

Flipped Classroom Through CLIL: Evaluating Effectiveness of Flipped Learning in a Bilingual School

Flipped Classroom a través de CLIL: evaluando la efectividad de Flipped Classroom en un colegio bilingüe

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Abstract

Motivation plays an important role in the learning of our students. Nowadays, the use of new technologies leads us, as teachers, to improve our teaching techniques. Therefore, the learning and attitude of our students towards the subject will change so that they feel comfortable and learn in an easier and more active way. The use of innovative methodologies together with the use of new technologies makes the motivation grow and the results are more satisfactory. This article develops the research carried out in a bilingual school in Madrid with a group of students with whom a new methodology is used (Flipped Classroom) and the results after the experimentation are analyzed.

Key words: CLIL, Flipped Learning, motivation, innovation, methodology.

Resumen

La motivación juega un papel importante en el aprendizaje de nuestros alumnos. Hoy en día, el uso de las nuevas tecnologías nos lleva, como docentes, a mejorar nuestras técnicas de enseñanza. Por lo tanto, el aprendizaje y actitud de nuestros estudiantes hacia la materia cambiará para que se sientan cómodos y aprendan de una manera más fácil y activa. El uso de metodologías innovadoras junto con el uso de nuevas tecnologías hace que la motivación crezca y los resultados sean más satisfactorios. Este artículo desarrolla la investigación realizada en un colegio bilingüe de Madrid con un grupo de alumnos con los que se utiliza una nueva metodología (Flipped Classroom) y se analizan los resultados tras la experimentación.

Palabras clave: CLIL, Flipped Learning, motivación, innovación, metodología.

1. INTRODUCTION

Teachers should acknowledge that motivating and capturing students' attention could improve their learning and their results. A demotivated student may not be able to follow the course of the class or show interest in what is being taught. In order for our message to reach all students and to get them involved in this learning process, there must be a motivation in each of them. As Confucius argues, «tell me and I will forget, show me and I may remember; involve me and I will understand,» which suggests that best way to make sure that students are learning something is through their active participation of their own learning. Therefore, we should encourage them to take part in their own learning experience, and make them feel motivated and important in the classroom, to entail a greater participation and effort towards the subject.

On the one hand, the use of innovative methodologies in which student feels motivated and interested in learning and acquiring new knowledge makes their learning more active. Thanks to that, their attitude towards the subject changes and a connection is established; therefore, the learning experience becomes more enriching for them. Over the years, this can become monotonous, and we can lose the enthusiasm and motivation of our students. Though my teaching experience, I can affirm that what works today may no longer be suitable tomorrow. That is why it is necessary to research and adapt to the new times by searching for new methodologies and ways to promote learning and motivation.

The objective of this Action Research Project is to answer the following research questions, Is Flipped Learning effective in a bilingual school? Do students feel motivated using Flipped Classroom? Does Flipped Classroom help to improve student's results? I have come up with three hypotheses. First, this methodology will result very attractive for them and that they will make the most of it. Second, students will also feel more confident and establish their own learning pace, since there are multiple intelligence levels. The latter is very important to be pointed out because, as Robert Fulghum suggested, «we are so different from each other inside our heads as we are different from the outside», since each student has a distinct learning level, using this methodology, will allow the learning process to be more individualized.

What follows is a brief explanation of previous research related to the changes in the education model, then origins, pillars, and characteristics of Flipped Classroom. I will explain the methodology employed in this study and the development of the project. The quantitative and qualitative results of the study I will be analyzed in order to draw conclusions about the effectiveness of Flipped Learning. Finally, I will discuss the implications of this study for future research and effective classroom practices.

2. LITERATURE REVIEW

Society has been adapting to the changes that have occurred throughout history. All in which shaped a society influenced by the economy, politics and culture. According to that, education and school are not immune to these changes and as Tourón Santiago and Díez (2014) pointed out, if learning is mobilized, education must also do so. That is why the teaching-learning methodology using small devices called Mobile Learning is already a reality that is seen in schools.

School life has had to adapt to modern time, to technological progress, to the new globalized society, etc. Therefore, it is the reflection of all the changes we had around us. These continuous changes bring a need for creative thinking and the ability to adapt to the technological advances; we are teaching a digitally fluent generation which poses the unique challenge of reconnecting them to reality.

In a traditional class, the teacher takes the leading role, dictates, presents tasks, shows content, clarifies any doubts, and sends tasks to be done outside the classroom, both individually and in groups. In the same scenario, the student is the one who listens, takes notes and reflects on what was presented in class. From my own experience, all this in the hands of a good teacher is quite effective, and this has been proven over the years. The acquisition of knowledge is the main objective of this teaching-learning process, where the teacher is the one who decides how and what to learn, and is the only one who assesses the students based on whether or not they have acquired the knowledge taught in class (Vice-rectory Academic. Directorate of Educational Research and Innovation, 2002) Piaget states (as cited in Hernández, 2008, p. 27): «Knowledge is built through experi-

ence. Experience leads to the creation of schematics. Schemas are mental models that we store in our minds. These schemes are changing, enlarging and becoming more sophisticated through two complementary processes: assimilation and accommodation».

Given this statement and the traditional educational model, it is necessary to reconstruct the teaching-learning process. This change goes from the model in which the teacher is the center of knowledge and the one who transmits information, to the student who occupies the central place and the whole process revolves around their learning. This orientation is based on two principles: constructivism and experiential learning (Academic Vice-Rector. Directorate of Educational Research and Innovation, 2002).

We are going to focus on these two principles to understand why Flipped Learning is a good option for this methodological change. According to Hamdan et al. (2013) Flipped classroom instruction is simply defined as an instructional strategy in which students learn content before class, allowing them to come to class prepared and ready for mentoring, active, and experiential learning experiences. Constructivism affirms that knowledge is a mental process of the individual resulting from a process of construction of reality that has its origin in the interaction of people with the world. It is a process of its own that occurs day by day as a result of these two factors (Herrera, 2009).

