

**THE IMPLEMENTATION OF PROBLEM BASED LEARNING TO FOSTER EFL
LINGUISTIC COMPETENCE ON FOURTH GRADERS**

LA IMPLEMENTACIÓN DEL APRENDIZAJE BASADO EN PROBLEMAS PARA
FOMENTAR LA COMPETENCIA LINGÜÍSTICA EN CUARTO GRADO.

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BOGOTA, 2020

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Abstract

This project determines the impact of Problem-Based Learning on fourth graders, using the Communication Language Teaching methodology, with the aim of identifying its impacts on the language skills of English as a second language. The population that participated in this project were 30 students of ages ranging from 8 to 9 years in a private school near Chia (Cundinamarca). As a result of the problem-solving activities applied in class sessions, an improvement in certain language skills, such as increased vocabulary and pronunciation in English was evident through cooperative work in small groups of students.

Keywords: Problem-based learning, language skills, cooperative work, vocabulary and pronunciation.

Resumen.

Este proyecto determina el impacto del Aprendizaje Basado en Problemas en estudiantes de cuarto grado mediante la metodología de La enseñanza del Lenguaje Comunicativo, con el objetivo de identificar sus afectaciones en las competencias lingüísticas del inglés como segunda lengua. La población que participó en este proyecto fueron 30 estudiantes de edades que oscilan entre los 8 y 9 años en un colegio privado a las cercanías de Chía (Cundinamarca). Como resultado de las actividades de resolución de problemas aplicadas en las sesiones de clase, fue evidente una mejora en ciertas competencias lingüísticas tales como, el incremento de vocabulario y la pronunciación en inglés gracias al trabajo cooperativo en pequeños grupos de los estudiantes.

Palabras claves: Aprendizaje basado en problemas, competencias lingüísticas, trabajo cooperativo, vocabulario y pronunciación

Chapter I: Introduction

Problem-based learning is a method which has been used for more than 30 years in different human disciplines, such as medicine, psychology, sociology, and education. (Savery 2006, as cited in Korenic Publicado 2014) defined it as “An instructional (and curricular) learner-centered approach that empowers learners to conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to define a problem”. Also, (Jonassen and Hung 2008, as cited in Korenic Publicado 2014) state that: “The primary goal of PBL is to enhance student’s application of knowledge, problem-solving, and self-directed learning skills by requiring them to actively articulate, understand and solve problems.” According to the previous information, it is assumed that the main purpose of PBL is to provide students with tools to identify a problem and give them the opportunity to solve it by themselves.

Furthermore, at the time of implementing PBL, it is important to consider that the development of communicative competences is inherent to language skills. Especially the language skills, that refers to the ability to understand the linguistic competence completely. Hulstijn, Schoonen, Jong, Steinel, & Florijn, (2012, p. 161) state a process to understand the linguistic competence: 1. Vocabulary knowledge, 2. Grammar knowledge, 3. Lexical retrieval speed, 4. The speed of articulation, 5. Sentence building speed, and 6. Pronunciation. Those steps help teachers to identify the main problems in students at the time of using their linguistic competences. This information relates to the main purpose of this action research, which gives fourth grade students the elements to find their own process to solve problems, not only for a subject but also for daily life too.

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The purpose of our study is to analyze how the implementation of PBL fosters linguistic competence in fourth graders. Throughout the application of data collection techniques on the need analysis, it showed that the students in fourth grade had a lack of linguistic competence when they had to talk or express their ideas in a foreign language.

In addition, this chapter will describe the problem, the objective, the question and the importance of this action research. Following chapters will include the literature review, research design, and type of study, instruments, instructional design and population. Additionally, the pedagogical implications will be explained, and the researches will analyze the data and draw the conclusions. Finally, some possible implications for further research will be explained.

Statement of the problem

The main purpose of this project is to foster Linguistic Competence, especially grammar code, vocabulary and speaking skills through the implementation of different strategies which belong to Problem based learning. We wanted to do this in order to contribute to their personal and cognitive development. Therefore, they were able to communicate and solve different types of situations effectively, not just in the classroom, but in a real context too. Consequently, in this section the researchers will present the need analysis, the statement of the problem, and the research question of the objective.

First, it is important to define what Linguistic Competence is; according to Radford as cited in (Barman, 2012) it is defined as “the product of a species-specific innate language faculty, which is independent of other cognitive capacities.” (p.112). The lack of that

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competence was the main problem we identified in a group of fourth graders. We came out with that conclusion after developing different kinds of observation methods in a class, such as; note taking (Teacher took notes about the behavior of students in the classroom) video recording, (We recorded the whole class to analyzed the behaviors of students, they made mistakes when read) and interviews (To obtain the main perceptions of students during the classes). For example; the problem was evident when students tried to participate or make comments in activities that involve critical thinking using English as a foreign language, like tales' readings in which they had to invent a more logical end to the story. It was evident that students had difficulties at the time to answer or propose solutions, because they lacked vocabulary and grammar structures.

Besides, when they could write or express their ideas in other ways, it was evident they forgot words and the grammar structures they needed to communicate their ideas. On the whole, it seems students' problem was low development of syntax, vocabulary and Linguistic Competences. The previously mentioned problem was identified throughout the application of three observational techniques for collecting qualitative data: note taking, video recording, and the pedagogical exercises in groups of a cooperative manner. First, while analyzing the information collected by note taking during class observation, we came out with different conclusions. First; students struggled too much trying to communicate their ideas in class. Second, they had high difficulties organizing their ideas in order to convey their answers or comments. Third, the pedagogical exercises in groups of a cooperative manner revealed that students with low proficiency, who sit next to students with good proficiency tend to improve their performance in all the activities. To summarize, by the application of note taking, video recording, and interviews it was

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revealed that students struggle with Linguistic competence in the vocabulary, grammar and pronunciation components.

Based on the previously mentioned issues researchers implemented PBL with the proposal to foster the low performance in activities, taking into account that (Korenica, 2014). Says: “As educators, we strive to sharpen the problem-solving skills of the students by giving them assignments which require them to apply the theory behind the subject matter being studied” (par.3). Thanks to problematic situations that the instructor assigns, students have a meaningful learning experience, at the same time, they should improve their linguistic competence looking for solutions in cooperative working through spontaneous interactions.

Research question.

What is the impact of the Problem Based learning methodology to foster fourth graders in their EFL linguistic competence?

Research objective.

To identify the impact of problem-based learning on fourth grade students EFL linguistic competence.

Specific objectives.

- To follow each step of PBL cycle when implementing the lesson plans
- To design activities in order to develop the four main skills (Listening, writing, Speaking and Reading)

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Rationale

It is important to mention how we became interested in this topic, the benefits or contributions this study can provide in these three fields: education in Colombia, education in the community (school) and education for students. The implementation of Problem Based Learning (PBL) into Communicative Language Teaching (CLT) classes to promote student's linguistic competence is an important study for the community we are working with. The existing literature and some studies that have been developed related to our study will be discussed in this section. First, the main reason why we were interested in this topic was because of the results we obtained by developing a needs analysis exercise on a private school in Chia, Colombia. We could identify that students showed a low development in their linguistic competence in English, such as grammar, vocabulary and several problems with their pronunciation when reading. Therefore, according to the observation during the Needs Analysis, we could say that the possible causes of student failures are due to not having enough time in class to answer questions, practice or develop the different challenges involved in learning a second language. Secondly, by the application of this research project, education in Colombia, in this school and for students was benefited in the following way: First, we consider that through the application of this methodology, education in Colombia will be useful, because the students who participate in this research could address problems and they would be able to generate alternatives to solve them. This

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way, students would be capable of examining situations or pieces of information to communicate their ideas effectively in order to solve real life issues. Second, the school will be benefited with this research, because probably throughout the implementation of Problem Based Learning, students would be able to find solutions to many situations, not just in real communication, but also in other subjects that bring their own challenges.

For the next part, we present documents and surveys made in some studies. CLT activities are implemented into the classroom in order to promote students' PBL and how our study could contribute with the existing theory and literature. On the other hand, the importance of our project in the existing theory and literature lies in offering an analysis about how the implementation of CLT activities can impact fourth grade students' problem-based skill in a private school, nearby Bogota (Chía). Overall, PBL and CLT activities have been carried out into the classroom with a view to develop problem solving in students and the way our study enriches them is mentioned. In brief, by implementing CLT activities in the classroom, one of the possible effects could be the development of students' linguistic competence. In this document the way we became interested in this topic, the benefits this study has.

Chapter II: Literature Review

According to Salazar (2015) “Linguistic Competence is one of the most important elements that a learner needs to develop to acquire EFL; because it is essential to keep a good communication and socialize with other people” (p.8). In this case, linguistic competence involves different abilities that contribute to learners in solving specific situations. It is fundamental to having key characteristics that foster linguistic competence; use different vocabulary in real situations, interactions to share ideas or opinions, and proper grammar utilized among others. All these aspects need to be considered to solve problems, for students to employ linguistic competence and communicative language properly. Our aim is to promote the construction of knowledge and linguistic competence development as a group to support every student's learning process. In sum, linguistic competence develops abilities in a foreign language into the classroom through the solving of specific situations given by the instructor.

Taking into consideration the previous concept, there are methods, techniques and theories to foster linguistic competence in students. Some authors have suggested certain methods to assist teachers whose aim is to work on the development of a foreign language, specifically on linguistic competence. In the event of selecting suitable methods, we found that problem-based learning (PBL) focuses on learning through difficult situations into the classroom, and communicative language teaching (CLT) is about the ability to have interaction among classmates; thus, it leads to support linguistic competence. Furthermore, Harmer (2015) states that “these methods make a point that one of the pedagogical actions to interact among students provides scenarios where they practice which would lead to foster abilities” (p. 87). Regarding this, there are some studies that support the student's

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learning process focusing on problem based learning and communicative language learning.

