimming, however, did not have any positive effect on her. She uses scanning instead and, therefore, her summaries are not well connected. More practice and instruction is needed for her to realize the utility of these two ideas.

In general, results are favorable and goals are starting to be achieved. Long term expectations on her abilities are an improvement in the word level strategies and a development of the textual structure skills.

6. Conclusion

As a conclusion of the actual work, it can be stated that results are satisfactory; the pupils we worked with developed a better understanding of the test by the use of the strategies and improved their autonomy while reading.

Even though they are connected, the most representative ones are prediction and guessing through context. As we worked more specifically on them and results are favorable. Summarizing is still seen as a work to do, instead of a tool which make studying easier, however, students are getting better at doing it; texts are more precise and take less time. Following the investigation explained on the previous pages, my conclusion is that paraphrasing skills must be improved first, through activities and games and later on, we can think on summarizing, once they have make the information theirs by giving the text their own words from what they have learnt.

Results cannot be conclusive for all the students, but according to our case study and investigation they look very satisfactory. Nevertheless, we have to take into account that these type of activities have long term goals and its application requires more planning and time than other methodologies. From our expectations and results, it has been a good first approach and the students' answers have been very favorable.

Something we have noticed is that these strategies were used crosscuricula and some students had problems also on reading their mother tongue as the strategies and skills were not internalized. This lack of automatic responses, connected to their preconceptions of what they know and do not know about English, results on poor engagement on the texts used. From the study realized, at least three reading levels could be seen among the group:

1. Talented readers, who enjoy it and read for pleasure at home. They read texts faster and they get the meaning easier than their classmates. Also, they can make connections between concepts and retell the reading in short lines with the important information.
2. Good readers, who work hard to get the information from the text and can get the main ideas. Their reading is slower, but didactic; they identify the keywords and explain the main information presented.

3. Poor readers or not interested readers, who do not want to read and found it too hard and useless. Here we can find:

    a. Students who might be talented but do not cultivate their talent, because they found reading boring. However, when they have to read, they can get the message and some important ideas. They tend to use skimming and scanning but not actual reading.

    b. Students who have problems reading, they read slowly and they might have to reread various times to start getting the main lines of the text. They do not read a lot because it is too exhausting and irritating (they start feeling they are not good enough, that reading is not made for them). They do not use the strategies, as they want quick answers and not *wasting* time on them.

With a lot of work done by the students, some of those on the third level, moved towards the second one at the end of the internship, because they were encouraged and rewarded with positive attitudes and expressions showing them they reach high expectations. Gamification and context were the most encouraging strategies on this change. As well, prediction strategies improved the reading of those in the first level, as they could create a "inner-debate" with the text and make it theirs.

From my research I conclude that the best aspect of the strategies is that they can be used on any language, they are universal and they help the students to find out the information s/he needs and work with it. I think all educators should know about them, control them and spend some lessons teaching them to the students on all the grades, adapting the texts and difficulties.

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