If we talk about the main representatives of constructivism, names such as Piaget (1896-1980), Vygotsky (1896-1934) and Ausubel (1918-2008) appear, which focused on the student's previous experiences, starting with new ones. Mental constructions and consider that the construction is achieved at the moment when (Herrera, 2009, p. 1): «The subject interacts with the subject of knowledge (Piaget), Interacts with others (Vygotsky), it is significant for the subject (Ausubel)». The other principle is experiential learning. We all learn from our own experiences and the reflection of them. This type of learning influences the student in two ways: it improves their cognitive structure and modifies attitudes and behavioral values (Academic Vice-rector. Directorate of Educational Research and Innovation, 2002).

For all these reasons, a conclusion is reached that a change in the educational paradigm is needed to solve this problem. Education in the knowl-

edge society requires various changes in the educational system. Learning no longer consists of absorbing information, but of knowing how to manage information, knowing how to pose the problem if new ways of solving them, that is, learning to make decisions about one's own work. This new definition of learning makes it necessary to redefine teaching that, as indicated by Tourón Altarejos and repairing 1991, the task of teachers in this ever-changing society is based on teaching students how to adapt to it. «The important thing is no longer what is taught but how it is taught» (Tourón, 2014). What is important is not teaching, but learning, transferring the role to the student who must transform information into knowledge (Tourón, 2014). As a consequence of these changes, the teacher and the student will assume new roles. It is necessary for the teacher to change his role as an actor and lecturer for that of a counselor while the student will be the apprentice who through personal involvement will build his own knowledge (Tourón, 2014).

Once understood, that the best way to learn is to perform a change of roles, where the student is the protagonist of his teaching-learning process, and where experimentation makes both the concepts and the content are innately acquired. Then, it is time to include the technological advances that have been produced over time and that have helped us to qualify our students as digital natives. Based on the fact that our students, from an early age, know how to handle different technological devices, it is time to take everything described above and change the methodology in the classroom. The Flipped Classroom is a pedagogical model framed in hybrid learning in which material is provided outside the class to transfer the development of content traditionally considered as tasks within the classroom environment (Rodríguez et al., 2015).

For all this, the use of technology is essential, since a physical and virtual environment is combined so that students can learn through experimentation. In this way, students will learn the theory at home, through presentations, videos, etc., will advance at their own pace since they can visualize it as many times as they think necessary. Once in class, learning will be more individualized since time at school will be dedicated to answering questions, practicing, carrying out activities and creating content. As the roles in this new methodology change, time in class will be dedicated to reinforcing content, carrying out activities in which students

interact and actively participate. In this way, teachers can devote more time to individualized student attention and create a collaborative environment in the classroom.

Flipped Classroom is therefore defined as a comprehensive approach that combines direct instruction with constructivist methods, increasing student engagement and involvement with the course content and improving their conceptual understanding. It is a comprehensive approach that, when applied successfully, will support the phases of a learning cycle (Santiago, n. d., p. 1).

As for its origin, Flipped Classroom emerged in 2006, when two chemistry teachers at Woodland Park School, in Colorado, applied it and were considered pioneers in this methodology. These teachers were Jonathan Bergmann and Aaron Sams who, based on their own experience, published in 2012 their work «Flip your Classroom: reach every student in every class every day». In this book, they explain how the need to change the traditional system ensures, that all students have the opportunity to witness their classes no matter how far away they lived. They realized that students frequently missed some classes for certain reasons (illness, for example), so, in an effort to help these students, they decided to record their classes. In this way, they realized that, by extending it to all students, even if they regularly attended the classroom, they could maintain a more individualized learning focused on the needs of each student.

The Flipped Classroom concept refers to the fact of investing the place and time of development of school assignments: those traditionally done at home are completed in class and proposals in class are developed at home (Bergmann & Sams, 2014). This model tries to make good use of technological infrastructures, multimedia resources and digital technologies to promote learning and school activities organized in such a way that its focus is the daily life and activities of students (Creative Classroom Lab., 2013). In this way, time in class is dedicated to reinforcing content that is offered, not only through a book, but through another format such as Information and Communication Technologies (González & Carrillo, 2016). When the Flipped Classroom is used in our classroom, students will perform a series of simple tasks at home such as viewing videos, reading documents, interactive activities, etc. That allows

them, once they arrive at class, to be able to carry out a series of activities that involve interaction and participation and in which they have the direct and individualized help from the teacher who will help them to solve doubts during the realization of them, so the attention to students is done in a more direct and individualized way.

In order to know the most important characteristics of the Flipped Classroom model, Hamdan et al. (2013) argue 4 fundamental pillars that give its name to its acronym FLIP.

- **Flexible environments:** Educators organize their learning space to accommodate the lesson or unit, creating flexible environments where students choose the time, place, and pace of learning. Educators build their own assessment system by objectively measuring understanding in a meaningful way for both students and teachers.
- **Learning culture:** In this learning model there is a shift from a teacher-centered class to a student-centered class. Students become the center of learning where they actively and significantly participate in the formation of knowledge. Educators help students explore issues in greater depth using student-centered pedagogies aimed at preparing and developing the proximal zone where they are challenged but not so much that they become demoralized (Vygotsky, 1978, cited by Hamdan et al., 2013).
- **Intentional content:** Teachers continually think about how they can use the flipped classroom model to help students achieve better conceptual understanding as well as procedural fluency. Educators use intentional content to maximize time in the classroom as well as adopt various instructional methods such as active learning strategies.
- **Professional educator:** In this model, educators are more important than ever and often more demanding than in the traditional method. Students should determine when and how to change direct group instruction to individual learning space as well as maximize face-to-face time between students and teachers. Teachers are thoughtful, observe and return relevant feedback to their students, interact with each other, accept constructive criticism, and tolerate controlled chaos in the classroom.

