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CLIL AND ITS EFFECTS IN NON-CLIL SUBJECTS

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ABSTRACT

The present paper compares the possible differences in anxiety and level of preparation between a group of CLIL and a group of traditional students. The observation that CLIL students may have a bigger academic load than non-CLIL students is the starting point of this study. This academic load could influence in a negative form the group of CLIL students. Both groups of students completed two of the following official tests: *Cuestionario de ansiedad infantil*, *Cuestionario de ansiedad infantil de Spence*, *Cuestionario de hábitos y técnicas de estudio*; in which the object of analysis was the difference scores of each of the tests. The results, which were not significant, revealed that CLIL learners obtained a lower level of anxiety and of preparation than non-CLIL students and provided evidence of growing advantages within CLIL students' and broadened their experiences. Furthermore, results revealed some interesting correlations between the time of preparation for a certain subject and the anxiety level of the students.

RESUMEN

Este estudio pretende comparar las posibles diferencias en los niveles de ansiedad y preparación entre un grupo AICLE y uno tradicional de estudiantes. La investigación parte de la observación de la carga académica de los alumnos AICLE, lo que puede tener cierta influencia negativa para éstos. Ambos grupos completaron dos de los siguientes tests oficiales: *Cuestionario de ansiedad infantil*, *Cuestionario de ansiedad infantil de Spence*, *Cuestionario de hábitos y técnicas de estudio*; de los cuales, las diferentes puntuaciones de cada uno de ellos serán nuestro objeto de estudio. Los resultados, que no reúnen los requisitos para ser considerados significativos, revelan que los estudiantes AICLE tienen un menor nivel de ansiedad y preparación que los no-AICLE, y nos muestran una creciente ventaja con el incremento de la experiencia de los estudiantes. Asimismo, una interesante correlación entre el tiempo de preparación y el nivel de la ansiedad del estudiante puede apreciarse.

1. INTRODUCTION

The present research project reports on how CLIL can affect different aspects of non-CLIL subjects, such as Spanish language and maths, during the Primary education period through the design of different questionnaires. The benefits of bilingualism are widely known, especially those that lead to the social aspect or to the cognitive functions. In this study, the aim is to see if the implementation of a bilingual education entails some negative effects in non-CLIL subjects. The goal of this research is not, in any way, to disparage this educational method, but to shed some light on different current questions. Our objective is to clarify whether the implementation of CLIL education through content subjects, such as social and natural sciences among others, can affect the anxiety or working plan of the CLIL students. In order to reach the solution to this research problem, different hypotheses have been created:

- i. Students who are receiving a CLIL educational method are more likely to present stress or anxiety towards the non-CLIL subjects.
- ii. Students who are receiving a CLIL educational method are more likely to spend more time studying Spanish language or maths.
- iii. Students who are not receiving a CLIL educational method are more likely to score highly on Spanish language or maths marks.
- iv. Students who spend more time studying Spanish language or maths are not more likely to present stress or anxiety.

Nowadays bilingualism is present in half of schools in the autonomous community of Andalusia. This percentage is suffering an upward growth. Many teachers who do not accept this method have been influenced by old-fashioned schools of thought, caused by an educational trend that claimed early bilingualism caused different delays in the acquisition of content knowledge. Therefore, we believe the choice of this topic is fully justified by its current importance in education.

Throughout this project we will do some research on the most important studies and findings concerning bilingualism, ranging from a general definition, to end with the mention of concrete works which highlight important positive findings and slightly negative characteristics. We include a detailed report of the methodology that will guide our work, which will inform about the characteristics related to the subjects and instruments that have been used to finally obtain reliable results. Later on these results will be discussed, clarifying possible doubts and emphasizing both the positive as well as the negative points. Finally,

some limitations of this study, and some suggestions to improve this research in the future to be able to overcome the problems encountered, will be established. The work concludes with a brief conclusion, which gives a project overview.

2. LITERATURE REVIEW

The faculty of speak two languages is what we understand for bilingualism. This field has generated countless studies and research. But first we need to clarify what is bilingualism.

A validated definition of what bilingualism is ASHA's (AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION) description of it:

Bilingualism is commonly defined as the use of at least two languages by an individual (...). It is a fluctuating system in children and adults whereby use of and proficiency in two languages may change depending on the opportunities to use the languages and exposure to other users of the languages. It is a dynamic and fluid process across a number of domains, including experience, tasks, topics, and time. (ASHA¹)

Nevertheless we can distinguish between two different types: simultaneous bilingualism and sequential bilingualism.

Simultaneous bilingualism happens when the subject receives a significant and meaningful input of both languages at home, in other words, from birth. Following this idea, the subject will acquire the same quantity of experiences and culture from both languages.

Sequential bilingualism occurs when an input of a second language is acquired after the acquisition of the mother language has been established. It usually happens before the age of 3, a fact that makes the bilingualism experience unique in each subject.

Sequential bilingualism can be acquired during the school years, through an educational method known as CLIL (Content and Language Integrated Learning), field in which our research project is focused.

Bilingual education was first implemented in Canada (1965), and then it was imported to USA (known as SIOP model), in order to be used with immigrant students. In Europe it was implemented at the end of the 1990s, where it is known as CLIL.

A validated definition of what CLIL is Marsh & Langé (2000: 2) description of it: "CLIL is defined as a generic or umbrella term used to refer to "a dual-focused education approach in

¹ <http://www.asha.org/practice/multicultural/issues/bll.htm> [accessed November 7, 2016]

which an additional language is used for the learning and teaching of both content and language”. Some of CLIL benefits for content learning have been proved:

- Learners are more successful and more motivated (Wolff, 2003).
- Learners find content like a different and broader perspective whether it is learn in another language (Wolff, 2003).
- Learners develop more precise concepts when a different language from mother tongue is involved (Lamsfuss-Schenk, 2008).
- In CLIL subjects intercultural learning takes place (Christ, 2000).

Bilingualism and CLIL are not synonymous. CLIL is an approach of bilingual education, which is a branch of bilingualism. In order to ensure students leave the compulsory education with the necessary second language skills for success, governments implement CLIL in the education system.

CLIL has some defining characteristics:

- Theory of language: language is used as a resource of meaning. Subject matter content is learned through it. It is learned as the same time second language is taught at school. Thereby, students are learning Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) (Cummins, 1999).
- Theory of learning: based constructivism and cognitive theory. Contents and materials are designed or chosen taking into account the students’ needs and interests.
- Learner and teacher roles: the student should be active. The teacher’s role is to guide them, not control them. The teachers have to be experts in the subject context and in the domain of the second language.
- Language level targeted: the target is to be functional instead of native-like competent.
- Amount of exposure to the FL or L2: from a low (5% of teaching time) to a high proportion (over 50% of teaching time).
- Languages taught through CLIL: those are considered as *linguae francae*.
- Methodology: based on task-based learning, collaborative work, and procedural knowledge.
- Materials: although some real materials can be used, it is based on adapted ones.

As Coyle (2010) points out, CLIL can be understood as the different relationships established between Cognition (thinking), Communication (language), Content (such a subject matter), and Culture (awareness of self and ‘otherness’), to integrate language learning with knowledge learning.

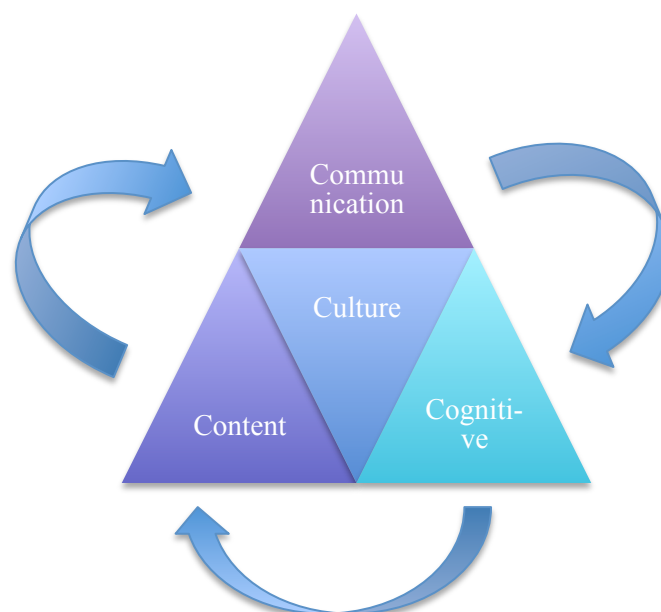


Figure 1. The 4Cs Framework for CLIL (Coyle)

Nevertheless, even though the CLIL benefits are evident, scientific research studies, as the following ones, have been carried out trying to solve different research questions related to the possible effect or differences between CLIL students and non-CLIL students.

Mesquida and Juan-Garau (2013) point another advantage of CLIL students, the appearance of more negotiation strategies in CLIL than in non-CLIL students. Nevertheless, in their study, final results were not significant.

Manzano (2014) carried out a research to compare the lexical transfer production of CLIL and non-CLIL students and determine the importance of the linguistic competence in order to anticipate differences between both groups. Final results solve there was not significant difference between CLIL and non-CLIL learners.

Canga and Fernández (2014) developed a study about how the CLIL educational method affects motivation, distinguishing between gender-based differences. At the end of the investigation, it was clear the difference from non-CLIL (who were more motivated) and CLIL students. Females' higher level of motivation was also proved.

Surmont, Struys, Van de Craen and Somers (2014), conducted a research to prove the different advantages of CLIL students. They demonstrate CLIL learners acquire cognitive advantages that can be noted in courses like mathematics.

Agustín-Llach (2016) concluded there were not significant differences between CLIL and non-CLIL students concerning the vocabulary development along three years.