In this case we decided to apply three principles which uphold the theory to assure the thesis statement. We present the concept with Linguistic Competence through Problem-Based Learning and communicative language teaching, which improve three important factors; primarily, students learn to solve problems; second, students learn better working together than alone; third, they are able to share their opinions. Therefore, it is essential to describe and identify these concepts that give clarity, help us to apply and support our research project. This chapter has three sections. The first part shows how the implementation strategies of PBL would impact linguistic competences. The second part is about how Problem based learning works harmonically into the Communicative Language Teaching approach depending on their specific characteristics. Finally, How the aspects of CLT would foster the Linguistic competences for English language learners.

How Problem- Based Learning fosters the Linguistic Competences

As the main objective for this research project is to foster linguistic competence using Problem Based Learning (PBL) in fourth graders, we are going to consider the definitions and perceptions about this method from some authors and the relation with Linguistic Competence. In the following paragraphs, we are going to briefly describe the main characteristics of PBL and CLT in order to illustrate the relation between these concepts.

First of all, we have to define the main concepts as Problem Based learning (PBL) as a method and Linguistic Competence. Therefore, PBL is defined as the

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instructional method in which students learn through facilitated problem solving, and in which the main objective is to put the students at the center of the study, as Hmelo & Silver (2009) states:

“Students work in collaborative groups to identify what they need to learn in order to solve a problem. They engage in self-directed learning (SDL), then apply their new knowledge to the problem and reflect on what they learned, and the effectiveness of the strategies employed” (p.7).

This previous assumption describes in a perfect way the purpose to achieve in our research project and what we expect our students to work on solving difficulties addressing to specific objectives applying their knowledge.

Secondly, linguistic competence definition for this chapter is retrieved from the Common European Framework of references for languages (2001), which states “Linguistic competences include lexical, phonological, syntactic knowledge and skills and other dimensions of language as system, independently of the sociolinguistic value of its variations and the pragmatic functions of its realizations” (p. 13). These are the skills we wanted to foster in students applying PBL, that is why in the succeeding paragraphs we established how this method would help to impact on them through their learning path.

One of the relations we could establish between PBL and the Linguistic competences is the “communication”, because this is one of the most important requirements for the application of this method, just as Valesquez (2018) states: “Critical thinking, Collaboration, Communication and Creativity are the 4C's present in PBL that help students to succeed in life” (p.2). PBL is well known as a method where students have

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to work in groups and the interaction among them is essential, that is why this method develops the communicative competence as Lehman (2007) states: “a given person may be competent to different degrees depending on the communication partner he is interacting with”. (p.16). For that reason, the learning input depends on the communication among them, in this case, the learners should be able to use a target language to achieve the goal. In brief, this demonstrates how PBL affects directly the communicative competence, due to the multiple situations where students have to assume communicative roles to share their contributions.

Moreover, another important linguistic competence that we consider is impacted by the application of PBL is the **lexical competence**, and being more specific the vocabulary increasement. That is supported by Capraro, & Capraro (2015) when they affirm that “Introducing new vocabulary words through STEM PBL helped students to connect new vocabulary words with imagery in a concrete way.” (p. 72). Furthermore, the PBL method requires the establishment of scenarios, in which the students have to be given a specific vocabulary and based on it learning through problem solving activities. This is fundamental for the learning of English as a L2. According to Soodeh (2012), who states that: “lexical ability is one of the prerequisite skills for L2 and foreign language literacy. In other words, vocabulary knowledge determines the extent to which the learners have commands over” (p.558). In brief, the relation between the PBL and the Lexical competence is evident, because both complement each other in the way that the first stages of PBL implementation require the learning of specific lexis in order to give basics to start communicating among learners and the teacher.

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For this action research, this is the issue to focus on, the progress and improvement in fourth-grade students' linguistic competence, in which they would understand and make an unconscious process on their minds, this process allowed them to solve a problem related to the English language. To conclude, the implementation of new methodologies to improve a foreign language in students, is one of the most important objectives to achieve by teachers in this century. That is why we consider that through the application of PBL, it is possible to foster linguistic competence and motivate students to engage with the responsibility for their own learning.

Problem-based learning And Communicative Language Teaching.

This research project is about the impact of PBL in linguistic competences of fourth graders, however we are based on a specific approach (Communicative Language Teaching) which defines some guidelines to carry out each class. This construct describes the similar aspects which allows working with the CLT approach and PBL method harmonically. Below, we defined what CLT is about, then, we presented some characteristics of the approach and the method already mentioned, based on that, we established their relations, leaving evidence how they could be used to foster successful EFL classes.

We define CLT based on Rhalmi (2009): "Communicative Language Teaching (CLT), which is an approach to the teaching of second and foreign languages, emphasizes interaction as both the means and the ultimate goal of learning a language." (Par, 1). This means that CLT helps to develop social interaction, in which students could learn a foreign language easier. Also, this approach is a way that students can practice more dynamic and interesting activities for them, CLT could contribute to meaningful learning during the classes.

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We consider PBL and CLT to be functional, the communication among students is important, because they find solutions to the problems and complete the activities assigned in class. According to Eisenring, Mohammad & Margana, Margana. (2019) : “the collaborative exchange of thoughts, feeling, or ideas between two or more people, resulting in a reciprocal effect on each other” (p.49). The previous idea is supported by (Rao, 2002, as cited in Ochoa, et al. 2016,) who said that in CLT “communicative activities include exercises characterized by student-to-student interaction with little or no monitoring of students' output by the teacher” (Par. 3). Thanks to the requirement of the CLT is the interactions between students, and learners among teachers. The relation with PBL is essential, because the necessity of collaborative working which is demanding in this method. In brief, the interactions in the approach (CLT) and the method (PBL) are fundamental in the lesson planning and application of classes.

Another characteristic that CLT and PBL have in common is: “They typically describe situations or phenomena set in real-life contexts, which require students to resolve the presenting issues” .(Hmelo-Silver, 2009, as cited in Sockalingam and Schmidt, p.6,2011,) As they make evident, the setting of a specific scenario gives the students the context to apply the theory in semi-real exercises. In the same way, Richards (2005) explains in one of the steps to planning a class implementing CLT that students practice using new structures in a controlled context through speaking exercises. Taking those authors in mind it is important to create a context in which they can develop activities applying theory into exercises, which represent possible situations in real life.

In conclusion, Communicative Language Teaching is an approach, which demands the creations of teaching environments, where contextualized activities are one of the

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principal components, and the interaction among the participants is mandatory. In the same way, Problem Based Learning is a method which needs the same requirements to be successfully implemented like a specific scenario where students would develop a series of activities in collaborative and communication work are essential. That is why the mix of CLT approach and PBL method could give contributions to the development of linguistic competences in our studied population.

Communicative Language teaching fostering Linguistic competences.

One of our objectives for this project is to create classes with the characteristics that CLT demands in lesson planning, and to achieve an impact in the linguistic competence on fourth graders students in some ways. Therefore, in this construct we show some definitions and concepts from previous studies, and articles that define those main concepts as we establish some relations between them. According to the previous statement, we present the definitions of Linguistic competences and Communicative Language Teaching in order to clarify concepts. Later on, we indicate some characteristics that complement each other and we establish a coherent relation among both.

We have to define clearly what we understand by Linguistic competence because the impact of those are our main objective. Hence, we defined again and from a different view, what linguistic competences are. Based on Pavličević-Franić (as cited in Slovacek, 2014): “it is acquisition of linguistic language at the level of grammatical norms or standards. It means that is connected to normative grammar” (p.109). The previous definition extends our understanding of CLT because this makes us take more importance to the grammatical part of the language instead of the spontaneous use of it. In short, we

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can consider the Linguistic Competences as all the components that someone has to take in consideration to acquire and use rightly a language.

Communicative language teaching is an approach that is fundamental in our project, the communication plays an important role in human life, as the process of constructing meaning that involves different abilities when students interact. In Fact, as mentioned by (Richards & Rodgers, 1982, as cited in Obeso, 2015), "Communicative Language Teaching is an approach which conceives language as communication" (p.73). This quotation established a direct connection between this approach and the Linguistic competence, due to this is the main objective of the communicative purposes of CLT.

Additionally, about the fostering of linguistic competence, Savignon (2017) states: "language communication of course takes both oral and written forms and develops in one or more languages wherever social interaction occur" (p.76), This means that in the development of linguistic skills and in the learning of a second language, it is important to take into account all the components that help develop oral and written skills, in this case the importance of the social field that directly influences in the development of these skills. Moreover, the interaction among the students, develop their abilities to complete the activities designed by the teacher, this promoted the foreign language communication among the participants, allow them to express their ideas and feel comfortable using their target language, leading to boost their linguistic competence. According to Obeso, (2015): "the interaction is the activity that socially attaches individuals, for instance, a communicative activity in a language teaching class" (par,14). In brief, the students would be able to change their opinions with their classmates and develop the activities, in which this is a positive contribution to develop in linguistic competence skills.

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In summary, through the development of this chapter, we could identify some relations among the three main concepts which govern this project CLT, PBL and linguistic competence. Those characteristics are the contextualization and the social interactions. We could observe that one of the requirements of the implementation of CLT demands is the contextualization of classes in which learners could develop free communication among them and the teacher. This characteristic is visible also in PBL in which the establishment of scenarios to focus on the students in a problem is one of its most important stages. Additionally, the contextualization of activities in class, because it is a characteristic of CLT classes and a strategy in PBL method, facilitates the assimilation of linguistic competences. Also, we found that in both CLT and PBL the social interactions are determinant in the process of teaching, and it is because this component is completely necessary in the planning of CLT classes. As well, interpersonal communication, which is a component of collaborative work when PBL is implemented, is essential for the problem-solving process. All this in order to develop communicative competence, more specifically, the communicative competence. All the relations can be briefly observed in the following diagram:

Figure 1. Constructs' relations.