Several studies and authors claim this methodology to be beneficial. The following can be highlighted: Bergmann and Sams (2012), point out that when teachers are not standing in front «just talking» to their students and are able to circulate and talk with students, they are likely to understand and respond better to the emotional and learning needs of students. Prieto Martín (2016) states that students arrive better prepared, know their doubts better and present a greater predisposition to participate. In addition, Shapiro (2013) affirms that accessible contents at any time and place (Shapiro, 2013) and Marlow and Bulter (1975) state students take responsibility for their own learning, follow their own rhythms and have access to the material at any time. So that they are not left behind, this results in greater motivation and better behavior. Also, this model alters the nature of the task by having students practice and apply their learning in the classroom, under the watchful eye of the teacher (Bergmann and Sams, 20212; Greenberget al., 2011). On the other hand, some of the drawbacks found are:

- Increase in the digital divide, especially in places where economic resources are scarce.
- Greater investment of time and training by the teacher (Educause, 2012).
- Greater commitment and responsibility on the part of students.

According to Bryan Goodwin and Kirsten Miller (2014), the evidence on the Flipped Classroom model is yet to come. So, more things will be discovered, and others improved. Numerous studies carried out show that classes of different educational levels experience gains in their performance and satisfaction and motivation on the part of students, one of these reports is the one written by Yarbrow et al. (2014).

3. METHOD

For evaluating the effectiveness, motivation and improvement of Flipped Learning, I implemented a system with some remarkable aspects. First, I chose an educational level in which the classes were as homogeneous as possible to carry out the study. One was the reference group and the other the experimental one. The educational level chosen was 6th grade of Primary Education. The intervention will be scheduled for a period of

approximately two months. With this, it is expected that students will be able to think, experiment, reflect and develop their critical thinking through meaningful learning.

Prior to the study, the first step was to conduct a questionnaire to the students of the experimental class. It was a questionnaire that consisted of 20 questions intended to measure the level of satisfaction with the class and to evaluate, not only the teaching methodology that was being used, but also the motivation that the students had towards it. Subsequently, we started working with the flipped classroom methodology. Once the theory was taught and the activities, projects and tests related to the topic were carried out, another questionnaire was conducted. This questionnaire was almost the same as the previous one, but this time the questions were intended to measure again the level of satisfaction with the class and to evaluate both the Flipping teaching methodology and the motivation that the students had towards it. After completing the process, I compared and contrasted the academic results between the reference group and the experimental group according to the results obtained in the knowledge test.

3.1 The Context

The school where I conducted the study is a bilingual public school, located in Alcorcón. This center belongs to the bilingual program of the Community of Madrid since 2006. I have been working for more than 13 years with the CLIL methodological approach. We work without books, the basis for obtaining the class contents are the blogs of each subject where children can access to them. The contents showed, are not only theoretical, but there are also explanatory videos, projects, oral presentations and written activities that make learning more motivating and dynamic.

All students who are exposed to a Content and Language Integrated Learning (CLIL) approach seem to work efficiently. The attitude of the students towards this methodology is very positive since they feel involved in their learning and are comfortable. The educational level chosen was 6th grade of Primary Education; this level is divided into two groups, A and B. They are children between the ages of 11 and 12. The group chosen as the experimental group is a class of 24 students. These students are all used to do teamwork and to use new technologies. The other group was the reference

group. The topic taught to both groups was the Human Respiratory System. The reference group kept working in the usual way and the flipped learning was implemented into the experimental group.

3.2 Design of the study

This study was conducted over 13 sessions where we worked on CLIL and FLIPPED Classroom the same topic in both groups. Both groups are quite similar, they have several levels of English and have a good behavior, which is favorable for a good learning environment, we have been working in the same way. The students accepted the new methodology used. Sessions were held in a way that students were learning the basic theory at home about a given topic, using an educational blog. In order to teach it, I uploaded edited videos on the class blog and some complementary information that could help them to understand it. The children watch the videos at home and later in class, they clear their doubts and carry out activities related to the topic, so they will feel more confident. These class activities were aimed to help students consolidate what they learned at home.

Other sessions were dedicated to carry out different parts of a project related to the different contents of the topic, such as models, power points, crafts, and posters. They also needed to do an oral presentation in front of their classmates in which they showed what they learned during that entire period. At the same time, they showed their classmates the final project that they had to work on. Finally, they took an exam to evaluate included all the concepts and theory learned during that period. Most students do not receive help at home, by this way; the doubts that may come up when they are doing their homework will be cleared right away because the teacher will be with them. On one hand, there is a change in their learning environment, and they must be responsible for watching the videos with the explanations and organize themselves- The teachers also can provide a more individualized assistance to the students. In this way, students feel more secure, participative and motivated. If their motivation increases their learning will be enriched and the teaching-learning process will be more favorable.

3.3 Data collection

The concept of data collection techniques encompasses all the technical means used to record observations or facilitate data processing. Within

these techniques there are some instruments used, such as questionnaires, observation, objective tests and test, among others. It should be noted that an instrument is valid if it measures what it claims to measure, and it is reliable if there is confidence in the data obtained from it (Lacave et al., 2015).

The focus will therefore be both quantitative and qualitative, when using different information collection tools, these being the questionnaire, the observation and the exam:

- *The questionnaire:* it offers quantitative information by collecting numerical data, allowing us to apply it at different times, thus facilitating independence between the primary and secondary scores obtained from the students. The tests or questionnaires are a set of instruments that collect information about the capacities and / or abilities of the subjects. They are continually employed in areas such as Psychology, Sociology, and Education, and are tailored to skill or performance. According to Hopkins (1989), among the advantages of the questionnaire in relation to other information gathering techniques, we find the following:

Ease of performance and assessment, direct comparison between groups and individuals, and the feedback provided on attitudes, adequacy of resources and the teacher, as well as providing help and quantifiable data.