Besides, although in Europe the bilingual method is CLIL, the development and results are different depending on the country where it is implemented. As Pérez-Cañado (2012) has summarized, throughout Europe different studies show how CLIL affects different issues:

- The Netherlands has remarkable CLIL investigation such as Admiral et al. (Admiral et al, 2006, in Pérez-Cañado, 2011) in which receptive vocabulary knowledge, reading comprehension and oral proficiency were tested, proving higher scores in oral and reading component and no negative effect for subject matter achievement.
- In Germany, Zydati (Zydati, 2007, in Pérez-Cañado, 2011) points a higher overall language competence of CLIL students.
- In Switzerland, Stotz and Meuter (Stotz and Meuter, 2003, in Pérez-Cañado, 2011) stated that the embedded use of English by the teachers does not produce any opportunities for classroom discourse. Stehler (2006) concludes, with an extremely heterogeneous sample, that CLIL has neither positive nor negative influence on the acquisition of knowledge.
- Austria is centered on narrative competence and lexical proficiency. Hüttner and Rieder-Bünemann (Hüttner and Rieder-Bünemann, 2007, 2010, in Pérez-Cañado, 2011), and Seregély (Seregély, 2008, in Pérez-Cañado, 2011), obtain similar results of their respective studies in which it was demonstrated that CLIL students had a more complex English vocabulary.

As we have seen before, similar studies have been carried out, proving the different positive effects of CLIL. Nevertheless, almost any of them have obtained significant results. Therefore its scientific reliability has not been proved.

Concerning our geographical area, as Pérez-Cañado (2012) has summarized, in Spain important scientific research studies have been developed:

- Scientific research studies in bilingual communities:
 - In the Basque Autonomous Community prominent figures like Sierra & Lasagabaster (2010), or Ruiz (2010), have developed different studies based on oral skills, pronunciation, vocabulary, written production, verbal tenses, morphology and syntax, showing favourable attitudes towards trilingualism have been achieved.
 - In Catalonia, Pérez-Vidal (2007), and Navés & Victori (2010) concluded CLIL learners improved some of their learning skill, even though Catalonia lacks continuity in CLIL programmes.

- Scientific research studies in monolingual communities:
 - In La Rioja the group GLAUR (Grupo de Lingüística Aplicada de la Universidad de La Rioja) reveal interesting results about vocabulary acquisition.
 - In Andalusia Lorenzo (2010) and (2006) respective studies reveal a supremacy of CLIL students over language-driven instruction. In monolingual communities such as Andalusia, not many instances about CLIL can be found, probably due to the fact that the CLIL tradition is much more recent.

Taking into account the previous studies, in which the different aspects, characteristics and effects of CLIL have been studied, our project had as main objective to determine the possible influence of CLIL in non-CLIL subjects, so the characteristics of a scientific research have been applied.

3. METHODOLOGY

3.1. Research design

Using Nunan's (1991) and Seligner & Shohamy's (1989) classification of the characteristics of research, we have determined the ones that have been applied in the present project. These characteristics can be divided following the classification below:

- According to the general framework: The present research covers three different types of parameters. It is basic or theoretical because it was based on research of English studies, more specifically, on possible negative effects in CLIL students. To be considered as a relative and related research, the basic research product (the possible negative effects) was applied to a specific problem, (anxiety in the students). Conclusively, as long as it was carried out on real classes, and can be considered as a Contrastive Analysis, we can define it as a practical research.
- According to the source of the information: It is a primary research, because even though a deep search in secondary sources is required, the principal aims have been derived from primary sources of information, (the differences between CLIL and non-CLIL students). More specifically, this project is a statistical study. It covers a wide range of subjects, operating on an experimental study in which some questionnaires have been included.

- According to the approach: Our project is analytic, in other words, we investigated a single factor, the influence of CLIL, which at some levels is constituent to a major system, the correct acquisition of certain knowledge.
- According to the purpose: It is deductive. We tested a particular hypothesis, the influence of CLIL in non-CLIL subjects, searching for evidence either to support or disprove it.
- According to the data, we have distinguished the following aspects:
 - Form of the data: The Data can be classified in quantitative and qualitative. Through the use of open-questionnaires we are going to work with subjective or relative data, this is because each individual can interpret the questions or the answers in a different way. Nevertheless, through the use of closed-questionnaires we are going to deal with controlled and factual data, or in other words, quantitative information.
 - Method of analysis: Interpretative (subjective) and statistical (objective and systematic).
 - Method of collection: It is experimental, classroom-based research.
 - Time of collection: It has been collected from a specific moment over a concrete period of time, or in other words, a cross-sectional study.

3.2. Sample

One of the most important and difficult issues to solve when planning to conduct an investigation is to decide what will be the sample, which features should be considered and if it engages the type of search you want to perform.

So adapting our needs to the research, we needed to find two schools, a CLIL and a non-CLIL within the same area, to avoid the possibility that some dependent variables could influence, somehow, in a decisive form, the final results. Students of the town of Campohermoso constitute the sample. Campohermoso is a town in the municipality of Níjar (Almería) Andalucía, Spain. Its population, as is reflected in the National Institute of Statistics (NIS), is approximately of 8871 inhabitants and they are dedicated almost exclusively to intensive agriculture in hothouses.

Specifically, the centers participating in the study were ‘CEIP La Libertad’, a non-CLIL school, ‘CEIP Concordia’, a CLIL school, and IES Campos de Níjar, a Secondary CLIL school where students from both previously mentioned centers arrive at the end of Primary

Education. The total number of participants was 174, divided in groups of 16/15 students per class. The course range selected to be included in the project has been from 2nd of Primary Education to 1st of Secondary Education. The idea was to use the students' experience to arrive at some valid conclusions. Therefore, the students had to have coursed at least one school year in their respective educational methods (CLIL and non-CLIL). Following these criteria, the sample was students from 2nd of Primary Education to 1st of Compulsory Secondary Education. 1st of Primary Education students were not selected because they were not course any school year using the CLIL method. The range of age is between 7 and 13 years old and the majority of the students are acquiring, in varying degrees, an A2 level (CEFRL) (Council of Europe, 2001). The sample is divided in 86 girls and 88 boys.

	NON-CLIL						CLIL					
	2 nd	3 rd	4 th	5 th	6 th	1 st	2 nd	3 rd	4 th	5 th	6 th	1 st
Girls	11	6	9	11	8	2	8	9	7	4	11	2
Boys	5	10	6	4	8	6	8	7	8	12	5	6
Total	16	16	15	16	16	8	16	16	15	16	16	8

Table 1. Distribution of the sample according to its course and gender

Finally their nationalities were varied, as there was a similar percentage between Spanish and immigrant students. Nevertheless, most of these immigrant students were born in Spain, so their native language was Spanish.

Student Nationalities

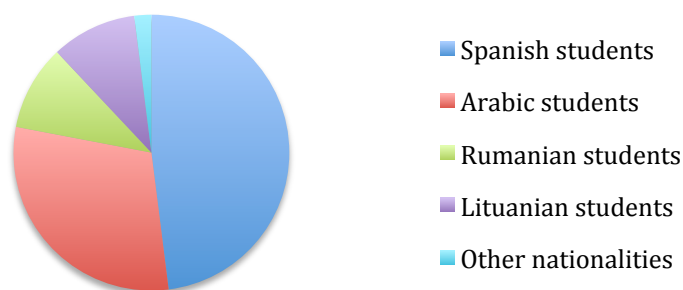


Chart 1. Distribution of the sample according to its nationality

3.3. Variables

In the present project, and related with the quantitative procedures and data, three different types of variables have been taken into account: dependent, independent and moderating. As Nunan (1991) explains independent variables are those that cause a particular effect on the dependent ones. Moderating variables change the established effect of the independent variable on the dependent one.

Taking into account the characteristics and aims of this study, we established as dependent variables:

- The level of anxiety in CLIL and non-CLIL students towards non-CLIL contents such as Spanish language and mathematics.
- The degree of preparation of CLIL and non-CLIL students towards non-CLIL subjects as Spanish language and mathematics.

As the independent variables:

- The educational method, CLIL o non-CLIL, implemented in each school.

The following variables are the moderator ones, those would can exert a change on the dependent variables:

- Last year Spanish language final qualification
- Last year mathematics language final qualification

At the end of the study, and just to obtain some informative data, we will explain the different correlations we have found between some of the dependent variables and the moderator ones.

3.4. Instruments

For this research, we have developed and selected some instruments, which vary depending on their function and application.

The variables to be measured in this research are the anxiety, that may be developed by CLIL students towards non-CLIL subjects, and the degree of preparation that both groups of participants, CLIL and non-CLIL, dedicate to the acquisition of content regarding the non-CLIL subjects. To obtain valid results, we have chosen three different questionnaires, which have been slightly modified to achieve the previously mentioned objectives.

In order to measure anxiety in students of the first Primary levels, the questionnaire *Cuestionario de ansiedad infantil* (CAS) by Gillis (1999) was chosen. To measure anxiety in the rest of the students, considered as young adolescents, the test *Escala de ansiedad infantil de Spence* (2003) in its Spanish adaptation was used. Finally, to assess the preparation and the time spent in these subjects the *Cuestionario de hábito y técnicas de estudio* by Álvarez and Fernández (1989) was selected.

Cuestionario de ansiedad infantil (CAS) detects possible anxiety disorders during the early years of Primary Education: 1st, 2nd and 3rd of Primary Education. CAS is a tool that enables teachers and professionals to make a psychological exploration of a child. Because of the students' age, the procedure has been simplified as much as possible. Thus, it allows participants to answer with greater naturalness to the questions, eliminating the stress that often accompanies such type of questionnaires. The Spanish adaptation of CAS has been selected instead of its original version because of the English level of the original one is too far from English level of our students. Turning to the reliability, this adaptation obtained very similar results to its original version. The internal consistency was 0.65, which was very similar to the original version. Its reliability was contrasted with Spanish factorial analysis with samples in which converge instability and the weakness of self.