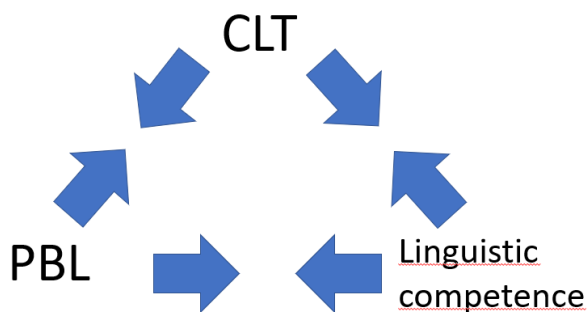


Figure 1. Constructs' relations. This figure shows the relation among the main concepts of the research.

Chapter III Research Design

This Action research represents a challenge because of the implementation of Problem Based Learning in EFL classes to foster linguistic competence. There are many aspects to have in mind to apply this method; therefore, this chapter covers a description about the design of this action research, which includes the type of study, the instruments and methods we use to collect data, which are explained in the following section. In addition, this paper has a clear description of the population and context we work with. Finally, the pedagogical implementation which contains the chronogram of activities we are going to develop during seven sessions applying the approach, methodology and methods we have chosen. In brief, we are determining the guidelines, in order to clarify the way of implementation of our instruments and techniques and the method we are going to apply in our project.

Type of study

We consider our project as an action research according to the following definition:

Action research is about two things: action (what you do) and research (how you learn about and explain what you do). The action aspect of action research is about improving practice. The research aspect is about creating knowledge about practice. The knowledge created is your knowledge of your practice. (Mcniff & whitehead, 2009, p.12)

According to the above, it is important to highlight the fact that doing research leads us to think about what we do and what we can do in the development of these types of

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practices that contribute to the improvement of educational quality in students and teachers. Take contexts into account, the possible data we could get from this research which cannot be numeric results, we reflect on our project as a qualitative research considering the following definition. According to Hancock, Ockleford & Windridge (2007):

Qualitative research is concerned with developing explanations of social phenomena. That is to say, it aims to help us to understand the social world in which we live and why things are the way they are. It is concerned with the social aspects of our world and seeks to answer questions about: Why do people behave the way they do? How opinions and attitudes are formed? How are people affected by the events that go on around them? How and why cultures and practices have developed in the way they have? (p.7). Those questions are extremely important to understand what the possible causes of the low performance are in the linguistic competence, and how we could treat the problems we have identified.

Data collection Instruments.

About the data collection, the techniques that we chose to use during the implementation of this action research would be: note-taking format, video recording and semi-structured interviews; those techniques are going to be explained and supported in the following paragraphs. Note taking is an observational technique in which the main purpose is to identify features that help to recognize a specific problem in a group. According to this, Gillies (2017) states:

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your notes become the visual representation of your analysis of the source speeches. The notes must be at least as clear (to you) as the analysis preceding them; otherwise the analysis is wasted, and usually, the notes will be clearer in structure than the original speech, so that the interpreter can easily transmit the same message to the audience (Gillies 2017, p.9)

In other words, taking notes helps to understand and find features that allow interpreting the main problem and, in this way, analyze those findings to start searching possible solutions that would improve the process.

On the other hand, about the video recording, Tessier (2012) states “The advancement of technology has provided an alternative to overcome these problems: working directly from tape recordings (i.e., digital sound files) or video files.” (p.452). According to this previous citation, it is possible to assume that nowadays the use of technology to help find problems on investigations are very important, that is why the use of audio recording would support the findings and help the researchers to analyze the context in which the project will be applied. Also, this technique will be useful to gather more detailed information from the classes in order to complement the assumptions of the research.

Context and Population.

The population we worked with is located in Chia (nearby Bogota) in a private school of medium social strata. This research project is focused on English class of fourth grade, there were 30 students, between 8 and 9 years old. The classroom is divided into 11 boys and 19 girls, seating in couples. Most of those students have low development of

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linguistic competence in English language, which is evident when the teacher makes them answer simple questions. They seem nervous and upset with the correct use of vocabulary or grammatical structures to express their ideas. According to the previous assumption, those primary conclusions are the results of the application of observational techniques during the needs analysis.

Ethical Considerations.

According to the National Education Ministry, it is fundamental to mention that we are going to respect and protect the integrity of our students who took part in the investigation. First, we asked for permission in the school to admit us as researchers teachers and carry out the research with their students. Second, informed the student's parents by a consensual permission in which we explained what the purpose of the investigation was and why we decided to work with those students. It is important to clarify that they were not obligated to participate or consent to enroll in this research.

Pedagogical Implementation.

For the pedagogical implementation, it is important to consider the aspects involved in this stage, which guided us in the way to fulfill our objective. According to Lyn, (2005):

“In the previous century education was monotonous, due to the teachers being in front of students giving a speech, in which students listened without giving opinions, they were only made to listen and follow instructions, this was a strategy that caused difficulties in English as a foreign language” (p.297).

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Taking this into account, teachers and institutions decided to use other strategies, methods and approaches to implement into the classroom, the idea of fomenting this method consist of augmenting student's skills. The purpose of this section is to reflect upon the benefits that offer problem-Based Learning as a method and Communicative Language Teaching as an approach focused on fostering linguistic competence (vocabulary, grammar, listening, speaking, reading and writing). All in all, this approach and method involve interaction among students to solve problems and at the same time increase their learning possibilities to use linguistic abilities into the classroom.

Subsequently, for the class development, we implemented the Problem-based learning (PBL) method in our project. According to Serhat, (2020)

Problem Based Learning is a model that is suitable for pedagogic activities, therefore is an excellent methodology to help students in the analysis of difficult problems. Besides, it alludes to exploration among students to solve the obstacle in their academic process. (p.267)

In other words, students express their possible alternative through linguistic competence, additionally PBL gives opportunity to find possible solutions to the problem in group work. Having this in mind, the researchers found this method suitable for their project proposal because it helps to have a better understanding about how to solve problems to encourage students to use their linguistic competence. This means that learners do a strict process of analyzing, understanding and debate of the situation to take appropriate solutions. In brief, Problem-based learning was adapted to fulfill students'

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needs and foster their learning process. Thus, through the implementation of PBL, students are able to improve their grammar and use of the language among others.

On the other hand, we also resolved to employ a Communicative Language Teaching approach as we considered it is fundamental to develop communication or interaction in a second language. In this approach, students need to work together and have interaction among them to express their opinions and their points of view to solve the common problem. According to Ochoa (2016):

Communicative Language Teaching (CLT), is a support tool to learn EFL because designing different tasks for students to interact and share their experiences and ideas; this pedagogical intervention is aimed to involve students in a real communicative environment using the target language (English), in order to foster student's language learning (p. 153).

Based on the previous information, we decided selecting this approach because it works harmonically with our method (PBL) and it addresses our research objective. This proposal is aimed at involving students in their own English learning process to reevaluate their previous assumptions, we found that PBL and CLT are suitable tools that encourage and foster the use of linguistic competence in the foreign language. Moreover, we designed a series of seven lessons with general topics, based on problem solving situations, also we included worksheets of vocabulary, grammar, writing, speaking and reading that could be interesting for the students. To sum up, based on the topics already assigned and the implementation of different activities along with the sessions, those activities were created according to the school's curriculum, the students developed different tasks that include grammar, reading,

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writing, vocabulary and speaking assignments, in order to foster their linguistic competence.

Also, in this part of the chapter information can be found about the method we chose, its definition and how it works. Problem Based Learning can be defined as an instructional method where students learn by solving challenging, open-ended problems. Therefore, students apply previous knowledge and acquire strategies and new ways to state a problem. According to Shelagh. Gallagher, William. Stepien, Hilary Rosenthal (1992) “Problem-based instruction is designed to provide students with a guided experience in solving an ill-structured problem. All learning in problem-based instruction stems from students’ initial questions about a problem situation.” (p. 1). Take this into account, we selected to implement PBL because students analyze and explore a specific situation, also they practice their linguistic competence through debate in groups. For its functioning, it follows a cycle that is easy to comprehend in the following image focus on the theory of Major & Palmer (2001)

Figure 2. Cycle of Problem Based Learning.

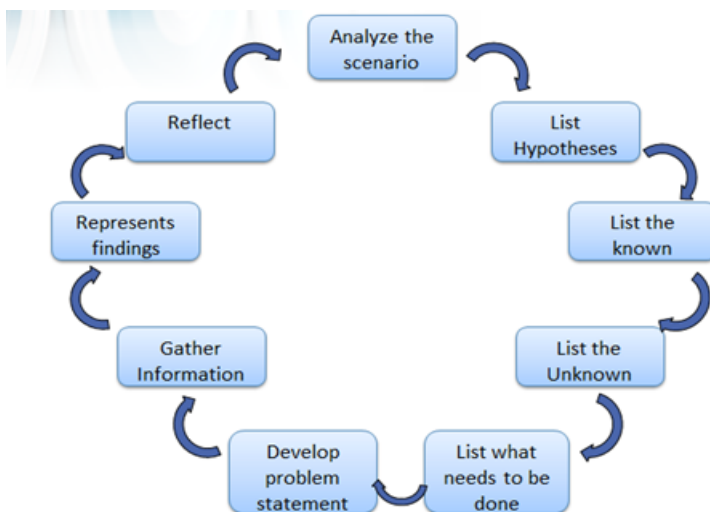


Figure 2. Cycle of PBL. Those are the 9 steps to implement PBL method.