In our case, the evaluation was carried out through a questionnaire made up of 20 items on a Likert scale with five response options (1-5, never always), these referred to different issues such as attention, study habits and aptitude of the students towards the teaching-learning process (table 1) This type of scales determine the degree or frequency with which a characteristic or trait occurs, being the response to the different items, the reflection of the attitudes and behaviors on the part of program participants. This questionnaire will be used for both the initial and the final evaluation, as a pre-questionnaire and postquestionnaire, with the aim of checking whether improvements have been made and the achievement of the objectives set after the intervention has been achieved. The questionnaires were distributed at the beginning of the study. The students of the experimental group filled in the questionnaire responding to the proposed items. Once the questionnaires were completed, the responses were collected and analyzed in order to have a general idea of how the methodology used in the school up to now was

seen from the point of view of the students and the degree of motivation towards it.

Table 1
Questionnaire/pre-questionnaire and post-questionnaire

Questionnaire					
Name:		Surname:			
Date:					
Questions	Never	Sometimes	Often	Usually	Always
I put a lot of interest in what we do in class.					
During class I frequently desire for it not to finish.					
I put a lot of attention in what the professor says.					
I participate in discussions or activities that are done in class.					
I distract myself in class doing scribbles, talking with my friends nor exchanging notes with my classmates.					
I get bored or fall asleep in class.					
I am satisfied with the activities that are done in class.					
I do extra-work by my own will.					
I feel good and comfortable in class.					
I do my tasks with effort and motivation.					
When I get out of school I have desire to keep studying.					
I am satisfied with my learning.					
I consider that the resources used by the teacher in class help to understand the topic.					
I feel desire to reach more about the topic that we are learning in class.					
I feel the class is short and entertaining.					
I learn something new in every class.					
I am interested in learning.					
The teacher is creative presenting the topic.					
I do my homework.					
The teacher's explanations seem attractive for me.					

Finally, once the study was finished, I distributed the same questionnaire again to make a comparison in the results. This was useful to be able to analyze the changes produced after the implement of the new methodology in the experimental group. All this information helped me to come to a final conclusion.

- *The observation:* it is one of the innate acts of human beings for the construction of knowledge of their environment. In turn, it is used as a data collection technique (Buendía, Colás & Hernández, 1997). It is a systematic and controlled process, by which information is collected during an investigation. It is characterized by being qualitative by obtaining categorical or quality data, taking into account that it is used for the subsequent analysis and interpretation of the data obtained to draw up the conclusions and the final report of results.

Likewise, a formative evaluation was carried out throughout the process by observing and recording the attitude of the experimental group students through a diary, this instrument analyzed attitudes, feelings and content acquisition. Daily, I was writing in a small notebook, everything that I could observe in the development of the class; the behavior of the students, the interest they showed, their doubts, questions, etc. Everything that caught my attention and that they did not do with the previous methodology. On the other hand, the assistant was collecting the same information, observed everything that happened in the class and we shared, daily, all our perceptions. In this way, I was able to collect the changes produced in them with this new way of teaching-learning. Through this, feedback on their learning was obtained, and the intervention could be readjusted or modified.

- *The exam:* as the main instrument for measuring the teaching-learning process (Jorba & Sanmartí, 1994), it is another complement the instruments used in this study. The data that you provide us are quantitative and qualitative as it allows us to collect conceptual, procedural and attitudinal content. In turn, they allow reorientation measures to be taken, achieving higher quality learning, as indicated in the Organic Law of Education (LOE¹).

¹ Ley Orgánica de Educación (LOE; Ley Orgánica 2/2006, de 3 de mayo, 2006).

Both groups, the experimental and the reference group, carried out the same exam. The exam was divided into two parts, 10 multiple choice questions and another 5 long questions about what has been learned about the respiratory system. This instrument was carried out at the end of the entire intervention process, in order to measure the work capacity and the results obtained among the students after the intervention. As mentioned above, the two groups were quite similar, it helped me to compare the type of improvement that had occurred through the use of the new methodology.

3.4 Methodology

This study is aimed at improving the performance and global development of students. It arises from the observation of certain shortcomings in the methodology applied so far, and from the need to face current problems. For this, the experimentation and application of a new methodology with one group of students is proposed, while the other will continue working with the CLIL methodological approach. With this, it is intended to measure the response and work capacity of the students, the impact of Flipped Learning and the motivation that arises among the students who learn with this new methodology.

The process that was followed with the experimental group to teach the Respiratory System was as follows: first, the questionnaire (pre-questionnaire) was passed to the students to measure their response, impact and motivation, without having introduced anything related to the new methodology. Later on, the topic was taught applying the new methodology. All explanations, tasks, activities, etc. were carried out through the Flipped Learning methodology. After that, the content exam will be performed by the students. This test contained the same type of questions that are normally asked at the end of any topic taught in class. Finally, the students took the questionnaire again (post questionnaire). In this way, the impact can be measured, and data can be collected to show us whether said intervention has been significant and effective. In turn, with the other group, we continued working with the CLIL methodological approach, following the normal sequence of development of a CLIL topic, and carrying out the same content examination as the experimental group to measure and compare the results.