After analyzing all these features, we proceeded to adapt this questionnaire to our particular project. To accomplish this task, we have studied each survey question to eliminate those who are far removed from educational issues. The items removed addressed family situations, so from the 20 questions of the Spanish adaptation of the CAS, 15 of them were chosen (see appendix 1). In order to adhere to the area in which research was conducted, teachers in each class were responsible to explain and remember every so often that even though the questions are worked in general, because they have not been modified to avoid incomplete results, the students must answer always thinking about the subjects of Spanish language and mathematics.

La *Escala de ansiedad infantil de Spence* is a questionnaire created to detect anxiety problems in young teenagers (participants from 8 to 18 years old). It is an adaptation of *The Spence children's anxiety scale* (SCAS), which was translated into Spanish taking into account sociolinguistic aspects of our culture. The questionnaire has been developed taking into account the different characteristics of adolescents and with a vocabulary adapted to them, thereby facilitating that students felt comfortable with the survey. Several studies have proved the reliability and validity of the present adaptation (Carrillo et al., 2012) particularly regarding both the reliability and validity of the questionnaire, as quoted below:

The total-score internal consistency (Cronbach's alpha) was 0.92 and indices of subscales ranged from 0.81 (Panic-Agoraphobia) to 0.61 (Separation Anxiety and Physical Injury Fear). The test-retest reliability (intra-class correlation) was 0.61 and subscales ranged from 0.62 (Specific Phobias) to 0.51 (Panic-Agoraphobia). All scores decreased slightly from test to retest. SCAS scores showed convergent validity in their high correlation with general and specific anxiety measures. SCAS scores also showed divergent validity in their low correlation with several measures of non-anxiety disorders, including depression. It is concluded that the SCAS is a suitable tool to assess in Spanish children anxiety disorders as they are depicted in DSM-IV. (Carrillo et al. 2012: 1-2)

The Spanish adaptation is too extensive and covers areas that are not needed for our project. It has, therefore, been adapted to our interests. After studying each of the questions and their respective areas of study we have made a classification of each of them, and we have chosen those that best suit our objectives. From a total number of 45 questions covering the following areas: panic attacks and agoraphobia, separation anxiety disorder, social phobia, fears, obsessive-compulsive disorder, and generalized anxiety disorder; two areas have been chosen for our project: social phobia and anxiety disorder in general, with a resulting total of 12 questions (see appendix 2). As in the previous questionnaire, these questions have not suffered any adaptation to avoid fractional results. In order to obtain reliable students answers that keep within our project, the teacher was in charge to explain and remind to the students, during the application of the questionnaire, that while they were answering the question, they should always be thinking about the relationship between the items and Spanish language and mathematic content subjects.

Connected to the students' questionnaires, we considered the last test of the three ones selected. *Cuestionario de hábitos y técnicas de estudio* by Álvarez and Fernández (1989). The instrument considers three basic aspects, such as the physical and contextual conditions, the time planning of the student and the knowledge of the basic study techniques. The questionnaire is divided in five different sections: general attitude toward learning, place where that learning takes place, physical state of the student, work plan, and study techniques. The reliability and validity of the present questionnaire have been proved in its past editions. In this new edition it has been updated, using the data obtained after the evaluation of 7.050 new cases from different geographical areas. As we mentioned regarding previous tests, not all the sections of this questionnaire fitted our interests, so after the study and the evaluation of

the research questions we selected one of the sections: work plan (See Appendix 1 and 2). This section includes different items related to a good planning and structuring of time when studying, taking into account the number of content subjects and their difficulty. As in the previous questionnaire, these questions have not suffered any adaptation to avoid fractional results. In order to obtain reliable students answers that keep within our project, the teacher was in charge to explain and remind to the students, during the application of the questionnaire, that while they were answering the questions they should be always thinking in the relationship between the items and the Spanish language and mathematics content subjects.

In order to obtain more detailed information about the students' results, a questionnaire with general questions for the teachers was elaborated. It treated the differences they can see between CLIL subjects and non-CLIL subjects. It is an open-closed questionnaire in order to give some freedom to the teacher if they want to comment some information they find interesting (See Appendix 3).

3.5. Procedure

The way in which the different questionnaires were applied was similar. Each student had their own paper-copy of the questionnaire due to the fact that not all the students had a computer at their disposition. An introduction and some instructions were provided from the teachers of the different groups, in order to explain the different features of the tests. We were present in the classes we used to teach, but in order to diminish some stress during the test, we were not present in the classes in which we had not taught in. All the students completed the test in their classes, with their corresponding teachers. The young students, 2nd and 3rd of Primary Education, did the test at the same pace with some help from the teacher, explaining each question and immediately answering it. In the rest of the groups, the teacher explained the general topic of the questions, and solved each question that the students had. Nevertheless, the students read and answered their questions at their own pace. The duration of the complete test did not take more than one session, 45 minutes.

3.6. Data collection

A clear planning of the tasks to alongside its execution is necessary in order to conduct a project. To ensure reliable results, each process was completed in a specified time. This is

really important for the development and administration of the questionnaires, in order to obtain valid results the questionnaires have to be accomplished under the same circumstances, for example, the same data collection procedure and time that was necessary. The following table allows for a clear visual of the planning.

Activity/Task	Month 1		Month 2		Month 3		Month 4	
Search of the two types of schools and high schools in Andalusia	X							
Search of different studies about the benefits and negative effects of bilingualism		X						
Search of different tests dealing with anxiety and study habits		X						
Adaptation of the selected tests			X					
Realization of a questionnaire for the general impression of the teachers			X					
Research design				X				
Data collection in Primary and High Schools					X			
Data collection of teachers' questionnaires					X			
Data analysis						X	X	
Discussion about results, conclusions and further investigations.							X	X

Table 2. Timeline of the present research study

It is important to bear in mind that we used real data about real participants, the probability we would have to deal with many issues, (participants who are ultimately not included, schedule changes, good will of the people you're working with, etc.) was very high. To solve these probably problems we included more days and more participants than we thought was necessary.

3.7. Data analysis

To confirm or reject research hypotheses, quantitative and qualitative methods were used for data analysis, since these methods provided a reliable outcome for the results. Quantitative methods had a more important role in this project than qualitative methods, due to the fact that we answered all the hypotheses by considering them alone; however, in order to support or refuse the final conclusion, a qualitative method was used. On the one hand, the specific quantitative methods selected were central tendency measures (mean, median, mode), dispersion measures (standard deviation) and correlational techniques (Pearson correlation coefficients). On the contrary, the qualitative method used was an open-closed questionnaire about some behaviors observed in class (class observation):-

The facts needed to reach a conclusion were provided by the central tendency. The central tendency indicates the typical behavior of a data set. Central tendency is understood as representative or typical score. The mean, known as the arithmetic average; the mode, which is the most frequent result or answer in a particular group; and the median, the result that is found exactly in the middle of the range of outcomes.

The variability measures were used to complete the insufficient information we can obtain from the previous option. The standard deviation is “a sort of average of the differences of all scores from the mean” (Chaudron, 1988: 69) which shows how separated the different results are from the mean.

The correlational techniques were used to find the possible relationships that can be established between particular variables. We distinguished among the positive correlation that both variables had a very close behavior, and the negative correlation, was the opposite. Pearson correlative coefficient can be defined as the covariance of two variables divided by the product of their standard deviations.

In order to support or refuse hypothesis 1 (H1) the central tendency measures were used. The mean gave us the support to clarify if CLIL students show more anxiety towards the selected subjects than non-CLIL students. The higher mean was present in the results of the more anxious group. Since we tried to prove a hypothesis we should have obtained homogeneous results from a heterogeneous group. To know if the results had included any extreme scores we employed the standard deviation. The lower the results of the standard deviation were, the more reliable the results were which enabled us to support the hypothesis.

With the intention of supporting or denying hypothesis 2 (H2) the central tendency measures were used. As in H1, the mean confirmed what group had a better work plan. The

higher mean was present in the CLIL group, due to their ‘larger’ amount of contents and academic load, the group learned how to organize their time better. Again, as in H1 the standard deviation showed us if we had worked with homogeneous results, or if there had been extreme scores that would rest reliability to the hypothesis.

With the purpose of confirming or rejecting hypothesis 3 (H3), as in H1 and H2, the mean gave us the answer. If our hypothesis had been correct, the higher mean should have been the non-CLIL group one, because they didn’t have the same academic load as the CLIL group and they didn’t feel the same stress. As in H1 and H2, the standard deviation added or took away reliability to the final results.

To support or refuse hypothesis 4 (H4), the correlative techniques, particularly Pearson correlative coefficient, were used. We tried to support that, although CLIL students are more anxious, the more they work in the different subjects, the less anxious they become. In other words, we tried to confirm a negative correlation between these two dependent variables, the anxiety and the preparation. The perfect result was $p = -1$, it demonstrated a perfect negative correlation but a $p < 0$ showed a negative correlation, which it also supported the hypothesis.

To conclude with the quantitative analysis, a t-student or t-test was applied to the final results, to verify if they are significant or if the sample is unreliable. To carry out these procedures we used the Statistical Product and Service Solutions (SPSS).

In order to obtain another perspective other than that provided by the previous questionnaires and results, we developed a fourth questionnaire, in this case, an open-closed document. Two different instruments were used, the teachers direct observation of their students and the fulfillment of the questionnaire. The teachers were advised to observe their students reactions to the different subjects during the week (structure observation) in which the students’ questionnaires were implemented. At the end of the week the teachers completed their own questionnaire with 7 open-closed questions. Due to the fact it is a qualitative method, based on the impressions of the participants, no on factual data, it was used as a complementary tool, the final results and conclusions were based almost completely on the quantitative research.