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Here, it is important to divide the population in groups. In that sense they can work together to explore the given problem, that is the first step of the PBL cycle. Then they will make a list with all the concepts they probably know about the scenario (The problem), subsequently they do a list with all things they need to do to troubleshoot the problem. This list is going to be organized in a timeline, in that they know what they have to do and follow a specific sequence: recognize the activity that they have to do first in order to get the results they want. Using that list, they are going to identify all possible solutions to the problem, and it is useful to have another list with things the group does not know to research, then perhaps with external resources or the instructor. Next, they write a report about the problem, that must contain all what they have done and how they got the answer for the problem. Finally, in a small presentation they are going to defend their conclusions and reflect about weak points they can improve.

Generally, this is the cycle that is followed when Problem Based Learning works as the main focus in any kind of research project. As we can see in the following chart, the 7 lessons we are to apply to our students.

Table 1.

Organization of classes and topics to implement.

Session	Topic	Objectives	Components of PBL.
1	Middle ages. Vikings	Learning objective: To understand the problem scenario in order to create different hypotheses.	WARM-UP: Students develop an introductory activity 1 Analyze the scenario: Teacher gives students the scenario where they are going

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		<p>Teaching objective:</p> <p>The teacher will be able to introduce the topic and create a scenario.</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording · We will use note-taking. · We will use interviews. 	<p>to work about middle ages, without any explanations about simple past tense and past continuous</p> <p>2 List of hypotheses: Teacher presents them the station, in which they are going to propose different solutions to the situation.</p> <p>3 List of previous knowledge: Students will be taken to another station into the classroom where they have to list the information they know about middle ages.</p>
2	Middle ages	<p>Learning objective:</p> <ul style="list-style-type: none"> -To comprehend the problem -To provide possible solutions taking into account the tools they can use in order to get to the main solution. <p>Teaching objective:</p> <p>The teacher is able to supply materials to students.</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording * We will use note-taking *We will use interviews. 	<p>4. List the unknown: Students will read information about the curious givens of Vikings; they can underline new information for them.</p> <p>5. List what needs to be done: Students will write in a concept map the main information that they need into the class with proposals that expand their knowledge. Like Verbs in past and Vocabulary about trips.</p> <p>6. Develop the problem statement: Students will present to the instructor what they understand about the problem and how to solve it.</p>
3	Middle ages.	<p>Learning objective: Students will be able to extend information and discover the</p>	<p>7 Gather information: Students will be given tools to find more information at this</p>

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		<p>proper decision to solve the problem.</p> <p>Teaching objective:</p> <p>To create tools and material for students</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording *We will use note- taking *We will use interviews. 	<p>point, students will be creating their text summarizing the solution.</p> <p>8. Represents findings: Students will present to the class their possible solutions following some questions.</p> <p>9. Reflect: Students will have an interview one to one with the instructor. Here they will answer some questions about how their experience was during the process.</p>
4	Camelot's Kingdom	<p>Learning objective:</p> <p>Students will be able to identify different components of solving the situation.</p> <p>Teaching Objective</p> <p>Teacher will be able to introduce the topic and create a scenario.</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording * We will use note- taking. *We will use interviews. 	<p>1 Analyze the scenario: Teacher gives students the scenario where they are going to work about Camelot's kingdom, without any explanations about simple past tense and past continuous</p> <p>2 List of hypotheses: Teacher presents them the station, in which they are going to propose different solutions to the situation.</p> <p>3 List of previous knowledge: Students will be taken to another station into the classroom where they have to list the information, they know about Camelot's kingdom</p>
5.	Camelot's Kingdom	<p>Learning objective:</p>	

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		<p>To comprehend the problem To provide possible solutions taking into account the tools they can use to get to the possible solution.</p> <p>Teaching Objective</p> <p>Teacher is able to supply materials to students.</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording *We will use note- taking. *We will use interviews. 	<p>4. List the unknown: Students will read information about Merlin’s life and king Arthur</p> <p>5. List what needs to be done: Students will write in a concept map the main information that they need into the class with a proposal that expands their knowledge. Like Verbs in past and Vocabulary about rings</p> <p>6. develop problem statement: Students will present to the instructor what they understand about the problem and how to solve it.</p>
6	Camelot’s Kingdom	<p>Learning objective:</p> <p>Students will be able to extend information and discover the proper decision to solve the problem.</p> <p>Teaching Objective:</p> <p>To create tools and material for students</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording · We will use note-taking. 	<p>7 gather information: Students will be given tools to find more information about Camelot’s kingdom. At this point students will be creating their text summarizing the solution.</p> <p>8. Represents findings: Students will present to the class their possible solutions following some questions.</p> <p>9. Reflect: Students will have an interview one to one with the instructor. Here they will answer some questions about how their experience was during the process.</p>

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		*We will use interviews.	
7	Greek Gods	<p>Learning objective:</p> <p>Students will be able to identify different components of the situation.</p> <p>Students will foster their oral skills and understand new vocabulary related to the actual topic “Greek gods”.</p> <p>Teaching objective:</p> <p>The teacher will be able to introduce the topic and create flashcards about the Greek gods.</p> <p>Instruments:</p> <p>* We will use video recording</p> <ul style="list-style-type: none"> · We will use note-taking. <p>*We will use interviews.</p>	<p>1 Analyze the scenario: The teacher gives students the scenario where they are going to work about Greek gods, without any explanations about past continuous and prepositions of place.</p> <p>2 List of hypotheses: Teacher presents them the station, in which they are going to propose different solutions to the situation.</p> <p>3 List of previous knowledge: Students will be taken to another station into the classroom where they have to list the information they know about Greek gods.</p> <p>4. List the unknown: Students will read information about the power’s givens of the Greek gods; they can underline new information for them.</p> <p>5. List what needs to be done: Students will write in a concept map the main information that they need into the class with a proposal that expands their knowledge. Like Verbs in past continuous and Vocabulary about Greek gods.</p>

Table 1.

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In conclusion, we are going to gather information from fourth grade children during seven sessions of EFL classes, implementing the PBL and its steps, using note taking, audio recording and social organization of the classroom as techniques of collecting data. That information is going to be qualitative, which means that we cannot analyze it numerically but we have to identify other aspects, such as the behavior of students, their opinions and attitudes, which could affect their results in their linguistic competence.

Chapter IV: Data Analysis and Findings

This research project aims to identify the impact of Problem-Based Learning on fourth graders' EFL linguistic competence, in a non-bilingual private school. This research was developed through the implementation of eight lesson plans designed by the researchers, taking into account the Presentation, practice, production (PPP) mode; as Dedduang (2014) states: "The aim of a PPP lesson is to teach a specific language form – grammatical structure, or the realization of a particular function or notion." (par, 4). Additionally, we used three observational techniques to collect information about the features in the students' process.

This proposal was developed because students demonstrated a lack of certain linguistic competences such as oral defense, listening and reading. Besides, they lack vocabulary and made mistakes in pronunciation when they read; consequently, they cannot produce the right sentences. Taking this into account, the researchers implemented the Problem Based Learning cycle which consists of 9 steps that are mentioned in Davies et al

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(2011): “Analyze the scenario, list hypothesis, list the known, list the unknown, list what needs to be done, develop a problem statement, gather information, represents findings and reflect.” (p.607). The researchers started and finished this cycle every three lesson plans to find evidence of improvements in listening, reading skills and oral defense.

Therefore, the instruments that we used to collect data were: Note-taking to identify students’ specific problems into the classroom, and allow us to analyze behaviors and their inputs; semi-structured interviews in order to identify students’ points of view and assumptions about the lessons; and video recording to study the process of PBL during the activities. Furthermore, those instruments helped us to explore deeper into some specific situations that were not seen during the classes. The information collected was interpreted based on The Grounded Theory; consequently, the results let us answer the following research question: What is the impact of the Problem Based learning methodology to foster fourth-graders EFL linguistic competence? Finally, by using “triangulation as a tool to analyze different sources of data collection” (Heale & Forbes, 2013, p.167), we could connect the evidence compiled during the classes. First, we gathered some information from the video recording; second, we compared it with the data collected from the note taking; third, we confirmed that, semi-structured interview allowed us to know, and obtain information about what students learn in each class.

Additionally, with the purpose of presenting the data in an organized way, researches coded each piece of information having in mind the type of instrument and the session number, for example: Session number (SS), Semi Structured interview (INT), video recording (VR), Note-taking from video recording (Nt) followed by the student code (ST) or if the teacher makes the comment (T). For instance: SS1, VR1, ST1 such as “session 1,

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video recording 1, student 1”; with the aim of working and classifying the data with its corresponding categories.

Overall, data collection allowed us to identify certain patterns in our class sessions among the instruments proposed, and analyze data by triangulating them. As a result of the previous process, we established the following categories: the first one is about the students' lack of vocabulary and the second one is about pronunciation mistakes when reading. These two categories contribute to identify the impact of implementing Problem Based Learning to foster students' linguistic competence.

Dictionary as a tool to increase vocabulary.

When a person does not know enough vocabulary, the capacity to communicate their ideas decreases, as Alqahtani (2015, p. 22) says: “vocabulary knowledge is often viewed as a critical tool for second language learners because a limited vocabulary in a second language impedes successful communication”. In fact, this is the case of students of fourth grade from a private school in Chía, Colombia, who do not have enough vocabulary in EFL, to express their ideas or to develop any other activity that requires vocabulary use in this language. These particular cases were evident in classes when students tended to ask the teacher about the words they did not know and the educator asked them to look for the words in the dictionary.

Nevertheless, during the fourth step of Problem Based Learning, called “list unknown”, implemented in the second, fifth and seventh classes, students were given different tools like online translators and physical dictionaries to find and acquire new

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vocabulary about a certain topic with the purpose of improving their English skills. This could help foster their level in linguistic competence by themselves, as Genc (2015, p. 25) says: “Resourcefulness for an autonomous learner means to gather and assess the internal and external resources needed for a learning experience”. This means that students need additional tools as dictionaries that allow them to enhance their learning experience, thus being more autonomous and having a richer process for each of the learners, as Tavakol et al. state in their article (2003): “The basic premise in PBL is that the students take the major responsibility for their own learning” (p.110). The researchers studied how those dictionaries as tools fostered students' linguistic competence, and enriching vocabulary using PBL methodology because it increased the capacity of learning EFL.