However, it must be taken into account that the monitoring of the intervention was carried out through observation and this was part of the entire

process, making the corresponding anecdotal record through the diary. In this way, the method and planning of the intervention could be adjusted or modified, depending on the information collected in the responses and perceptions. The person who carried out the initial and final evaluations of each student were the English teacher, who taught them the theoretical and practical subjects that were the object of the intervention program, and the assistant, who helped them in the observation and exchange of impressions. On the other hand, continuous evaluation was carried out after each session by both, recording and analyzing what was observed in the intervention. The final evaluation was carried out at the end of the intervention and was proceed to its subsequent study and analysis of the results. This made it possible to analyze the relevant positive and negative aspects of the study, to modify and develop the necessary improvement proposals, and thereby increased its effectiveness before its successive implementations.

4. DATA ANALYSIS

The results obtained in the intervention are presented below, with the aim of examining the degree of efficacy of the same. First, the results of the pre and post questionnaire will be analyzed, then the conclusions drawn from the observation through the diary entries and finally, the results obtained in the examination of both groups, which are quite homogeneous as I have said before, will allow me know if the new methodology has had a positive influence.

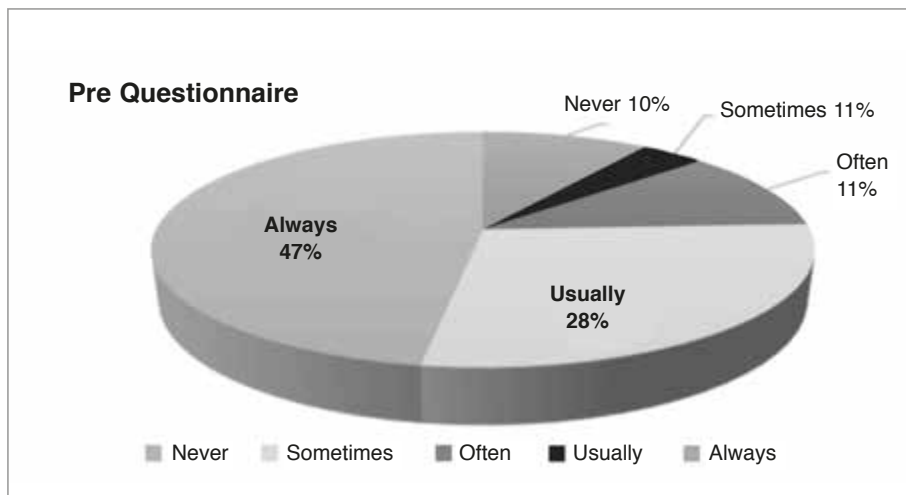
According to what was obtained in the initial phase through the pre-questionnaire phase, and then those related to the final phase through the post-questionnaire phase and globally after the intervention, for comparison. In this way, the impact of the study carried out can be assessed and analyzed, taking into account the evolution of the responses obtained through the evaluation instrument used, and the degree of achievement reflected in the qualitative responses.

The size of the sample corresponds to the experimental group, 24 students from the 6th A grade class of CEIP Daniel Martín, who will participate in the study and will be the object of intervention. As I mentioned previously, the questionnaire consists of 20 items on a Linkert scale, where students answer from 1 to 5 to them, where 1 is never, 2 is someti-

mes, 3 is often, 4 is usually and 5 is always. If we analyze in general terms the responses obtained from both, pre and post questionnaire, we can observe the following information:

Beginning with the pre-questionnaire, the one I give to my students at the beginning of the study, the following data was taken from the students' answers:

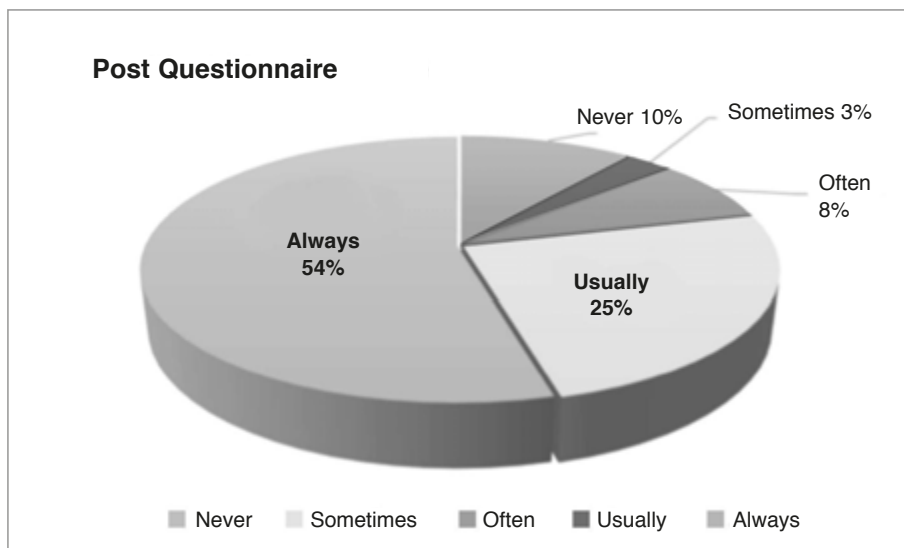
Figure 1
Prequestionnaire Total Percentages



Based on the responses to the items answered by the students, 47% choose the answer option «always» where students recognize that they are satisfied with the activities that are done in class and they do them with effort and motivation. Among other statements, 28% do so «usually» referring to what they see the desire to keep studying when they get home and that they put a lot of attention in what the teacher says among other items. It should be noted that 10% of the students show that «never» is among their selected option to reflect their responses related to items in which they remain directed and uninterested in class. Such scribbling or doodling, talking with friends, falling asleep in class, nor exchanging notes with classmates. These results gave us enough information to determine the degree of involvement and evaluation in terms of the teaching-learning process.

The Post-questionnaire was then given to the students after using the new methodology. The percentages are slightly modified from those collected in the previous one.