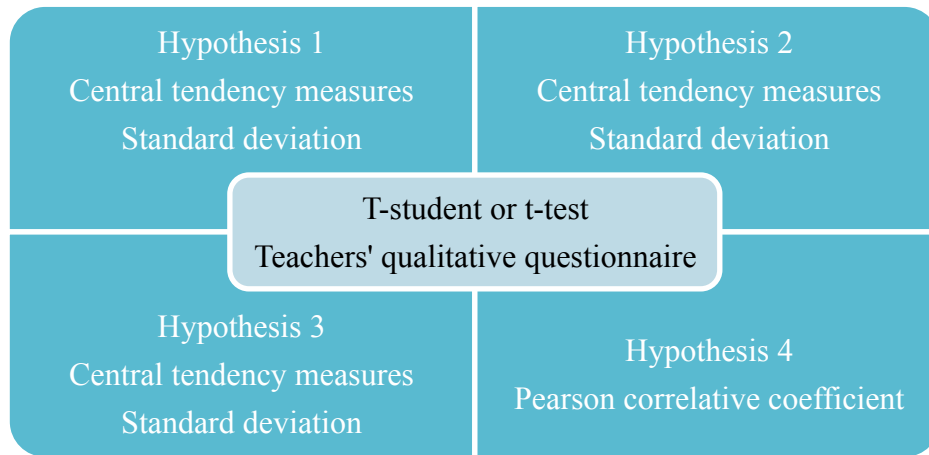


Figure 2. Data analysis of the different hypothesis

4. RESULTS AND DISCUSSION

Taking into account the previous aspects of the project, and as we have mentioned before, we studied the diverse results of the different questionnaires as two varied kind of data, quantitative and qualitative, therefore we selected two different analyses of data. As far as quantitative data was concerned, we based our analysis on the central tendency measures and Pearson correlation coefficient. Regarding qualitative data, we analyzed the different answers provided by the teachers and elaborated a brief summary that included the most important and conclusive questionnaire points. This analysis was conducted by each tutor individually, we allowed also for possible differences between each of them.

4.1. Quantitative data analysis of the different classess results.

To reach a conclusion regarding hypotheses 1, 2 and 3, we carried out a study about the mean, the median, the mode and the standard deviation of each class. When all the different groups had been analyzed we reached a general conclusion using the compilation of all the different results.

4.1.1. Second of Primary Education

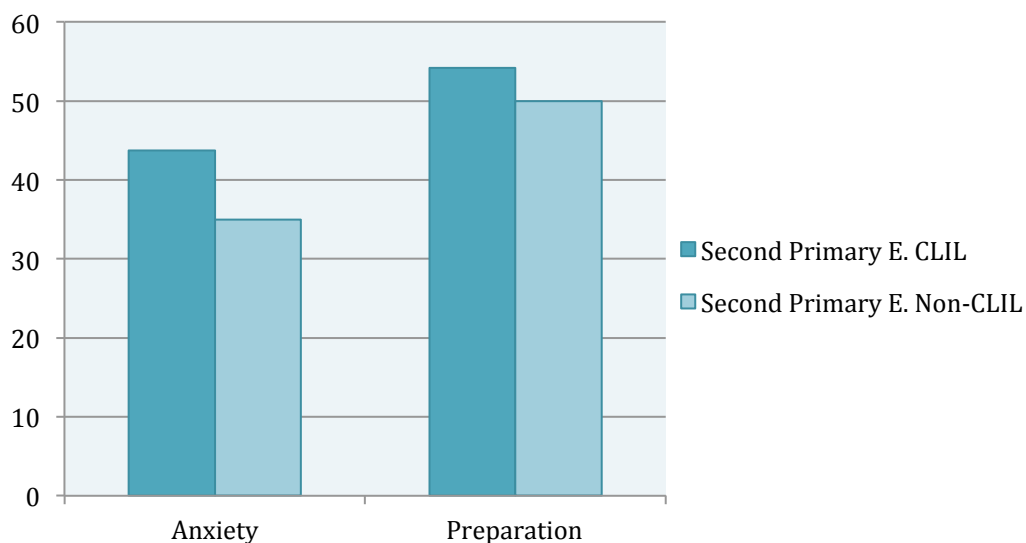


Chart 2. Second grade means in anxiety and preparation

We observed in the previous chart of the mean of CLIL students that both anxiety (43,75) and preparation (54,10) were higher than non-CLIL students mean (35,00 in anxiety, 50,00 in preparation).

		Standard deviation	Median	Moda
CLIL	Anxiety	11,08	43,75	46,67
	Preparation	15,10	55,47	66,67
Non-CLIL	Anxiety	15,21	30,00	20,00
	Preparation	9,72	50,00	55,56

Table 3. Central tendency measures in second grades

The standard deviation in both classes was between 9 and 16 therefore, we deduced that there were no extreme scores, so the results were much more reliable.

In Second grade of Primary Education, hypothesis 1 and 2 were confirmed, nevertheless the difference between both results was not highly significant.

4.1.2. Third of Primary Education

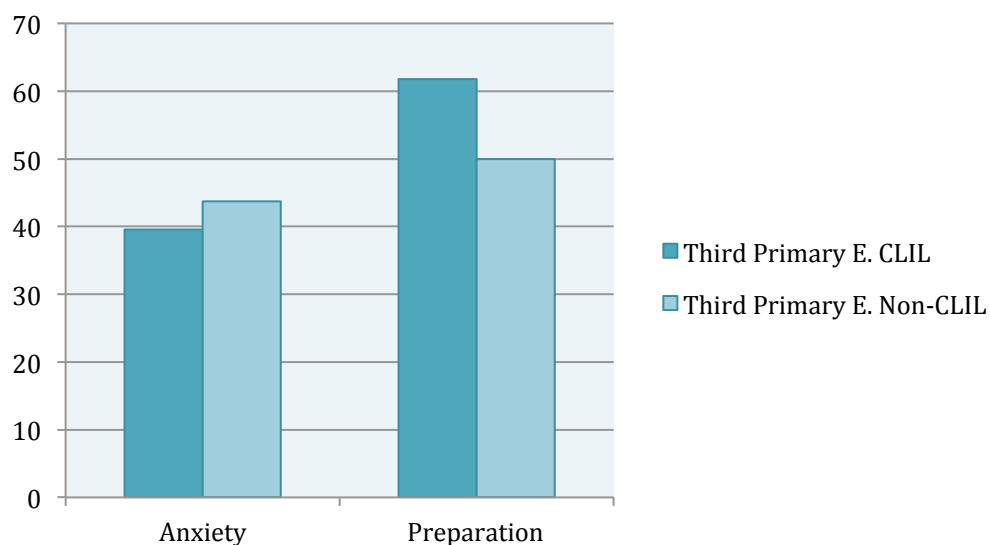


Chart 3. Third grade means in anxiety and preparation

We observed that in the previous chart the mean of CLIL students in anxiety (39,58) was lower than non-CLIL students mean (43,75) meanwhile the preparation mean of CLIL students (61.80) was higher than non-CLIL students mean (50,00).

		Standard deviation	Median	Moda
CLIL	Anxiety	13,96	43,33	40,00
	Preparation	14,41	66,67	66,67
Non-CLIL	Anxiety	8,75	43,33	46,67
	Preparation	14,58	55,56	55,56

Table 4. Central tendency measures in third grades

The standard deviation in both classes was between 8 and 15 therefore we deduced that there were no extreme scores, so the results became more reliable.

In Third grade of Primary Education, hypothesis 1 was confirmed, although the difference between both results was not very meaningful. On the contrary, hypothesis 2 was disconfirmed, in this case, because of a clear difference in the mean of both results.

4.1.3. Fourth of Primary Education

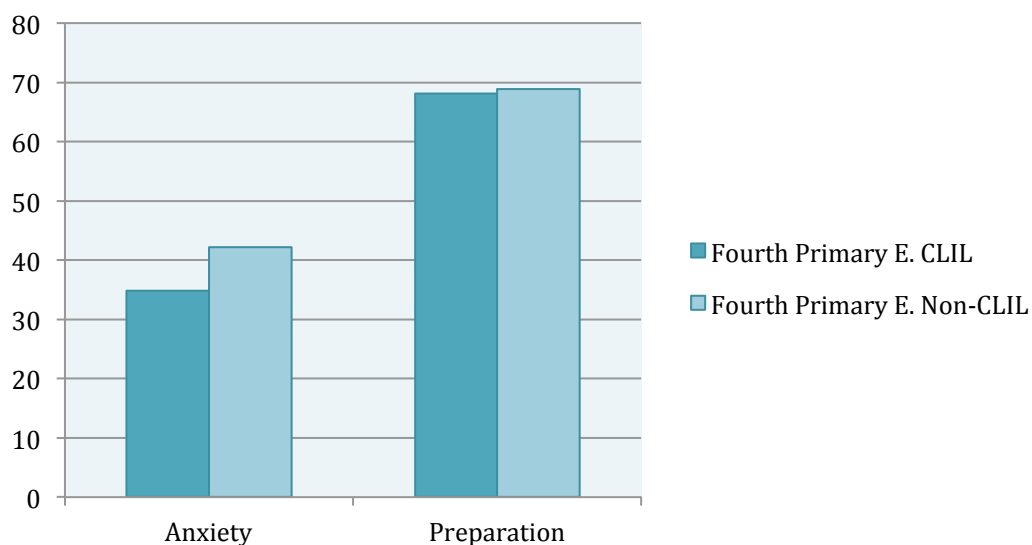


Chart 4. Fourth grade means in anxiety and preparation

As we observed in the previous chart, there was a change in the evolution of the mean. The mean of CLIL students when it came to anxiety (34,81) and preparation (68,14) was lower than non-CLIL students anxiety (42,21) and preparation (68,89).

		Standard deviation	Median	Moda
CLIL	Anxiety	10,07	36,11	41,67
	Preparation	16,59	66,67	55,56
Non-CLIL	Anxiety	7,93	44,44	41,67
	Preparation	16,30	66,67	55,56

Table 5. Central tendency measures in fourth grades

Standard deviation in both classes was between 7 and 17 therefore we deduced there were not any extreme scores present, so the results gained more reliability.

In Fourth grade of Primary Education, hypotheses 1 and 2 were confirmed, although the difference between both results was not very meaningful.

