

Motivation and Content Language Integrated Learning: Action Research

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Research Paper

Submitted in partial fulfillment of the requirements for the degree of *Magister en la Enseñanza del Inglés* in the Instituto de Idiomas. Universidad del Norte, Barranquilla 2021.

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Affidavit

I, Karen Ibeth Rodríguez Vega, hereby declare that this master's thesis has not been previously presented as a degree requirement, either in the same style or with variations, in this or any other university.

KAREN IBETH RODRÍGUEZ VEGA

Dedication

To the memory of my parents: Alvaro and Yolanda.

Acknowledgements

First and foremost, I must thank God who has given me the strength to keep going. Thanks to my little boy, Emilio, for his love and patience. I am also grateful to my sisters Margui, Ana & Neyla, and their families for always being there for me despite the distance.

Thanks to my parents who inspired me to be a better person and professional.

Finally, I would like to express my deepest gratitude to my dear tutor, Kathleen Corrales, for her constant guidance and support.

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Abstract

This paper reports on an action research study that looked at how the use of Content and Language Integrated Learning (CLIL) affects the intrinsic, extrinsic, instrumental, and integrative motivation of primary school children. A mixed-method approach was used with the participation of 22 fifth-grade students at a private school in Santa Marta. The following instruments for data collection, coherent with the research questions, were used to elicit information: a pre-and post-survey and pre-and post-focus groups. Based on the development of seven units with the CLIL approach, the quantitative data was gathered and analyzed using descriptive statistics by implementing the Statistical Package for Social Sciences software (SPSS), version 23.0.s while qualitative data was carried out through content analysis to code the information and organize it into categories related to the different types of motivation. Findings revealed that the CLIL methodology intervenes on intrinsic, integrative, and instrumental motivation while extrinsic motivation is affected to a lesser extent. Also, after implementing CLIL, the students began to consider that science taught in English could be interesting, fun, and enjoyable. Therefore, from this study, it can be concluded that CLIL has a positive effect on students' motivation. Because of the deep connection between motivation and learning, and as CLIL continues to grow in Colombia, CLIL could become an important element for strengthening teaching and learning in schools.

Keywords: Content Integrated Language Learning (CLIL), motivation, primary school, science.

Chapter 1. Introduction

In the present globalized world, the use of the English language has become a central issue for those who want to get access to the modern world that includes science, technology, businesses, power, media, international safety, intercultural understanding, entertainment, etc. (Crystal, 2003; Nunan, 2001). This is also true in Colombia where the expansion of English and the interest in promoting its learning has led to the creation of educational policies for teaching and learning English as a foreign language through the National Bilingual Program (Programa Nacional de Bilingüismo [PNB], 2004-2019) of the National Ministry of Education (MEN, 2005) (Ministerio de Educación Nacional de Colombia, n.d.).

This program implemented several aspects which supported the teaching and learning of English including the development of solid standards for English teaching and learning, the use of different assessment procedures to evaluate communicative competence in students and teachers, promoting continuing professional development by incorporating standardized models, the use of ICT's tools for teaching purposes, and the creation of bilingual and trilingual models for different indigenous and ethnic groups around the country (Gómez Sará, 2017). It also established language goals for students to research at the end of each level of education using the Common European Framework of References (CEFR). According to this program, when students finish high school, they should have a minimum of a B1 level and university students should reach a B2 level (Corrales et al., 2015).

To meet the goals that the MEN have proposed, Colombian educational institutions have implemented many educational initiatives. One innovative pedagogical approach that many schools have implemented is Content and Language Integrated Learning (CLIL). This, which has been used in educational institutions worldwide, is described as a “dual-focused educational

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approach in which an additional language is used for the learning and teaching of both content and language” (Coyle et al. 2010, p. 1). This type of approach is especially important for bilingual schools of the nation, such as that of the setting of this research project, since it is a way for students to learn the content recommended in the curriculum as they develop a foreign language.

Motivation plays an important role as a key factor in successful language acquisition (Dörnyei, 1994; Gardner, 1985). Gardner (1985) points out that motivation is an important component of language achievement in terms of linguistic outcomes such as vocabulary, grammar, pronunciation, and the four basic skills of the language, including listening, speaking, reading, and writing. The literature on motivation shows it to be so essential that Dörnyei (2001a) believes “99 percent of language learners who really want to learn a foreign language will be able to master a reasonable working knowledge of it as a minimum, regardless of their language aptitude” (p. 2).

Particularly, one of the reported benefits of implementing CLIL is an increase in students’ motivation due to its nature as an approach that creates conditions for naturalistic language learning, increases the time of exposure to the foreign language, and provides an aim for language use in the classroom (Dalton-Puffer & Smit, 2007). Likewise, Fazzi and Lasagabaster (2021) have highlighted that the authenticity of CLIL’s content, materials, tasks, and communication in the L2 contributes to enhancing motivation and raising learners’ academic interests and the L1 curriculum.

In recent years, there has been an increasing interest in CLIL, and several studies have widely discussed the effects of CLIL programs on students’ language proficiency in different

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educational settings especially in secondary schools and universities (Lasagabaster, 2011), but the effect of CLIL on students' motivational patterns is more limited (Seikkula-Leino, 2007).