Figure 2
Total Percentages Post Questionnaire

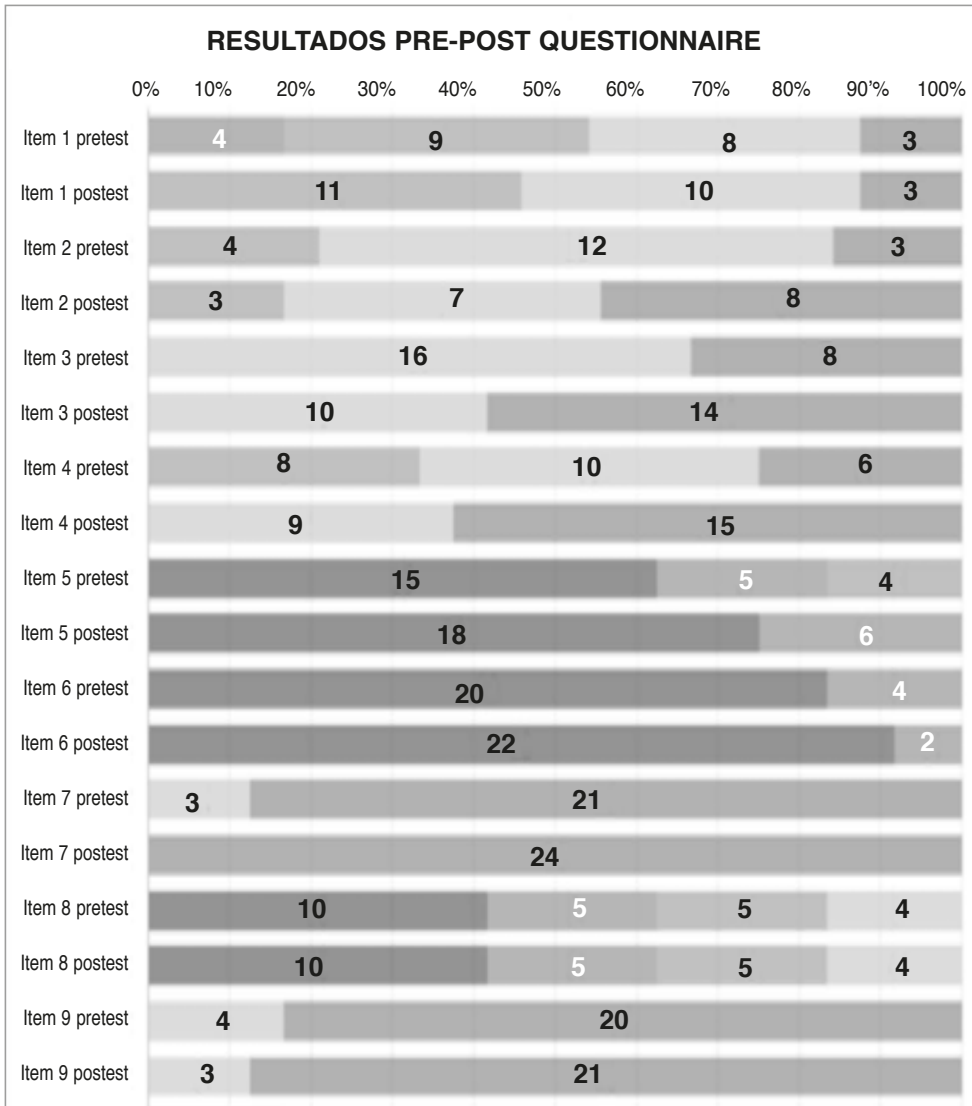


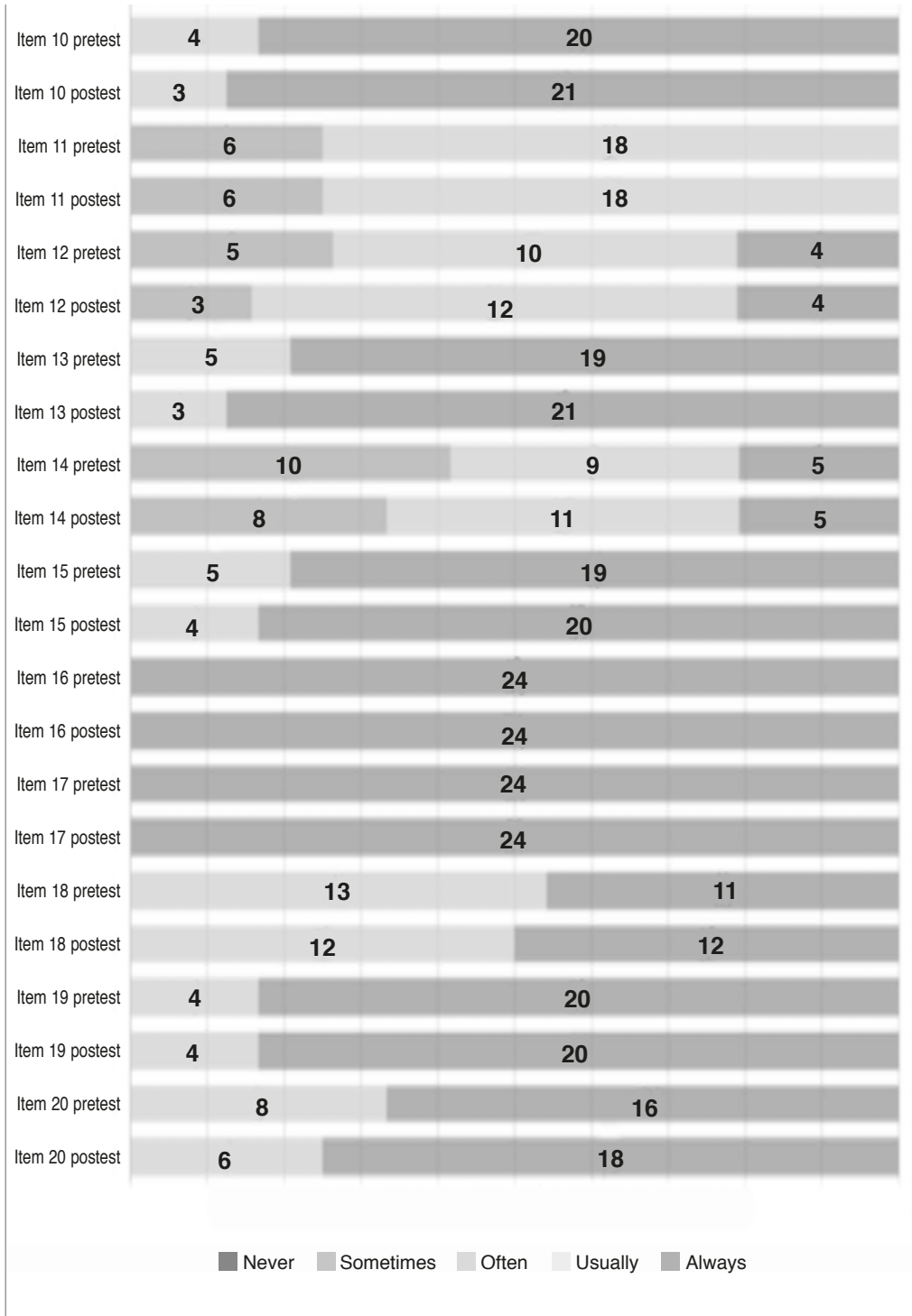
In this case, the «always» range has obtained greater responses than in the initial phase, standing at a percentage of 54% of the total number of students, in which the «usually» option's percentage was lower. Some of the responses such as I am interested in learning, I put a lot of attention in what the professor says or I feel the class is short and entertaining; have been rated very positively, becoming «always». The other ranges «never and sometimes» show almost no significant differences and «often» is reduced by 3 points compared to the initial phase. In some items, you can see the decrease in the degree of distraction and boredom in the class.