Following, we are going to present some evidence about the lack of vocabulary on specific moments of the classes, when the teacher gave dictionaries to help them and how students improved their target language, that issue with the vocabulary thanks to autonomous work and dictionaries as a tool in class.

In the first piece of evidence from a note-taking, the students asked the teacher about the meaning in English of the vocabulary. Additionally, students tried to complete the activity filling the mind map with words that the teacher gave to them. While students worked in a small group, the teacher passed for each teamwork and observed that some students had a dictionary but they did not use it and they wrote some words with mistakes, it is possible that they mixed their language in the writing activity.

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Evidence 1

DATE: September 17th	PROJECT NAME: The Implementation of Problem Based Learning To Foster EFL Linguistic Competence On Fourth Graders		TYPE OF RESEARCH: Qualitative research SS1, Nt1	
TIME: 110 minutes	RESEARCH NAME: Elizabeth Díaz, Brayan Castro.			
ACTIVITY	ENVIRONMENTS	INTERACTIONS	OBJECTS	USERS
4. Design a mind map 5. Write what they already know about Vikings	Divided in two groups. One group work on a classroom corner, and the other on their desks	<ul style="list-style-type: none"> • Students have difficulties to write the verbs in the mind map and constantly ask the teacher for words • Students had dictionaries but they did not use it • Students try to write the verbs in Spanish or with spelling errors. • Students asked the teacher about the vocabulary. 	Cardboard, markers,	Teacher and students

In this activity, the teacher implemented steps 1, 2 and 3 (analysis the scenario, list hypotheses and list of known) of the PBL cycle. Those steps allowed us to identify that it was possible that students do not know how to search a specific word, this could affect their learning process in linguistic competence, because it was standstill during the activities, and for that reason, they asked the teacher for a solution. That behavior suggests that the

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activity was attractive for them but they did not use the right elements to solve them. At this point learners noticed that they had problems in the use of the tool and they could infer that dictionaries could help them.

As it is evident in the following evidence taken from video recording transcript (Evidence 2), we noticed that students had to search for words to create a short story and the teacher guided them to find the words in the dictionary. In that example, there were 4 students working and most of them showed difficulties with vocabulary.

Evidence 2

SS1, VR1, ST2, ST4	TRANSCRIPT 3
minute 23:41	ST2: Profe como se dice Los T: Los que. Debes buscar en el diccionario ST2: ELLOS, es en español ST5: debes de buscar en inglés T: eso lo vimos acuérdate. ST4 Espérame que ya la encontré! HAT, HAT. H - A - T ST2 ¿ H - A - T ? Si. Eso ya lo habíamos visto en el primer punto. ¡Yo la encontré! ST6: profe “Accompany” con doble C se escribe. T: si.

Teachers noticed that during the application of steps 3, 4 and 5 (list the known, list of unknown and list what needs to be done) of PBL, most of the students did not recognize the vocabulary presented in the activities. For instance, students started to ask the teacher about the vocabulary. This recurrent pattern delayed the process of the cycle. Taking this into account, one of the tools given by the teachers during the application of lessons was

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the dictionary. This tool was given to contribute to the improvement of linguistic competence to expand their vocabulary in language use. This happened when ST4 found the word “hat” in the dictionary and he said it out loud, ST2 made a relation of that word with a previous exercise where the group had asked the teacher the meaning of that same term. About the use of the dictionary, according to Huang & Eslami (2013):

learners’ inferences about the meaning of unfamiliar vocabulary are not always reliable. Thus, advocates of dictionary use suggest that teachers should encourage learners to use a dictionary to find the particular meaning of an unfamiliar word in a given context. Dictionaries are an essential source for information about words in a language. (p.2)

According to the previous citation, researchers can infer that students not only needed to know how to use the dictionary correctly, but also the teacher should be in charge of putting into context the different words they want to search, so that they can strengthen the meaning and the process of searching in the given tool.

In the third evidence taken from a transcript from a video recording (Evidence 3), an interview sample, in which learners answered some questions about the activity of the class, we found a student had problems completing the activity, because she did not know the meaning of the words in English. After the activity, the teacher implemented steps 4, 5 and 6 (list of the unknown, list what needs to be done and develop a problem statement) of the PBL cycle, these steps were useful because students were encouraged to learn more vocabulary and increase their learning process in EFL.

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Evidence 3

SS3, INT4, VR3,ST7	TRANSCRIPT
Minute 1 h 01:00	T: Question number 1. Which was the most difficult to complete the activity in class? ST7: I don't know how to say the words T: Question number 2. Which activity was interesting for you? ST7: I like all T: Question number three. What did you learn? ST7: I learned many com se dice cosas T: things ST7: eso

At that point, students were trying to respond to the questions in English using the words and expressions they had known in that session, but it was complicated for ST7 because the participant did not know the necessary vocabulary to establish a coherent response. That issue affected directly students' capacity to communicate fluently and the Linguistic Competence process. So, the possible solution that the student found in the interview was to ask the teacher to translate the words that the student needed to say.

Having in mind the PBL activities, the researchers decided to provide students virtual dictionaries as another format of the traditional dictionary to foster their motivation in the activity and increase the target language for each session. As Hassan, (2014) said: "online dictionaries are being used as a compact tool for entertainment and knowledge." (par 7). Having that in mind, this tool would help students to foster their linguistic competence and solve the different issues that students could face in the exercises related to a content that requires specific vocabulary in a contextualized and dynamic way.

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In evidence 4 taken from a transcript of video recording, the teacher implemented the sixth step of PBL (gather information) in which students had to write a script for a role-play using some information given during the first part of the class. Therefore, it was evident that students had difficulties searching a word in a virtual dictionary, after that, the teacher explained how they could use it and gave them instructions step by step so that they enhanced and completed their activities.

Evidence 4

SS3, VR3, ST2	TRANSCRIPT 7
minute: 00: 3:15	<p>T: esperen un momento porque les voy a explicar cómo funciona la página, entonces ya están en la página wordreference, lo que tienen que ver es que la palabra acá abajo donde estoy yo diga Spanish, English y no English, Spanish</p> <p>ST2: ya profe.</p> <p>T: listo, y por ejemplo si quieren buscar una palabra, por ejemplo, viajaban</p> <p>ST2: Spanish, English</p> <p>ST2: profe ponemos viajaban</p> <p>T: ahí, (student 2) es un ejemplo, entonces</p> <p>ST2: silencio, (students are speaking among them)</p> <p>T: ya, entonces ustedes colocan una palabra cualquiera, que les va a despegar todo esto, desde el verbo viajar hasta aparece Spanish, English, entonces aparece viajar y lo que significa y hay hasta ejemplos. y hasta varias conjugaciones y opciones que las oraciones compuestas. esa página no les va a dejar traducir oraciones enteras, esto no es google traductor, listo solo les deja mirar el significado de una palabra, pero no les va a dejar traducir todo, porque ninguno me va a usar google traductor.</p> <p>ST2: tan chévere, así es más fácil, mire aquí podemos escuchar.</p>

In evidence 4, the implementation of step 6 (gather information) of the PBL cycle allowed students to have a clear mind to express their ideas. The explanation from the

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teacher helped students to use the virtual dictionary and take the advantages that it offered like the pronunciation of the words and the use of words in context. Students were more comfortable using this tool because they found the words easier and they could listen to the pronunciation in the web page “wordreference.com”. This contributed to their lexical competence increase, as they could remember the vocabulary easier in upcoming activities. According to Wilck. elt (2019) “the authors were interested in understanding if the conceptual overlap (word meaning) between equivalent translations would be enough to produce the repetition of the same word in the future” (p.16). This means that the brain of the student can be independent and share the new concept with the memory; in other words, when the students find a word in the dictionary they associate it with their native language.

In evidence 5, a transcript taken from the video recording, the teacher implemented the 6th and 7th steps of PBL cycle (Develop problem statement, gather information). These steps allowed students to show more autonomy by working on their own in the activities, students could also remember the vocabulary of the last class. Furthermore, step by step students did not use the dictionary because they were acquiring the target vocabulary. Those steps contributed to the process of linguistic competence to increase their vocabulary in language use.

Evidence 5

DATE: OCT 2ND	PROJECT NAME: The Implementation of Problem Based Learning to Foster EFL Linguistic Competence On Fourth Graders	TYPE OF RESEARCH: Qualitative research
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TIME: 110 minutes	RESEARCH NAME: Elizabeth Díaz, Brayan Castro		SS6, Nt 6 & SS7, Nt7	
ACTIVITIES	ENVIRONMENTS	INTERACTIONS	OBJECTS	USERS
5. create a short history	Throughout The Classroom, students work in pairs.	<ul style="list-style-type: none"> • students worked without help from the dictionary. • Students did not ask the teacher about the meaning of the words like “Sword, Kingdom, Knight. Prince etc. • students remember and used the vocabulary of the previous classes. 	Projector, computer, dictionary	Teacher and students

In evidence 5, the session was about King Arthur so students needed the vocabulary learned, they were able to use it without resorting to the dictionary, and also the students decreased the questions toward the teacher because they preferred to use their acquired knowledge. It was an advance in their Linguistic Competence and learning process of EFL because the students used their previous vocabulary or knowledge to use in the activities.

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Also, they could create a story related to the famous sword Excalibur accurately expressing their ideas.