4.1.4. Fifth of Primary Education

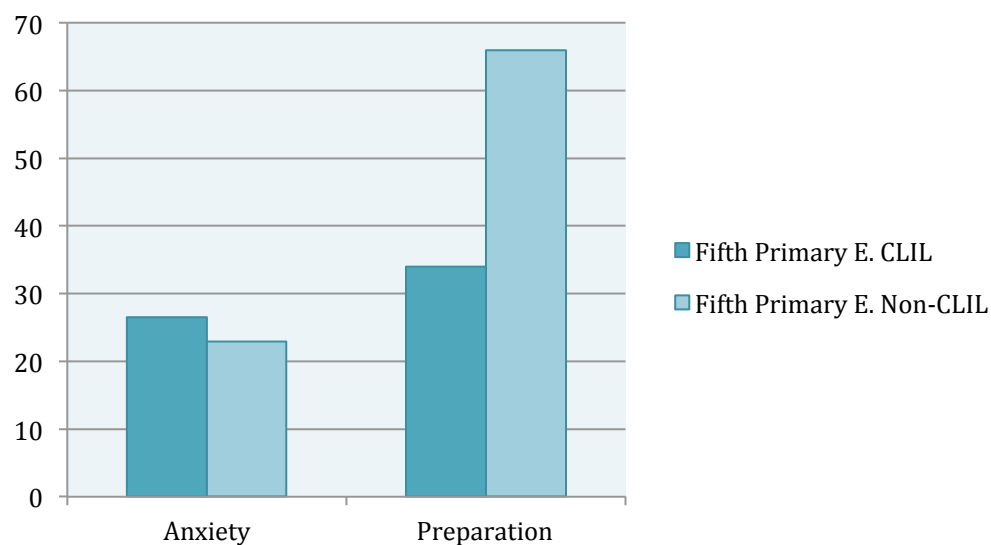


Chart 5. Fifth grade means in anxiety and preparation

In this course, as we observed in the previous chart, the average returned to have a similar tendency to the one we saw in the first courses. The mean of CLIL students in anxiety (26,56) was higher than non-CLIL students anxiety (22,91) meanwhile preparation (34,02) was lower than non-CLIL preparation one (65,97).

		Standard deviation	Median	Moda
CLIL	Anxiety	12,87	23,61	22,22
	Preparation	9,29	33,33	33,33
Non-CLIL	Anxiety	9,46	18,06	16,67
	Preparation	10,59	66,67	66,67

Table 6. Central tendency measures in fifth grades

Standard deviation in both classes was between 9 and 13, therefore we deduced there were not any extreme scores, so the results were more reliable.

In Fifth grade of Primary Education, hypothesis 1 was confirmed, although the difference between both results was not very meaningful. On the contrary, hypothesis 2 was refused and, as in the third year, it was due to a clear difference in the mean of both results.

4.1.5. Sixth of Primary Education

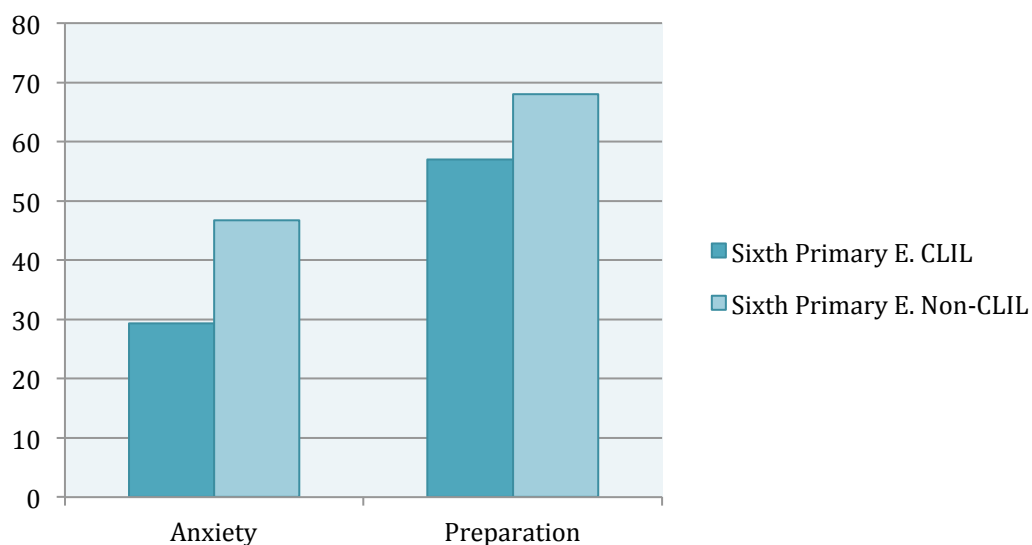


Chart 6. Sixth grade means in anxiety and preparation

In this level, as we observed in the previous chart, a change was present again in the movement of the anxiety levels. The mean of CLIL students in anxiety (29,34) and preparation (56,94) was lower than non-CLIL students anxiety (46,70) and preparation (68,05).

		Standard deviation	Median	Moda
CLIL	Anxiety	10,94	29,17	27,78
	Preparation	16,84	55,56	55,56
Non-CLIL	Anxiety	15,73	41,67	33,33
	Preparation	12,67	66,67	77,78

Table 7. Central tendency measures in sixth grades

Standard deviation in both classes was between 10 and 17, therefore we deduced there were no extreme scores, so the results again were more reliable.

In Sixth grade of Primary Education, hypotheses 1 and 2 were confirmed, and this was the first level in which both means had together a clear difference.

4.1.4. First of Compulsory Secondary Education (ESO)

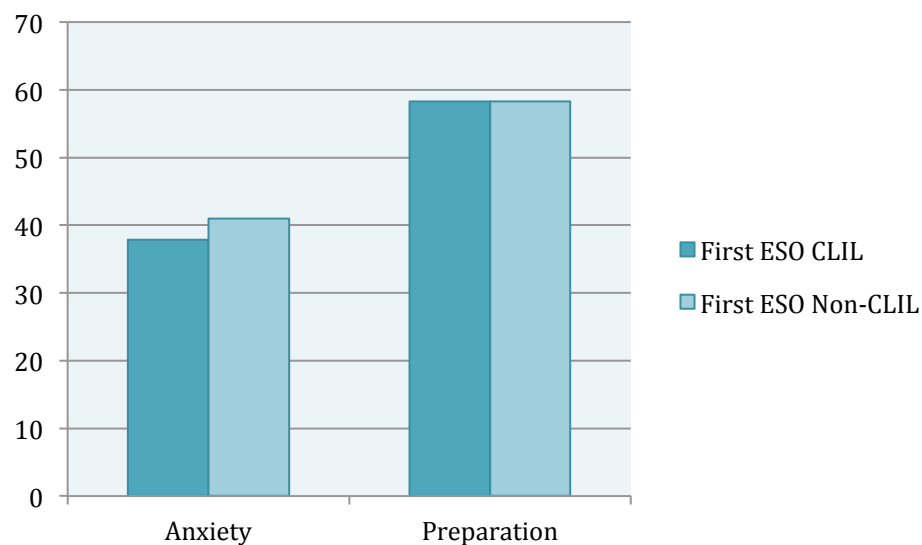


Chart 7. First grade of ESO means in anxiety and preparation

As we can observe in the previous chart, in this level, both levels of anxiety and preparation were quite close. The mean of CLIL students in anxiety (37,84) and preparation (58,32) was lower than non-CLIL students anxiety (40,97) and preparation ones (58,33).

		Standard deviation	Median	Moda
CLIL	Anxiety	10,76	36,11	25,00
	Preparation	13,10	66,67	66,67
Non-CLIL	Anxiety	24,31	41,67	-
	Preparation	6,25	55,56	55,56

Table 8. Central tendency measures in first grades of ESO

The standard deviation in both classes was between 7 and 17, therefore we deduced there were not any extreme scores, so the results gained more reliability.

In the First grade of Compulsory Secondary Education, and as we confirmed in previous levels, both 1 and 2 hypotheses were confirmed, but in this particular level with a hardly any significant difference.

4.2. Results and discussions from quantitative data analysis of the hypotheses

4.2.1. Hypothesis 1

- i. Students who are receiving a CLIL educational method are more likely to present stress or anxiety towards the non-CLIL subjects.

	Standard deviation	Median
CLIL	16,00	36,11
Non- CLIL	17,01	38,89

Table 9. Central tendency measures

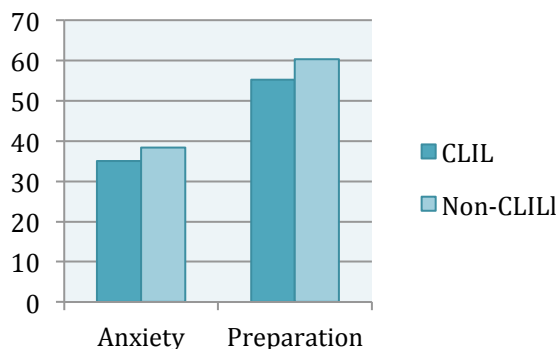


Chart 8. Bilingual and no-bilingual means in anxiety and preparation

After analyzing the statistical data that was drawn from the study, it is appreciated that the hypothesis one was disconfirmed.

Although in the individual analysis of each of the classes it was observed that there were different results. When working with all the data together, the anxiety mean in such subjects as Spanish language and mathematics was higher in non-CLIL students than in CLIL students. It was demonstrated that although CLIL students had a ‘higher’ academic load, the CLIL educational method had no negative effects related to anxiety when it came to the rest of the subjects. Moreover, the standard deviation is considered low for this study, due to the fact that it is lower than 20 points out of 100.

The evolution observed in the previous section related to the anxiety mean in the different classes was due to the introduction of the child in the Primary Education School or to this particular educational method. If in the first aspect a higher anxiety mean was shown in CLIL students, it was caused by the introduction of ‘English subjects’ that the students had not seen or worked on before. However, as students grow up, the mean suffers different changes and it finishes with a higher score in non-CLIL students. We deduced from this variation that, although at the beginning the CLIL method created more anxiety in students, when these reach higher grades, they have learned to deal with different subjects improving

their ability to face these challenges. Similar results were found in Agustín-Llach (2016: 75-96) concluded there were not significant differences between CLIL and non-CLIL students concerning the vocabulary but that CLIL learners were improving different advantages as they were growing.