If the responses in relation to each item are taken into account, the changes in each of them can be verified before and after the intervention, thus reflecting more positive scores regarding the initial phase. In the following graphic, we can observe a comparison between the answers obtained in each item in the pre and post questionnaire, where the numbers represent the students who answered to that item in the frequency chosen. In this way, we can see how many students have changed their minds once they have experienced the new methodology. The aim of this questionnaire was to measure the degree of interest and motivation of the students in the class through items related to participation, such as I participate in discus-

sions or activities that are done in class (4), I get bored or fall asleep in class(6); their interest in the subject, such us I put a lot of attention in what the professor says (3), I do extra-work by my own will (8); or their attitude towards the contents, activities, methodology, such as I feel good and comfortable in class (9), I feel the class is short and entertaining (15).

Figure 3
Results of the number of responses obtained in both phases of the Pre-Post Questionnaire





As can be seen in the post-questionnaire phase, the items corresponding to questions 2 (during class I frequently desire for it not to finish), 3 (I put a lot of attention in what the professor says), 4 (I participate in discussions or activities that are done in class), 7 (I am satisfied with the activities that are done in class), 13 (I consider that the resources used by the teacher in class help to understand the topic) and 20 (the teacher's explanations seem attractive for me), have been marked by more than one student in relation to the initial pre-test phase. These questions encompass the student's interest and motivation in the teaching learning process, which have been improved through the intervention carried out.

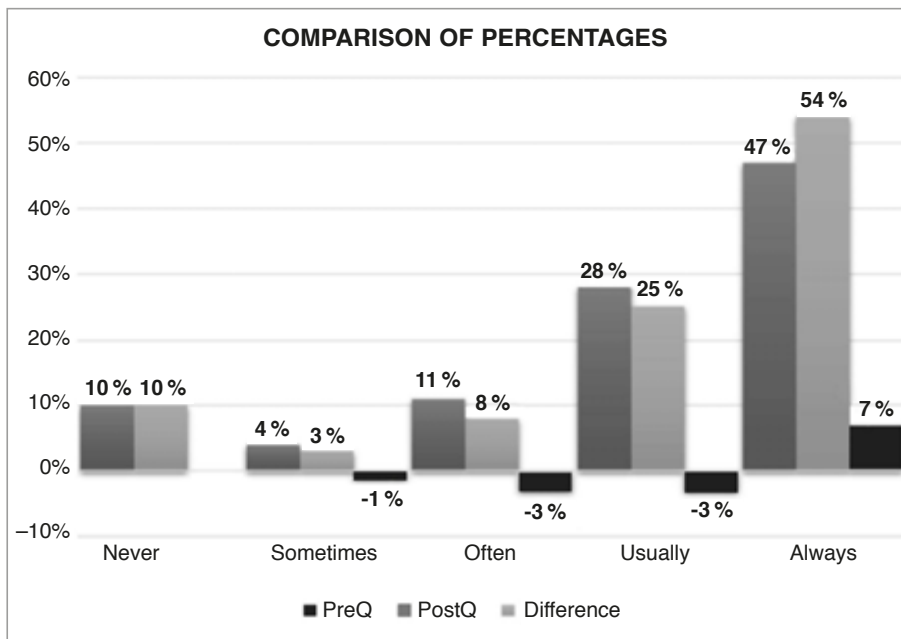
Items 5 (I distract myself in class doing scribbles, talking with my friends nor exchanging notes with my classmates) and 6 (I get bored or fall asleep in class), identified with distraction and boredom, do not reflect positive improvements despite the intervention.

Highlight items 8 (I do extra-work by my own will) 9(I feel good and comfortable in class), 10 (I do my tasks with effort and motivation), 11 (When I get out of school I have desire to keep studying), 16 and 17 with almost or no variation despite having intervened with a different methodology, highlighting items 16 (I learn something new in every class) and 17 (The teacher is creative presenting the topic) in which all students reflect that they always learn something new and their interest for learning.