In evidence 6, taken from an interview transcript of video recording, the teacher implemented step 8 (Represent findings) of the PBL cycle, the student did not use the dictionary in the greater part of the class, because, in the previous class, the student had already sought the vocabulary; hence the student already knew the new words that were needed for the session 6 and 7, it was evident he did not frequently use the dictionary.

Evidence 6

SS7, INT7 ,ST4	TRANSCRIPT
Minute 1 h 01:00	T: First question, how did you use the dictionary during the class? ST4: no, I did not see necessary because I knew the vocabulary. T: How do you feel during your searching using the dictionary was easy to find the words? ST4: si.. yes was easy but I search some words, I not know how write. T: ok. Which do you think is better the normal dictionary or virtual tools like Word reference? ST4: is better to normal dictionary because is difficult and you are not lazy. but I did not used it. T: thanks.

In session 7, it was evident that learners were confident using the vocabulary to complete the activities, because they acquired the words thanks to the constant contact with an environment, in which students manifested at the end of the last steps of the cycles, that the use of dictionaries were not necessary for them, because they had memorized the word used the most during the exercises in previous classes. We can infer that thanks to the autonomous use of different kinds of dictionaries at the first stages of the PBL cycle, and the creation of activities that encourage the use of a specific vocabulary repetitively,

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learners acquired the vocabulary to be used at the final steps with positive results that are even identified for pupils.

In conclusion, through the implementation of dictionaries to make students learn the vocabulary during the first stages of the cycle of PBL, the teacher could achieve an improvement in learners' language during activities in which they were encouraged to write, read and speak. Researchers identified during the implementation of each step of the PBL cycle, in which when the teacher presented a topic and they started working in order to solve a problem, they required a specific vocabulary. Students could obtain the vocabulary thanks to the use of dictionaries, until the point that they recognized the words in speeches, readings and they could apply it in written and spoken activities.

Pronunciation mistakes when reading.

Another pattern we identified in students was the mistakes when learners pronounce, since most did not know how to read or say some words in activities that included speaking out loud. According to Quinn (2017) “Spanish speakers tend to show difficulties in the pronunciation of English, and it has often been claimed that these are partly related to cross-linguistic influence from their native language, L1 Spanish” (p. 275). This means, that the influence of the mother tongue directly affects the pronunciation of some words in a foreign language, this happened when students pronounced with mistakes when reading, it delayed the implementation of the PBL cycle.

The process could be altered in the correct pronunciation, reading comprehension, because each language uses different structures. Several studies have suggested that “Spanish-English bilinguals can use aspects of their reading knowledge across their

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languages” (van der Velde Kremin, Lena et al, 2019, p.10). This means that students used their language as a resource to understand the English text. In brief, students used their knowledge of native language during each lesson, because they combined their context and culture with the new pronunciation of the words that they found in the English text.

This category aims to examine the role of the teacher and the classwork in small groups in reading activities, focused on solving problems to foster students' EFL linguistic competence. Furthermore, reading activities could foster linguistic competence during the learning process of English Foreign Language. According to Chuang et al. (2012) “The transfer of reading strategies across two languages is dependent upon the bilingual child's understanding of the purpose of reading and the relationship between his/her languages” (p.10). This means that students used their linguistic competence through the implementation of PBL because they combined their personal experience to understand the text.

Following, we are going to present some evidence about the mistakes when students read English texts on specific moments of the classes, and when the teacher gave feedback while they work in small groups to help students to improve their Linguistic competence through the implementation of working in a small group.

Evidence 7, taken from a transcript of video recording, shows that the student who was reading had pronunciation problems when she tried to read in English, because she had a strong influence of the mother tongue in the sounds of the vowels and consonants. According to Darcy, et al. (2012): “In first and second language phonological processing, pronunciation difficulties are also in part a result of inaccurate perception of the L2, which is due in part to the influence of the first language phonological system” (p.94). In this case,

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the teacher read again the text with the intention that students listened to the correct pronunciation, the students were following the text at the same time, and this reading was about the Viking Gods. The Teacher implemented steps 1, 2 and 3 (Analyze the scenario, list hypotheses and list the known) of the cycle of the PBL.

Evidence 7

SS1, VR1, ST1	TRANSCRIPT
1h 13 minute	ST1 : //was the gudess of the jardest, and Thor's wive. chi was very proiud of her long, blonde jair. One day, as a prank,Luki cut her beautiful jair. Sif wos su sad. chi cried tiars so jeaivy with salt that her tiars fell on Mirrle Earth, and the crops could not grow. To fix this, and to avoit an engray beating by Thor, Luki asked the darf to espin her some new jair, which fortunately for Luki, they did//. SIC T: voy a leer, the gods tiene que ir siguiendo la lectura, was the goddess of the harvest, and Thor;s wife. “She was very proud of her long, blonde hair. One day, as a prank, Loki cut her beautiful hair. Sif was so sad. She cried tears so heavy with salt that her tears fell on Middle Earth, and the crops could not grow. To fix this, and to avoid an angry beating by Thor”.(p.1)

In the previous evidence, the teacher noticed that implementing steps 1, 2 and 3 of the PBL cycle, allowed students to know the correct pronunciation of their mistakes during the reading activities, because the teacher read after the students made mistakes, she had contextualized the proper pronunciation. It was possible they modeled after the teacher read and permitted them to have knowledge clear about the pronunciation, leading to an appropriated comprehension of reading activity, fostering their concentration and accent of the words and contributing in the process of Linguistic Competence.

In evidence 8, from note-taking, students read aloud or pronounced according to the sounds they learnt in their mother tongue. In this activity, students had to create a play about King Arthur, they wrote the script, then learners read and presented their role play.

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Teacher noticed that students read the same way that they had written, beside they read with Spanish sounds, it was possible that they did not have a good pronunciation because the activity was in front of the other guys, consequently the teacher intervened in the presentation and corrected the mistakes. According to Abbas et al., (2011):

Learners are most helped by teachers who themselves can appreciate and imaginatively explore what the sounds seem like to learners, gradually leading them to more appropriate ways of thinking about English pronunciation. Indeed, some of the most gifted teachers are probably those who are themselves good at pronunciation and have an openness to hearing sounds in different ways but this in itself is not enough for teachers. It is also necessary to be able to articulate what one does. (p.79)

Evidence 8

DATE:	PROJECT NAME: The Implementation of Problem Based Learning To Foster EFL Linguistic Competence On Fourth Graders		TYPE OF RESEARCH: Qualitative research SS2, Nt 2	
TIME: 110 min	RESEARCH NAME: Elizabeth Díaz, Brayan Castro			
ACTIVITIES	ENVIRONMENTS	INTERACTIONS	OBJECTS	USERS
Reading	Whole Classroom, some distractions on the desks.	* 2 students read and it is evident that those students have a lack in reading and pronunciation, because they read as it is written and don't pronounce the words correctly. *The teacher interrumps to correct the pronunciation. Phonemes like	Projector, computer	Teacher and students

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		<p>“th”, “ch”, “sh” and vowels. also the stress of some words.</p> <p>*Students have bad pronunciation in their role plays</p> <p>*students pronounce the word in the same way it is written.</p> <p>* some students had good pronunciation at the end of the class.</p>		
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The teacher implemented steps 4,5 and 6 (list of unknown, list what needs to be done and develop problem statement) of the PBL cycle, those steps allowed the teacher to identify that one of the factors that affect the development of linguistic competence in the foreign language was the lack of knowledge regarding how a word sounds in English. As Tritich (2016) stated: “learners hear new sounds or can tell the difference between two sounds, they tend to interpret the sounds of the new language in terms of the phonemes of their mother tongue” (p.48). Regarding the previous assumption, the teacher’s feedback was the best tool to improve the pronunciation difficulties. It helped to develop a good pronunciation in reading activities because learners are encouraged to be responsible for listening and correcting as many times as necessary based on the teacher’s commentaries, creating in them self-confidence that allowed them to make satisfactory progress until this weakness is greatly improved.

Evidence 9, is a transcript of an interview of the fifth class, in which the second cycle of the PBL, was getting close and the Camelot kingdom topic had been practiced during the two previous sessions. There, student 3 answered some questions and the pupil

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showed good pronunciation in words that the teacher had corrected previously on several occasions in different activities.

Evidence 9.

SS5, INT4, ST3.	TRANSCRIPT
1 hour 05 minute	T: How did you feel during the process?, cómo te sentiste durante el proceso ST3: fue muy divertido T: What did you learn in the reading activity today? que aprendiste en la lectura el día de hoy ST 3: Aprendimos sobre cómo pronunciar algunas palabras en la lectura de Camelot T: Which were the words that you learn? ¿Cuáles son las palabras que aprendiste? ST3: eee.. sword, knight ee... castle, dragon ee y otras jaja T: What was useful for you? ¿Qué fue útil para ti ? ST3: la información útil por ejemplo como se dice la palabra y también si uno está en ciencias sociales y nos preguntan sobre el mago Merlín uno ya sabe que decir profe. T: ok thank you.

At the end of the second cycle of PBL and during the interview that the teacher made to students to gather learners' perceptions about the process, it was evident that pupils felt confident about their recently acquired knowledge, because students tried to pronounce the words in the same way the teacher did. Also, students tried to emulate the sounds that the teacher pronounced during the activities, and the repetition of the same words constantly. This technique had positive results in a research of Sa'diah,(2015), in which he used Audio Lingual method to improve pronunciation in learners. as he said: "Audio Lingual Method is a method which all the drillings emphasize on oral practice. Its oral

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practice helps students to improve their pronunciation. One of the techniques is repetition drill” (p.5).

In evidence 10, taken from video recording, the teacher implemented steps 7, 8 and 9 (Gather information, represents findings, reflect) of the PBL cycle. This evidence showed how the teacher gave them an English text, in which students should underline keywords or verbs related to the topic, then each group wrote a story and presented in small groups. Teamwork was the most significant strategy in oral language; it was the way in which children learnt a specific pronunciation in the reading activity.