4.2.2. Hypothesis 2

- ii. Students who are receiving a CLIL educational method are more likely to spend more time studying Spanish language or maths.

	Estándar deviation	Median
CLIL	21,66	55,56
Non-CLIL	19,76	55,56

Table 10. Central tendency measures

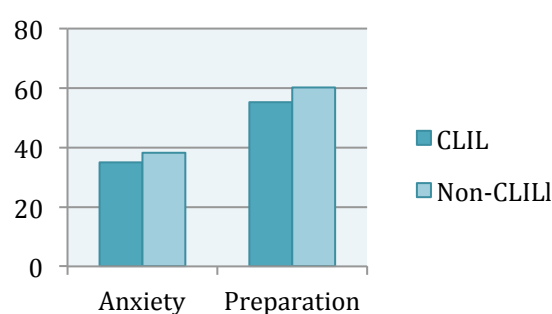


Chart 9. Bilingual and no-bilingual means in anxiety and preparation

After analyzing the statistical data that has been obtained from the study it is appreciated that the hypothesis two has also been negated.

As in the previous hypothesis, we observed that, although in the individual analysis of each of class we detected different results, when we worked with all the data together, the mean of preparation towards Spanish language and mathematics, was higher in non-CLIL students than in CLIL subjects. Again, an evolution was seen in the preparation mean. In the first years we saw a higher score in CLIL students, nevertheless in this occasion the mean suffered a change in fourth grade of Primary Education until the end of the study. If CLIL students need less time and techniques in order to be ready for an exam, we deduced that CLIL method improved their learning strategies and abilities. Finally, in First Compulsory Secondary Education, both means were practically equal.

Standard deviation was an important factor in this hypothesis, although it was still a low score, it is lower than 22 out of 100, it visibly shows a rise in the final result. This could have been caused by the extreme scores found in Fifth of Primary Education, which allowed questions to be asked about the reliability of the final results. Similar results were found in Stehler (2006) who concluded, with an extremely heterogeneous sample, that CLIL has neither positive nor negative influence on the acquisition of knowledge.

4.2.3. Hypothesis 3

- iii. Students who are not receiving a CLIL educational method are more likely to score highly on Spanish language or maths marks.

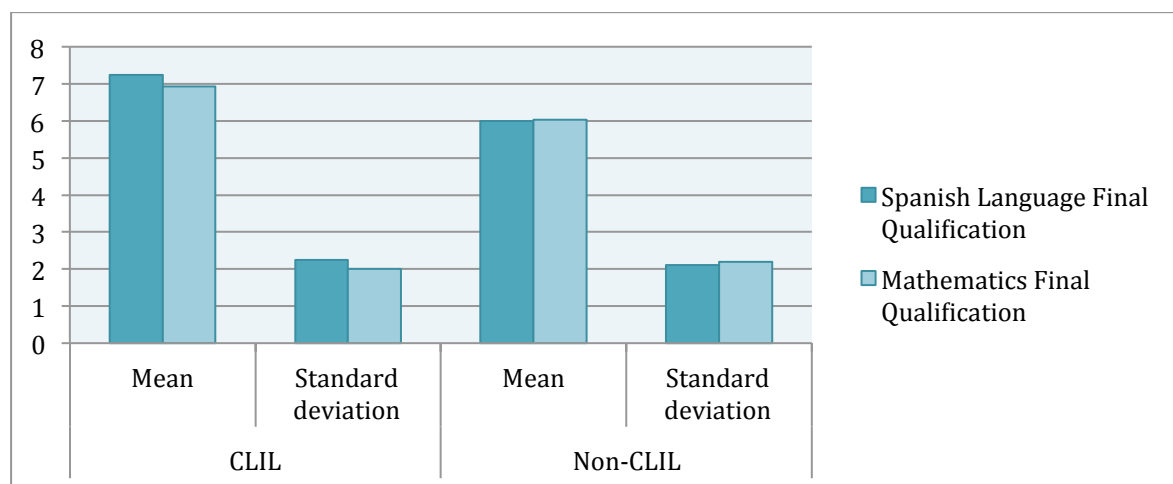


Chart 10. Comparison between the mean of last year marks in Spanish language and mathematics, differentiating the two groups of the study

The different means in Spanish Language Marks and in Mathematics Marks were analyzed having taken into account if the students were CLIL or non-CLIL. After the comparison of both results we observed that hypothesis 3 has been refused. CLIL students obtained a Spanish Language mean of 7,23 out of 10, meanwhile non-CLIL students obtained a mean of 6 out of 10. Concerning Mathematics, the CLIL students' results were 6,92 out of 10, and non-CLIL students was 6,02 out of 10.

It was expected that the non-CLIL students would obtain better results than CLIL students, because the first subjects have less 'academic load' than the second. These results, in particular, could be connected with the hypotheses 1 and 2, which demonstrated that the effects of bilingualism influenced the rest of the subjects in a positive form, making the students' need less preparation time and they suffered a lower level of anxiety. Similar results were found in Surmont, Struys, Van de Craen and Somers (2014: 55-72), who conducted a research to prove the different advantages of CLIL students and they demonstrate CLIL learners acquire cognitive advantages that can be noted in courses like mathematics.

4.2.3. Hypothesis 4

- iv. Students who spend more time studying Spanish language or maths are not more

likely to present stress or anxiety.

Correlations		Preparation	Anxiety
Preparation	Pearson correlation coefficient	1	,052
	Sig. (bilateral)		,497
	Sum of squares and cross products	67579,771	3013,927
	Covarianza	390,635	17,422
	N	174	174
Anxiety	Pearson correlation coefficient	,052	1
	Sig. (bilateral)	,497	
	Sum of squares and cross products	3013,927	50093,552
	Covarianza	17,422	289,558
	N	174	174

Table 11. breakdown of the different analyzes related to the correlation between anxiety and preparation.

To analyze the possible correlations between the level of preparation and the anxiety we conducted an analysis using the Pearson Correlation Coefficient. This principle, as it has been explained previously, establishes a range from the perfect positive relationship ($p = 1$) and the perfect negative correlation ($p = -1$). In this study a negative correlation between the preparation of a student and his stress level was expected to be found. However, after having carried out the necessary statistical processes, the final results were the opposite, so again, the hypothesis 4 had been denied.

It was expected that the greater the preparation, the greater the self-esteem would be and students' personal safety. However, what we have found is that the greater the preparation, the greater the anxiety. Nevertheless, although the result exceeded the value 0, it did with very low score ($p = 0,052$), so it was understood that both variables are practically independent from one another.

4.2.5. T-test of the research study

Finally, in order to obtain the significance of the present research, a t-test or t-study was carried out.

		Levene Test for Equality of Variances		T-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Anxiety	Equal variances assumed	,479	,490	-1,259	172	,210	-3,24308	2,575
	Unequal variances are assumed	-	-	-1,259	169,858	,210	-3,24308	2,575
Preparation	Equal variances assumed	4,968	,027	-1,715	172	,088	-5,11115	2,980
	Unequal variances are assumed	-	-	-1,715	164,415	,088	-5,11115	2,980

Table 12. breakdown of the different analyzes related to the t-test

Regarding anxiety t-test, we were able to extract some conclusions. Levene's test is not significant ($p = 0.490$). Therefore the probability that the null hypothesis could be fulfilled is relatively high, so we assume homogeneity of variance or, in other words, equal variances had been assumed. The t statistic worth is -1.259 (172 degrees of freedom), which leads to the “p” value (“p” = 0.210). Taking into account the previous data, it was assumed there is no link or association between anxiety in CLIL and no- CLIL students because mean value of anxiety in both groups was not statistically different to the alpha significance level ($p = 0.05$).

Regarding preparation t-test, similar conclusions were reached. Levene's test was not significant ($p = 0,027$), the equality of variances had been assumed. The t statistic worth is -1.715 (172 degrees of freedom) and the value "p" was 0.088. As in the previous t-test, it was assumed that CLIL and non-CLIL students had no significant differences when it came to preparation, due to the fact the mean value of both groups were not between the alpha significance level ($p = 0.05$).

As a general conclusion of quantitative data analysis, our four hypotheses had been refused, proving the benefits of bilingualism in students and demonstrating nonexistence of any negative effect. Finally, the finishing results are not significant because the sample did not have a sufficient level of reliability.

4.3. Results and discussion from qualitative data analysis of the hypotheses

In order to analyze this research study from a qualitative point of view, a questionnaire based on teachers' observations and opinions (see Appendix 3) was given to the professionals involved. A summary of their answers is presented below:

- Second grade of Primary Education (CLIL): The tutor, who imparted language, maths, social and natural sciences, and social and civic values, did not notice any difference between CLIL and non-CLIL subjects. Her answers were negative to the possibility of a clear difference related to anxiety or preparation between the previously mentioned subjects.
- Second grade of Primary Education (non-CLIL): The tutor, who imparted language, maths, social and natural sciences and social and civic values, noticed a clear difference between language and maths in contrast with sciences, in spite of the school not being CLIL. The first subjects needed more preparation on behalf of the students and a higher importance was given to them. Nevertheless, she did not notice any anxiety towards the subjects. Finally she pointed out the possible reason for this difference: the majority of the students were immigrants, some of them had been in Spain for several years, so they had no problem with the language, but the rest of them had recently arrived from their respective countries, consequently they were currently acquiring Spanish, which toughened their the comprehension of the contents.