4.1 The findings

In order to make a global assessment, comparing both pre-questionnaire and post-questionnaire, the following general data is presented, which show existing differences once the intervention has been performed.

Figure 4
Comparison of Percentages Before-After the Intervention



Taking into account the results with respect to the percentages obtained both in the initial phase and those collected in the post-questionnaire phase, it can be determined that the «never» range does not reflect any change despite having intervened, standing both before and after, 10% of the option chosen by some students, when the desirable thing is that it had decreased. On the contrary, both the «sometimes» option, as well as the «often» and «usually» option have been slightly diminished among the participants' choice options, being less chosen than in the previous phase.

Finally, the «always» range has risen in the choice among students, significantly improving and increasing by 7 % among the response options of the students after the intervention, which confirms that, to a certain extent, the intervention has been effective. Based on these findings, it's clear that the change to the new methodology hasn't caused a great influence in students.

In the questionnaires, an increase in attention and participation was observed, as well as an arousing interest in what was being done in class. For the rest, there were no notable differences. I believe that this was due to the methodology we use at school. By working with CLIL, the way children

learn and work in class does not correspond to the traditional way. At school, we do not have textbooks, thus children use new technologies to support classes and acquire knowledge. The use of blogs is a great help, since through videos and web pages they can consult and expand their knowledge. In this way, they have everything they can find in a textbook, but in a more striking and attractive way. According to the second instrument used, it is important to note that through the observation made during these days, we were able to affirm that our students are accustomed to work in a team, investigate and make oral presentations presenting projects, they are used to changing roles, in which they become the main character of the class. By adopting Flipped Learning, there was not a great variation of results. An increase in participation and assimilation of knowledge can be noted. Everything new is attractive and interesting, which made their attention improve during the first days, and they feel unsure of the process and expectant. Little by Little, they were accepting the new methodology and awakening their interest in learning. An increase in the participation and in the knowledge has been observed.

Children feel more confident in the process of checking what they have learned or been taught, since they can solve doubts in class and are exposed to a more individualized learning. When feeling confident about themselves, their attitude towards the subject changes. Regarding the last instrument used, the students take an exam to verify the acquisition of the contents taught in all the sessions. In the results of the exam there are no great differences between the two groups of students, this means that there are similarities between the way of working in both methodologies. All this is reflected in this type of test since no type of result that can attract attention is observed.

To sum up, I can affirm that there are no striking differences between the results obtained before the intervention and the results obtained at the end of this study. There are many similarities between the way they study and work on the subject. In a regular school, in which classes are taught in a traditional way, the research could probably have more different and significant results. In CEIP Daniel Martín, the study did not reveal major results due to the use of the CLIL methodology and the common usage of new technologies to teach the classes.

5. CONCLUSIONS

5.1 Outcomes

This study aimed to analyze the effectiveness of Flipped Learning in a bilingual school. To respond to this objective, in the first place an analysis of the Flipped classroom model has been carried out, explaining what it is, how it arises, how it is applied and the way in which it influences the teaching-learning process in students. Since the change of scenario in which each of the tasks were carried out was different, I expected to find a statistically significant difference in the use of the new methodology. The results have shown that this has not been the case: there is a minimum percentage of students who feel more motivated and happier with the new methodology, but it is an exception. Most of them continue with the same attitude and the same feelings towards the way of learning. My own interpretation of what happened is that the students are used to those active classes in which they participate and learn in a non-traditional way. I think that is why this new methodology has not resulted too different from what they were used to. As a result, the level of motivation has not increased, and their line of learning has remained continuous. It should be pointed out that some students commented that learning at home with videos was an amazing resource. Some even liked to share these videos with their families, therefore showing an increase to learn more outside the classroom. On the other hand, one student stated that she did not see much difference between the two methodologies, that she liked and felt comfortable with both.

It is clear that the we, as teachers, must teach our students in a way that they feel motivated and engaged with the methodology. The implement of this new methodology has not significantly changed their perception since the motivation and confidence they had before starting with this new methodology was already high. Perhaps, if we analyze the results of some of the students with lower academic level, it can be observed that there has been a slight change in their perception towards learning the foreign language and in their confidence.

5.2 Implications

The goal of this study was to find out if Flipped Learning is effective in a bilingual school, if students feel motivated by using Flipped Classroom and

if it helps them improve academic results. Through the use of this new methodology, it was intended to increase the students' motivation and their attitude towards the subject in order to improve their learning and the assimilation of their knowledge.

First of all, the methodology of the class varied, but did not influence the students in the expected way. The students continued to participate actively and, although they had a positive reinforcement, the results were not as expected. There was not much difference between the current opinion, and the opinion that they had previously. Second, through the analysis of the surveys and conversations that the language assistant and I had, we came to the conclusion that the results corresponded to the attitude of the children in the class. The children felt more confident because they could experience a more individualized learning, but their attitude towards the subject did not change much with respect to the attitude they had with the other methodology.

This study is limited to a specific situation, in a specific school and in a specific class. As mentioned above, the results were not as expected, and everything was due to the current methodology that is carried out in the school. From my point of view, the study would have been more revealing if it had been conducted in a different school with the same type of students, in which they learn in a traditional way, that is, with a textbook and using few technological resources to complement their learning experience. After preparing this study, another future line of research has emerged in which the implementation of the Flipped Classroom model is carried out in a bilingual school where the methodology used does not resemble the new methodology to be implemented.

In conclusion, motivation is very important for children to learn, thus the teacher has to find the best way to engage and spark the interest in their learning. There are always new things to try, new methodologies to carry out and intriguing resources to catch their attention. We must never stop learning on how to adapt our teaching methods to engage students to their full potential.

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