Evidence 10

SS3, VR3, ST4.	TRANSCRIPT
minute 34:07	T: Ok, so please read according to the reading. T. entonces let's read. ST4: Profe ya terminamos la historia que hicimos. T: léela. ST4: //the mom have animals was its other animals eish incrediblol that unitezoon the men sait wordl and the formword check animal, the men instrucchon killed the animals// SIC. ST6: ST4 así no instruction cierto profe. T:jum

In the previous evidence, steps 7, 8 and 9 (Gather information, represents findings, reflect) of the PBL cycle allowed them to have clear understanding about the pronunciation and reading comprehension of English texts and leading to an appropriate and organized intervention in the target language. Also, those steps helped to strengthen students' Linguistic Competence and their process in EFL, in which each group was enabled to have

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a clear communication after learning the pronunciation of the words while reading, it was evident that the participants helped among them.

In evidence 11 from a note - taking transcript, in which the main topic was related to the Camelot Kingdom, the teacher implemented steps 1, 2 and 3 (analyze the scenario, list hypotheses and list of known) of the PBL cycle. in the sessions (1, 2 and 4) showed that some students had more mistakes when they read English texts in public, and the teacher intervened when the students made mistakes in their pronunciation, therefore, in this class the teacher went around for a small group, so some students could read in different parts of the text. Additionally, the educator gave a text for a small group, after that, the teacher read again the text in a small group, students should write their understanding about the text, and when the teacher asked some questions about the reading, students were able to answer.

Evidence 11

DATE:	PROJECT NAME: The Implementation of Problem Based Learning to Foster EFL Linguistic Competence On Fourth Graders		TYPE OF RESEARCH: Qualitative research SS4, NT4	
TIME: 110 min	RESEARCH NAME: Elizabeth Díaz, Brayan Castro			
ACTIVITIES	ENVIRONMENT S	INTERACTIONS	OBJECTS	USERS
Reading	Whole Classroom, some distractions on the desks.	<ul style="list-style-type: none"> * Teacher chose some students to read in a group. * Most of the students read better in small groups. * All of the members from each group wanted to read 	Projector, computer	Teacher and students

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		<ul style="list-style-type: none"> *Teacher passed for each group and listened to the students' pronunciation. * Teacher corrected some pronunciation mistakes. * While some students read in small groups others wrote what they understood. * Teacher asked some questions about the reading, and the students were able to answer. * Some students explained their ideas when teacher asked something 		
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The teacher analyzed that implementing steps of the PBL cycle helped students work in small groups, they learnt more because they complemented their ideas, pronunciation, vocabulary and acquired a deeper understanding of the reading. Moreover, the teacher assigned some students who had a better level than others in different teamwork, this contributed to those students solving problems related to the mistakes in pronunciation of different words and improving their learning process while working in small groups. Therefore, Linguistic Competence allowed them to use their communicative language to interact among them to solve the difficulties in the classroom, through steps 1, 2 and 3 (analysis the scenario, list hypotheses and list of known) of the PBL cycle, it was possible to observe the intervention of the participants of each group to find the way to explain their ideas to present the teacher; as a result they developed their skills in Linguistic competence.

In evidence 12, taken from a transcript of interview, the teacher implemented the steps 7, 8 and 9 (Gather information, represents findings, reflect) of the PBL cycle, this was

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a class where students watched a video and wrote some information to complete the activity, at the end of the class, it was evident that students felt more comfortable to read and help each other to finish the activity.

Evidence 12

SS7, INT7,ST6	TRANSCRIPT
1 hour 02 min	T: How did you feel during the work in group?, cómo te sentiste durante el trabajo en equipo. ST6: pues profe fue chévere porque era mis amigas. T: Do you prefer work individual or in groups? Prefieres trabajar individual o en grupo. ST 6: Profe pues es mejor en grupo porque uno lee más. T: Why? ¿por que? ST6: eee profe porque uno le pregunta cosas a los otros y es más fácil T: What was useful for you? que fue útil para ti ? ST6: la información útil como decir las cosas que vimos el video y ahi nos rotamos para leer la historia nueva y ya.

Using steps 7,8 and 9 of the PBL cycle helped to correct the bad pronunciation when the learner read because he was confident with his group, he practiced the pronunciation while reading, also the use of those steps allowed him to strengthen his pronunciation, vocabulary and his listening and it was possible to improve his reading. In this way, the steps of PBL were necessary for the students since they generated communication, solution of problems during the activity and promoted students' Linguistic Competence.

In brief, the eight steps of the PBL cycle played an important role into the classroom because the students had the opportunity to solve their problems in small groups, also the guide and feedback of the teacher when students read was relevant to how the students were involved with their participation in spite of their low proficiency level in

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EFL, and how the students who had a better level help their classmates with the pronunciation of some words when they read.

The right pronunciation is fundamental for the improvement of the linguistic competence in learners. This factor was clearly improved because different strategies that the teacher implemented in classes were set, in order to accomplish the steps of the PBL cycle, giving three different scenarios in three different contexts in which the target language was associated to fantasy events recreated in the past, like the King Arthur story and Vikings tales. In this process, the teacher played an important role thanks to the good pronunciation she used during the classes; because of that, students could emulate her sounds and pupils started to pronounce the words better leaving apart the Spanish sounds. Also, it was demonstrated that during the small class group works, students were able to communicate with more confidence.

As a conclusion, considering the data collected, we were able to identify and analyze the strategies our students implemented in order to cope with the classes' activities. Accordingly, we divided such strategies into two categories: dictionary as a tool to increase vocabulary and pronunciation mistakes when reading. Our students implemented the previous actions in order to accomplish class goals, as it was evidenced in the results of the instruments implemented in this study. In the same way, the impact of the implementation of problem-based learning to foster linguistic competence in fourth graders, was appropriate to help students to integrate more with their classmates and find solutions actively during the classes. As a result, the implementation of this problem-based learning project provided us with relevant information to support and foster students' linguistic

competence and to know what kind of activities and strategies were appropriate to improve their vocabulary and pronunciation.

Chapter V: Conclusions and Implications for Further Research.

In this final chapter, the researchers are going to expose the final conclusion of a process, which started with the observation of a population of fourth grade students and the identification of problems in their linguistic competence, the selection of a methodology (Communicative learning) and a method (Problem Based Learning) were complemented, both helped solve the student issues, at the same time of implementing of the nine steps of PBL. The selection of 3 data collection instruments that were used to collect the results of the activities, and the observation of certain patterns in the students' behavior and in their learning process, (note-taking, interviews and video recordings) those instruments allowed us to see how students foster their Linguistic Competence. Thanks to the triangulation, the data was consolidated in 2 categories, which helped us to determine the effects of the implementation of Problem Based Learning in EFL linguistic competence in fourth graders. In brief, this document will present the findings of the two developed categories, that are dictionaries as a tool to increase vocabulary and pronunciation mistakes when reading to establish a general conclusion of this document. The presentation of further researches that can be explored based on this.

In the process related to the vocabulary of the students, it was evident how the pupils focused on three important steps of the PBL cycle which were 4,5 and 6 (list the unknown, list what needs to be done and develop a problem statement). Through the

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implementation of dictionaries that were provided by the tutor as a tool in a contextualized scenario, which it was considered as a resource for students to develop activities proposed by the instructor. They started to share their ideas and retain more vocabulary in lessons, which was useful to clarify doubts and extend their language use about the target vocabulary; as a result, they felt more confident working in the activities and they could develop them autonomously without the teacher's help. In brief, since the students began to familiarize with different dictionaries, they increased the target vocabulary, in order to develop activities that helped them to solve the final problem of the tasks of the PBL cycle, through collaborative work in which they had to communicate among them to find solutions and present them to the class.

On the other hand, in the process of pronunciation mistakes when reading, most of the students read some English text, they did not pronounce correctly but pupils perceived the instructor as a model in order to achieve pronunciation goals. The learners who had certain doubts in terms of pronunciation of the target language, started to adopt a strategy that naturally emerged along the class, they imitated the way the teacher used the language; copying her pronunciation, or accent, as they considered her a model speaker of the language. Additionally, being the one assisting them in their language use, the educator facilitated the way the students participated in the reading activities, using the target language due to the fact that by imitating the teacher, they felt more confident in their pronunciation. In brief, the guide modeling was a solution by the learners in order to solve doubts and properly use the target language during the reading activities, because they saw the teacher as a model who has enough Linguistic Competence to provide the appropriate use of the language.

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Furthermore, thinking about the possibility of developing future research to affect significantly EFL learning processes by looking for strategies inside the classroom and provided new results to the field, the researchers consider, as a way to develop further studies on this topic to analyze the impact of the PBL cycle to foster academic writing and oral communication in learners. Also, PBL activities involve students' proficiency, it is a factor that influences positively on their progress. Finally, we hope this study works as a tool for English teachers, and helps them foster the development of Linguistic competence that is necessary not only for the academic process of the students, but also for the community

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Appendix 1. Consent form for students.

FORMATO DE CONSENTIMIENTO INFORMADO

Chía, agosto de 2019

Estimados padres de familia:

Reciban un cordial saludo.

Mi nombre es Daniela Pérez, docente de la institución y estudiante de la Licenciatura en Educación Bilingüe de la Universidad El Bosque. Actualmente estoy realizando mi proyecto de investigación el cual pretende ayudar a una determinada población a mejorar algún aspecto de su proceso de aprendizaje. Por lo anterior, les comento que durante el próximo semestre se aplicará en el proyecto de grado que junto con mis compañeros Elizabeth Díaz, Brayan Castro hemos estado elaborando, pensando en el bienestar de sus hijos/as.