- Fourth of Primary Education (CLIL): The tutor, who imparted language, maths, social and natural sciences and social and civic values, did not notice any difference between the CLIL and the non-CLIL subjects. All her answers were negative to the possibility of a clear or important difference between the previously mentioned subjects, neither in anxiety or preparation.
- Fourth grade of Primary Education (non-CLIL): The tutor perceived a small difference between language and maths in contrast with sciences. The first subjects required a major percentage of studying or preparation but it did not derive in anxiety or nervousness towards them. In some cases they showed negative responses to tests or exams.
- Fifth of Primary Education (CLIL): The class showed difficulties towards the CLIL subjects, furthermore CLIL homework produced a general rejection response from the students. CLIL qualifications were lower than the rest of the subjects, nevertheless the students spent more time at home working with Spanish language and mathematics. Finally, the students preferred the non-CLIL subjects due to the inclusion of English in sciences.
- Fifth of Primary Education (non-CLIL): No important difference between the two groups of subjects was found, although students did a slightly higher level importance to mathematics and language.
- Sixth of Primary Education (CLIL): The tutor inferred his students found more difficulties in the language and math's subjects, but he did not notice any anxiety towards them. The results were lower in the non-CLIL subjects. Moreover the students showed a negative attitude towards all the subjects.
- Sixth grade of Primary Education (non-CLIL): The teacher did not notice any differences between the different groups of courses, but he did perceive nervousness when they had to complete an exam.

In conclusion, we can affirm that the qualitative study has confirmed the results of the quantitative outcomes. Almost no teachers found anxiety or a higher level of preparation towards non-CLIL subjects at the expense of CLIL subjects, only in very precise cases. The students presented, in general, rejection towards tests, independently of the subject (it was more feasible in the highest degrees). A curious fact that could be extracted was found in the thoughts of the CLIL teachers, their students perceived both groups of subjects important, while in non-CLIL teachers' impressions, students believed Spanish language and mathematics were more important.

5. LIMITATIONS OF THE STUDY AND LINES FOR FUTURE RESEARCH

Before commenting on the conclusion of this research study, some brief notes should be highlighted concerning the limitations of the study.

Despite the effort and commitment on our part in order to conclude this research without disputes, we have encountered number of different problems, that although we had been warned about their possible appearance, not sufficient measures were taken to avoid them.

First of all, regarding the timeline of the study, it was planned taking into account all the different sections, information, data collection and data analysis necessary to develop a research study. Nevertheless, although two weeks were allocated for the implementation of the questionnaires (which could be completed in 45 minutes at the most) in the different classes, some of the teachers did not meet the deadline, and a delay of one and a half weeks was added to the deadline of the study. In order to solve this problem, the data collection should have had more time to avoid possible mishaps related to the real samples.

On the other hand, due to the fact this study is an MA Dissertation, we had not calculated with the support of all the participants involved in the different schools. The management team of each school agreed to our research study and gave us the approval to give the different questionnaires to their students. Nevertheless, it seems that not all the teachers involved in the schools were content because some of their questionnaire were handed in in blank, and others have yes/no answers, where multiple or more complex responses were required. In order to improve the study, the research should be implemented in a center in which all the participants have a scientific interest in the results or the investigation, in order to facilitate the process.

The present is a cross-sectional study, data is collected at a single point. A longitudinal study would allow for more reliable data, the students would be the same over a long period of time, so the study would be more reliable.

To obtain a more broad result about the benefits or negative effects of bilingualism, a study that could take into account more variables related to the students IQ, gender, nationality would be recommendable.

Finally, although the external factors of the sample were very similar, because all the data was situated in the same geographical area, in order to improve the study, it should be piloted with a larger number of students in order to obtain reliable and generalizable results.

6. CONCLUSION

In the present paper it was argued that the majority of the studies related to bilingualisms do not address the possibility of negative effects that it could result in, and almost none of them have conducted a research in the area of studies. In order to clarify some aspects of this ‘unexplored’ area of CLIL, we have designed a study in which through the implementation of certain questionnaires some possible negative effects may arise.

Returning to the hypotheses posed at the beginning of this study, it is now possible to state that no negative effect has been found in any of the results. Hypothesis 1 was refused and its results were positive towards CLIL. CLIL students were less stressed toward the selected subjects than non-CLIL students. Hypotheses 2 and 3, as the previous one, were rejected and consequently positive effects were found. CLIL students had a higher final qualification in Spanish language and mathematics they also spent a reduced quantity of time on the preparation when it came to the previous subjects. Ultimately, hypothesis 4 was refused, suggesting that CLIL students had acquired better learning strategies. However, the significance of the present data does not have a abundant degree of reliability, as the t-test results proved.

As it has been said before, similar results were found in Stehler (2006) study, summarized by Pérez-Cañado (2012: 319 – 326) which concludes, with a extremely heterogeneous sample, that CLIL has neither positive nor negative influence on the acquisition of knowledge, and in which there was not any statistically significant differences between CLIL and non-CLIL students on the acquisition of subject content knowledge.

These findings enhanced our understanding of the different relationships about bilingualism and how our minds work, making connections between different parts of our brain which enhance the acquisition and understanding not only of different languages, but, also different strategies and contents.

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APPENDIX 1

Las presentes escalas y cuestionarios han sido modificados para poder detectar en los alumnos de Primaria una cierta ansiedad o dejadez hacia las áreas de LENGUA y MATEMÁTICAS. Por lo tanto, hay que recordarles en todo momento que a la hora de contestar las preguntas deben hacerlo pensando en estas asignaturas en concreto, sin tener en cuenta otros aspectos.

EJEMPLAR PARA EL PROFESORADO

- Adaptación del *Cas, Cuestionario De Ansiedad Infantil*. Por John S. Gillis. El alumno deberá marcar con una X el círculo o el cuadradito, dependiendo de su respuesta. Deben contestarlas pensando siempre en las áreas de matemáticas y lengua.

1. Mariposa. ¿Crees que te salen bien la mayoría de las cosas que intentas? Sí (redondel); No (cuadradito).
2. Cuchara. ¿La gente piensa que normalmente eres bueno (redondel) o que eres malo (cuadradito)?
3. Nube. Cuando te preguntan, ¿contestas antes que los demás niños (redondel) o los demás niños contestan antes que tú (cuadradito)?
4. Pez. ¿Tienes buena suerte (redondel) o mala suerte (cuadradito)?
5. Seta. ¿Alguna vez te han dicho que hablas demasiado (redondel), o no (cuadradito)?
6. Ratón. ¿Puedes hacer las cosas mejor que la mayoría de los niños (redondel), o a todo el mundo (cuadradito)?
7. Luna. ¿Crees que te pasan muchas cosas malas (redondel) o pocas (cuadradito)?
8. Botella. ¿Estás contento y alegre casi siempre (redondel), o casi nunca?
9. Avión. ¿Te parece que las cosas son demasiado difíciles (redondel) o demasiado fáciles (cuadradito)?
10. Libro. ¿Piensas que estás demasiado tiempo sentado en el colegio (redondel), o no (cuadradito)?
11. Hoja. ¿Sueles terminar tus deberes a tiempo (redondel) o necesitas más tiempo para terminarlos (cuadradito)?
12. León. ¿Los otros niños pueden hacer las cosas mejor que tú (redondel) o peor que tú (cuadradito)?
13. Sol. ¿Tienes muchos problemas (redondel) o pocos problemas (cuadradito)?
14. Mano. ¿Piensas que la gente a veces habla mal de ti (redondel) o que no es así?
15. Bandera. ¿Crees que haces bien todas las cosas (redondel) o sólo algunas (cuadradito)?

- Adaptación del *Cuestionario De Técnicas De Estudio* de by Álvarez and Fernández (1989). Los alumnos deberán escribir un sí o un no, dependiendo de sus respuestas. Deben contestarlas pensando siempre en las áreas de matemáticas y lengua.

1. ¿Te has parado a pensar sobre el número de actividades que realizas cada día y el tiempo que le dedicas a cada una de ellas?.....
2. ¿Tienes una idea general de lo que vas a estudiar a lo largo del curso en cada materia o asignatura?.....
3. ¿Has elaborado un plan de trabajo en función del tiempo de que dispones y de las asignaturas que tienes?.....
4. ¿Dedicas a cada asignatura el tiempo necesario que pueda asegurarte un buen resultado?.....
5. ¿Sigues el plan de trabajo que te has propuesto desde el principio de curso?.....
6. Antes de empezar a estudiar, ¿piensas lo que vas a hacer y cómo vas a distribuir el tiempo?.....
7. ¿Sueles interrumpir tus sesiones de estudio en casa?.....
8. ¿Tienes la costumbre de preparar los exámenes con poco tiempo de antelación?.....
9. ¿Aprovechas algún momento del fin de semana para repasar aquellos temas que te han quedado más flojos?.....

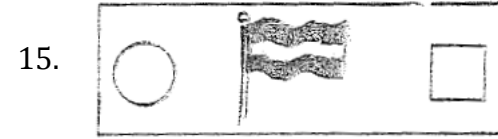
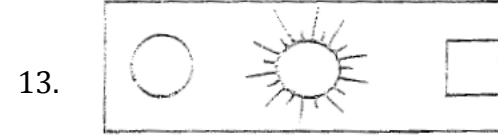
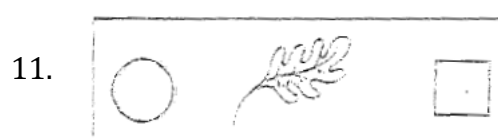
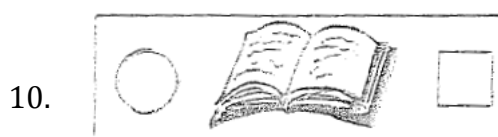
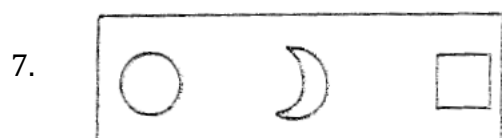
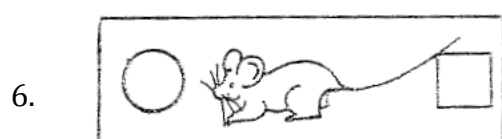
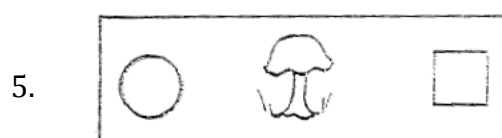
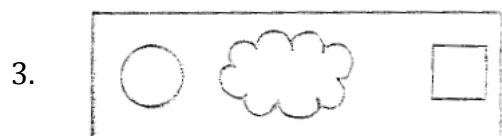
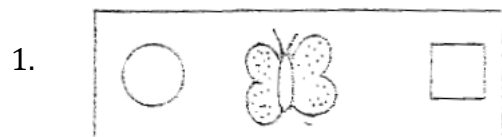
Contesta las preguntas pensando en las asignaturas de **LENGUA y MATEMÁTICAS**.

Alumno Bilingüe: ☐ Sí ☐ No **Género:** ☐ Niña ☐ Niño

Nota de Matemáticas del curso anterior:

Nota de Lengua del curso anterior:

Curso:



CUESTIONARIO DE TÉCNICAS DE ESTUDIO. Contesta las preguntas pensando en las asignaturas de **LENGUA y MATEMÁTICAS**.

Escribe al final de cada pregunta un Sí o un No.

1. ¿Te has parado a pensar sobre el número de actividades que realizas cada día y el tiempo que le dedicas a cada una de ellas?.....
2. ¿Tienes una idea general de lo que vas a estudiar a lo largo del curso en cada materia o asignatura?.....
3. ¿Has elaborado un plan de trabajo en función del tiempo de que dispones y de las asignaturas que tienes?.....
4. ¿Dedicas a cada asignatura el tiempo necesario que pueda asegurarte un buen resultado?.....
5. ¿Sigues el plan de trabajo que te has propuesto desde el principio de curso?.....
6. Antes de empezar a estudiar, ¿piensas lo que vas a hacer y cómo vas a distribuir el tiempo?.....
7. ¿Sueles interrumpir tus sesiones de estudio en casa?.....
8. ¿Tienes la costumbre de preparar los exámenes con poco tiempo de antelación?.....
9. ¿Aprovechas algún momento del fin de semana para repasar aquellos temas que te han quedado más flojos?.....

APPENDIX 2

Las presentes escalas y cuestionarios han sido modificados para poder detectar en los alumnos de primaria una cierta ansiedad o dejadez hacia las áreas de LENGUA y MATEMÁTICAS. Por lo tanto hay que recordarles en todo momento que a la hora de contestar las preguntas deben hacerlo pensando en estas asignaturas en concreto, sin tener en cuenta otros aspectos.

EJEMPLAR PARA EL PROFESORADO

- Adaptación de la *Escala De Ansiedad Infantil De Spence*. El alumno deberá marcar con una X su respuesta. Deben contestarlas pensando siempre en las áreas de matemáticas y lengua.

1. Me da miedo hacer un examen.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

2. Me da miedo usar aseos públicos.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

3. Tengo miedo de hacer el ridículo delante de la gente..

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

4. Me preocupa hacer mal el trabajo de la escuela.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

5. Me preocupa lo que otras personas piensan de mí...

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

6. Me da miedo tener que hablar delante de mis compañeros de clase.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

7. Hay cosas que me preocupan.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

8. Cuando tengo un problema noto una sensación extraña en el estómago.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

9. Tengo miedo.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

10. Cuando tengo un problema mi corazón late muy fuerte.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

11. Me preocupa que algo malo pueda pasarme.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

12. Cuando tengo un problema me siento nervioso.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

- Adaptación del *Cuestionario De Técnicas De Estudio* de by Álvarez and Fernández (1989). Los alumnos deberán escribir un sí o un no, dependiendo de sus respuestas. Deben contestarlas pensando siempre en las áreas de matemáticas y lengua.

1. ¿Te has parado a pensar sobre el número de actividades que realizas cada día y el tiempo que le dedicas a cada una de ellas?.....
2. ¿Tienes una idea general de lo que vas a estudiar a lo largo del curso en cada materia o asignatura?.....
3. ¿Has elaborado un plan de trabajo en función del tiempo de que dispones y de las asignaturas que tienes?.....
4. ¿Dedicas a cada asignatura el tiempo necesario que pueda asegurarte un buen resultado?.....
5. ¿Sigues el plan de trabajo que te has propuesto desde el principio de curso?.....
6. Antes de empezar a estudiar, ¿piensas lo que vas a hacer y cómo vas a distribuir el tiempo?.....
7. ¿Sueles interrumpir tus sesiones de estudio en casa?.....
8. ¿Tienes la costumbre de preparar los exámenes con poco tiempo de antelación?.....
9. ¿Aprovechas algún momento del fin de semana para repasar aquellos temas que te han quedado más flojos?.....

Contesta las preguntas pensando en las asignaturas de **LENGUA y MATEMÁTICAS**.

Alumno Bilingüe: ☐ Sí ☐ No **Género:** ☐ Femenino ☐ Masculino

Nota de Matemáticas del curso anterior:

Nota de Lengua del curso anterior:

Curso:

1. Me da miedo hacer un examen.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

2. Me da miedo usar aseos públicos.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

3. Tengo miedo de hacer el ridículo delante de la gente..

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

4. Me preocupa hacer mal el trabajo de la escuela.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

5. Me preocupa lo que otras personas piensan de mí...

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

6. Me da miedo tener que hablar delante de mis compañeros de clase.....

- ☐ Nunca
- ☐ A veces
- ☐ Muchas veces
- ☐ Siempre

7. Hay cosas que me preocupan.....

- ☐ Nunca

☐ A veces

☐ Muchas veces

☐ Siempre

8. Cuando tengo un problema noto una sensación extraña en el estómago.....

☐ Nunca

☐ A veces

☐ Muchas veces

☐ Siempre

9. Tengo miedo.....

☐ Nunca

☐ A veces

☐ Muchas veces

☐ Siempre

10. Cuando tengo un problema mi corazón late muy fuerte.....

☐ Nunca

☐ A veces

☐ Muchas veces

☐ Siempre

11. Me preocupa que algo malo pueda pasarme.....

☐ Nunca

☐ A veces

☐ Muchas veces

☐ Siempre

12. Cuando tengo un problema me siento nervioso.....

☐ Nunca

☐ A veces

☐ Muchas veces

☐ Siempre

Contesta las preguntas pensando en las asignaturas de **LENGUA y MATEMÁTICAS**.

Escribe al final de cada pregunta un Sí o un No.

1. ¿Te has parado a pensar sobre el número de actividades que realizas cada día y el tiempo que le dedicas a cada una de ellas?.....
2. ¿Tienes una idea general de lo que vas a estudiar a lo largo del curso en cada materia o asignatura?.....
3. ¿Has elaborado un plan de trabajo en función del tiempo de que dispones y de las asignaturas que tienes?.....
4. ¿Dedicas a cada asignatura el tiempo necesario que pueda asegurarte un buen resultado?.....
5. ¿Sigues el plan de trabajo que te has propuesto desde el principio de curso?.....
6. Antes de empezar a estudiar, ¿piensas lo que vas a hacer y cómo vas a distribuir el tiempo?.....
7. ¿Sueles interrumpir tus sesiones de estudio en casa?.....
8. ¿Tienes la costumbre de preparar los exámenes con poco tiempo de antelación?.....
9. ¿Aprovechas algún momento del fin de semana para repasar aquellos temas que te han quedado más flojos?.....

APPENDIX 3

CUESTIONARIO PARA EL PROFESORADO. COMPARATIVA ENTRE ASIGNATURAS BILINGÜES CON LENGUA Y MATEMÁTICAS. (AICLE)

1. ¿Ve que sus alumnos encuentran más dificultades en las asignaturas de lengua y matemáticas que en aquellas que son bilingües?
2. ¿La actitud de sus alumnos es hastío o rechazo cuando reciben tareas de lengua o matemáticas para casa? ¿Y si las tareas son de asignaturas bilingües?
3. A la hora de realizar algún test o examen, ¿los resultados de lengua y de matemáticas van conforme al resto de las asignaturas, o se pueden observar diferencias claras? Si es así, ¿el cambio es un ascenso o un descenso en la calificación?
4. A la hora de realizar un examen, ¿nota si sus alumnos dedican más horas de preparación para las asignaturas de lengua y matemáticas o para las bilingües?
5. A la hora de realizar un examen o una tarea, ¿ve ansiedad o nerviosismo en la mayoría de sus alumnos o solo en casos particulares?
6. ¿Ve preocupación en sus alumnos por las calificaciones de lengua o matemáticas, por las asignaturas bilingües o por todas las materias en general?
7. Observaciones de interés.

CUESTIONARIO PARA EL PROFESORADO. COMPARATIVA ENTRE LAS ASIGNATURAS DE CIENCIAS SOCIALES Y NATURALES, CON LENGUA Y MATEMÁTICAS. (NO-AICLE)

1. ¿Ve que sus alumnos encuentran más dificultades en las asignaturas de lengua y matemáticas que en aquellas que en ciencias?
2. ¿La actitud de sus alumnos es hastío o rechazo cuando reciben tareas de lengua o matemáticas para casa? ¿Y si las tareas son de ciencias?
3. A la hora de realizar algún test o examen, ¿los resultados de lengua y de matemáticas van conforme al resto de las asignaturas, o se pueden observar diferencias claras? Si es así, ¿el cambio es un ascenso o un descenso en la calificación?
4. A la hora de realizar un examen, ¿nota si sus alumnos dedican más horas de preparación para las asignaturas de lengua y matemáticas o para las ciencias?
5. A la hora de realizar un examen o una tarea, ¿ve ansiedad o nerviosismo en la mayoría de sus alumnos o solo en casos particulares?
6. ¿Ve preocupación en sus alumnos por las calificaciones de lengua o matemáticas, por ciencias o por todas las materias en general?
7. Observaciones de interés.