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Debido a esto, es necesario e indispensable contar con su aprobación para que su hijo/a haga parte de dicha investigación, la cual tiene como objetivo principal mejorar las habilidades lingüísticas a la hora de hablar en otro idioma (inglés).

Dicha autorización no verá afectado el tratamiento de datos personales de sus hijos, ya que no mencionaremos nombres específicos ni utilizaremos ningún tipo de información personal. Únicamente se tomarán algunas fotos como prueba de la aplicación del proyecto y así mismo algunos videos durante la hora de clase.

Si usted está de acuerdo, le solicito diligenciar el siguiente consentimiento y autorización para que su hijo/a participe de dicho proyecto.

YO _____ en calidad de Padre___ Y/O Madre__ del estudiante _____. Autorizo para que participe en la aplicación del proyecto de grado de los estudiantes de la Universidad El Bosque.

Appendix 2. Consent form for school.

Consent form for the school

Chía, agosto 2019

Señores

Colegio Santo Tomas

Comité Directivo

Cordial saludo,

Somos estudiantes de la Universidad El Bosque y por medio de la presente queremos solicitar a ustedes la autorización para llevar a cabo un proyecto de investigación, el cual pretendemos realizar con los estudiantes de cuarto grado. Este proyecto tiene como objetivo principal mejorar las competencias lingüísticas de los estudiantes a la hora de comunicarse en una segunda lengua (inglés).

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La estudiante Daniela Pérez, quien labora en su colegio, será la encargada de aplicar dicho proyecto. Sin embargo, sus compañeros Brayan Castro, Elizabeth Díaz y Jenifer Espinoza asistirán a alguna clase si es necesario, por lo tanto, pedimos a ustedes muy respetuosamente su autorización para dicha aplicación e ingreso de los estudiantes anteriormente mencionados en caso de que así se requiera.

Quedamos atentos a su respuesta.

Cordialmente.

Angie Daniela Pérez

Brayan Castro

Elizabeth Diaz.

Figures and tables.

figure 1: Constructs' relations.

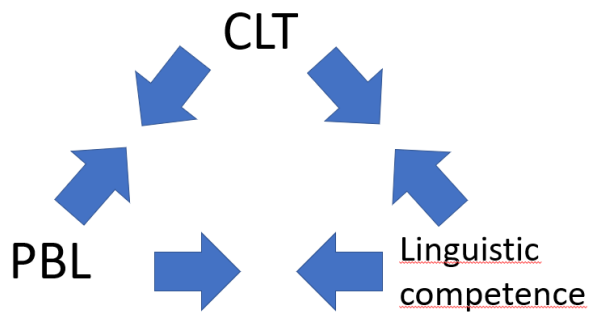


figure 1: Constructs' relations.

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Figure 2. PBL cycle.

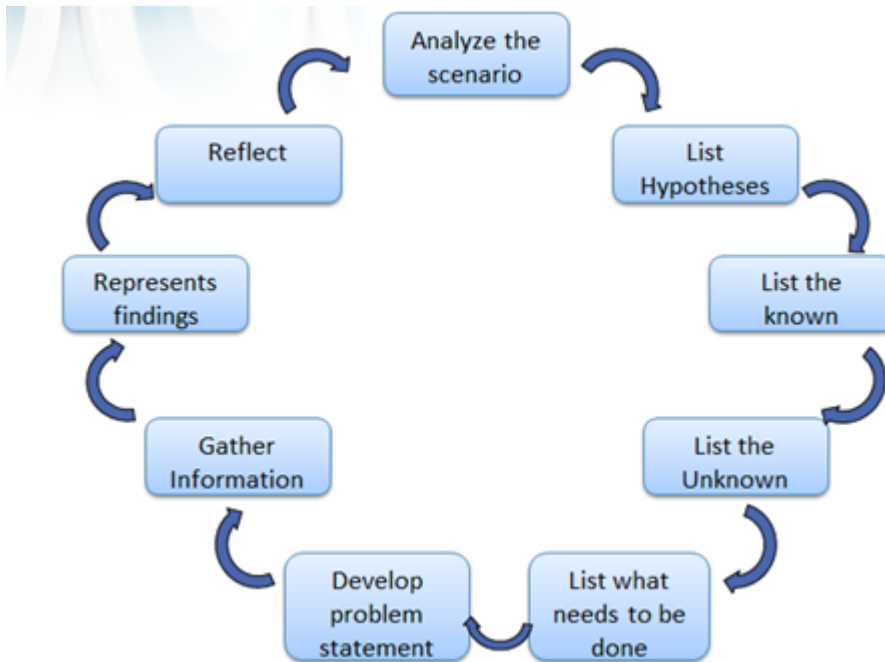


Figure 2. PBL cycle

Table 1. Organization of classes and topics to implement.

Session	Topic	Objectives	Components of PBL.
1	Middle ages. Vikings	<p>Learning objective:</p> <p>To understand the problem scenario in order to create different hypotheses.</p> <p>Teaching objective:</p> <p>The teacher will be able to introduce the topic and create a scenario.</p> <p>Instruments:</p> <p>* We will use video recording</p>	<p>WARM-UP: Students develop an introductory activity</p> <p>1 Analyze the scenario: Teacher gives students the scenario where they are going to work about middle ages, without any explanations about simple past tense and past continuous</p> <p>2 List of hypotheses: Teacher presents them the station, in which they are going to propose</p>

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		<ul style="list-style-type: none"> · We will use note- taking. · We will use interviews. 	<p>different solutions to the situation.</p> <p>3 List of previous knowledge: Students will be taken to another station into the classroom where they have to list the information they know about middle ages.</p>
2	Middle ages	<p>Learning objective:</p> <ul style="list-style-type: none"> -To comprehend the problem -To provide possible solutions taking into account the tools they can use in order to get to the main solution. <p>Teaching objective:</p> <p>The teacher is able to supply materials to students.</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording * We will use note- taking *We will use interviews. 	<p>4. List the unknown: Students will read information about the curious givens of Vikings; they can underline new information for them.</p> <p>5. List what needs to be done: Students will write in a concept map the main information that they need into the class with proposals that expand their knowledge. Like Verbs in past and Vocabulary about trips.</p> <p>6. Develop the problem statement: Students will present to the instructor what they understand about the problem and how to solve it.</p>
3	Middle ages.	<p>Learning objective: Students will be able to extend information and discover the proper decision to solve the problem.</p> <p>Teaching objective:</p> <p>To create tools and material for students</p>	<p>7 Gather information: Students will be given tools to find more information at this point, students will be creating their text summarizing the solution.</p> <p>8. Represents findings: Students will present to the class their possible solutions following some questions.</p> <p>9. Reflect: Students will have an interview one to one with the</p>

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		<p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording *We will use note- taking *We will use interviews. 	<p>instructor. Here they will answer some questions about how their experience was during the process.</p>
4	Camelot's Kingdom	<p>Learning objective:</p> <p>Students will be able to identify different components of solving the situation.</p> <p>Teaching Objective</p> <p>Teacher will be able to introduce the topic and create a scenario.</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording * We will use note- taking. *We will use interviews. 	<p>1 Analyze the scenario: Teacher gives students the scenario where they are going to work about Camelot's kingdom, without any explanations about simple past tense and past continuous</p> <p>2 List of hypotheses: Teacher presents them the station, in which they are going to propose different solutions to the situation.</p> <p>3 List of previous knowledge: Students will be taken to another station into the classroom where they have to list the information, they know about Camelot's kingdom</p>
5.	Camelot's Kingdom	<p>Learning objective:</p> <p>To comprehend the problem To provide possible solutions taking into account the tools they can use to get to the possible solution.</p> <p>Teaching Objective</p>	<p>4. List the unknown: Students will read information about Merlin's life and king Arthur</p> <p>5. List what needs to be done: Students will write in a concept map the main information that they need into the class with a proposal that expands their knowledge. Like Verbs in past and Vocabulary about rings</p> <p>6. develop problem statement:</p>

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		<p>Teacher is able to supply materials to students.</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording *We will use note- taking. *We will use interviews. 	<p>Students will present to the instructor what they understand about the problem and how to solve it.</p>
6	Camelot's Kingdom	<p>Learning objective:</p> <p>Students will be able to extend information and discover the proper decision to solve the problem.</p> <p>Teaching Objective:</p> <p>To create tools and material for students</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording · We will use note- taking. *We will use interviews. 	<p>7 gather information: Students will be given tools to find more information about Camelot's kingdom. At this point students will be creating their text summarizing the solution.</p> <p>8. Represents findings: Students will present to the class their possible solutions following some questions.</p> <p>9. Reflect: Students will have an interview one to one with the instructor. Here they will answer some questions about how their experience was during the process.</p>
7	Greek Gods	<p>Learning objective:</p> <p>Students will be able to identify different components of the situation.</p> <p>Students will foster their oral skills and understand new vocabulary related to the actual topic "Greek gods".</p>	<p>1 Analyze the scenario: The teacher gives students the scenario where they are going to work about Greek gods, without any explanations about past continuous and prepositions of place.</p> <p>2 List of hypotheses: Teacher presents them the station, in</p>

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		<p>Teaching objective:</p> <p>The teacher will be able to introduce the topic and create flashcards about the Greek gods.</p> <p>Instruments:</p> <ul style="list-style-type: none"> * We will use video recording · We will use note- taking. *We will use interviews. 	<p>which they are going to propose different solutions to the situation.</p> <p>3 List of previous knowledge: Students will be taken to another station into the classroom where they have to list the information they know about Greek gods.</p> <p>4. List the unknown: Students will read information about the power's givens of the Greek gods; they can underline new information for them.</p> <p>5. List what needs to be done: Students will write in a concept map the main information that they need into the class with a proposal that expands their knowledge. Like Verbs in past continuous and Vocabulary about Greek gods.</p>
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Table 1. Organization of classes and topics to implement.