Also, around the world, very few studies have researched and measured the motivation of CLIL in the primary school context. Focusing particularly on Colombia, while over the past ten years research in CLIL has been carried out at all levels of education in this nation (see, for example, Alvira & González (2018) at preschool, Martínez & Domínguez (2018) at primary, Garzón-Díaz (2018) at secondary, and Banegas, Corrales, & Poole (2020) at university levels), this study looks at the way CLIL affects students' motivation.

Research Question

To explore how the use of CLIL in a course affects the motivation of primary-school children, this project aims to answer the following research question:

How does the implementation of the CLIL approach to teaching science in a group of fifth graders at a private bilingual school in Santa Marta affect the students' intrinsic, extrinsic, integrative, and instrumental motivation?

Since motivation is acknowledged as a key component in learning, one of the tasks of teachers is to try to promote and maintain students' interest to learn. By implementing different strategies to motivate students in the classroom, the student's desire for learning can be impacted positively. Under these circumstances, this project provides an important opportunity to advance the understanding of how CLIL could be an effective approach that fosters students' motivation to complement the educational approach already used at the institution.

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Setting of Study

The present study takes place at a private bilingual school in Santa Marta, Colombia. Most of the students came from a high or medium socio-economic background. While English is rarely spoken at home, most learners can interact with English through the media.

The school is divided into three sections: Preschool (children aged 4 - 6 years old), Elementary (grades 1 - 5, children aged 7 - 11 years old); and Secondary (grades 6 - 11, students aged 12 - 17 years old). Like most of the present-day bilingual schools, it has integrated content and language teaching in the areas of science, math, social studies, religion, and art as a strategy to foster bilingualism and provide students with tools to develop general competences (knowledge and abilities) and communicative competencies. The other subjects, such as music, Colombian studies, Spanish and Physical Education are taught in Spanish, so students have more contact with English than with Spanish.

The main pedagogical teaching approach employed in the classrooms is Teaching for Understanding which promotes students' engagement in the active construction of meaning, the use of authentic performance tasks, participation in collaborative activities, self-assessment, and reflection. While CLIL has not been adopted as a complementary teaching approach in this school, the teaching staff attended mandatory CLIL training workshops delivered by British Council trainers for a year as part of ongoing professional development. For this reason, and because CLIL harmonizes with the school approach since both involve constructivist principles and the teaching of content through a language, this approach was implemented in this project.

Outline of the Thesis

This paper is divided into five chapters: This first chapter contains an overview of what this study is about and describes the research problem, the context of the study, and the research

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questions. The second chapter portrays the theoretical framework that supports this research project and includes a literature review. The third chapter is focused on the research method, including the paradigm, approach, type of study, details about the data collection instruments and procedures implemented, and the way the data was analyzed. The fourth chapter provides the results of the data collected, and the fifth chapter is the discussion section which gives a detailed analysis considering previous studies and the literature on the topic. The last chapter displays the conclusions of the study, the limitations, implications, and suggestions for further research.

Chapter 2. Theoretical Framework and Literature Review

This study focuses on how students' motivation is affected by the implementation of the CLIL approach. For this reason, it is essential to know what motivation is, its components, and understand its importance for the learning context as well as essential aspects about CLIL. Therefore, in this chapter, the main concepts that will support this study are discussed. First, this section will start with some relevant definitions of motivation. Then, it continues with the importance of motivation and its types. Then the focus will turn to CLIL. The CLIL section highlights the definition of CLIL, its features, benefits, and its implementation. Finally, it will review some recent studies related to this present study.

Motivation

Definition of Motivation

Motivation is considered the driving force for accomplishing positive results in any task and a critical component in teaching and learning. As cited in Bakar (2014) motivation is a complex part of human psychology and behavior that influences how individuals choose to invest their time, how much energy they exert in any given task, how they think and feel about the task, and how long they persist in the task.

According to Dörnyei (2001b), motivation explains the reason why people choose a particular activity, how much time is devoted to persisting in it, and what effort they invest in it. Madrid and Pérez Canado (2001) add to this definition by describing it as one's internal and individual state which is influenced by certain needs and/or beliefs that generate favorable attitudes and interest towards a goal that demands an effort from students.

Since motivation is a central topic in education, and even more so in language learning, it has been described in different ways. Gardner (1985), a recognized expert in the field, defines

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motivation as “the extent to which the individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity” (p. 10). Lightbrow and Spada (1993) suggest that motivation in second language acquisition is impacted by SLA since it is “a complex phenomenon which can be defined in terms of two aspects: learners’ communicative needs and the way students see their attitude towards the second language community” (p. 205). Furthermore, Ellis (1994) points out the dynamic nature of motivation stating that “it is not something that a learner has or does not have but rather something that varies from one moment to the next depending on the learning context or task” (p. 76). However, Rodicio (1999) cautions that motivation is not a physical feature; that is, it cannot be observed directly.

Importance of Motivation in Learning

Motivation is important for learning success. It regulates learners’ behavior towards goals or targets and increases the learning process (Bakar, 2014). This is especially true for academic learning and achievement from childhood through adolescence (Elliott & Dweck, 2005). Skinner and Belmont (1993) highlight those students with high levels of motivation are usually actively and spontaneously involved in activities and find the process of learning enjoyable without expecting any external rewards. In contrast, rewards are needed when students exhibit low levels of motivation. Therefore, learners who are motivated will work hard to achieve their goals and thrive while the lack of motivation causes them to flounder.

When looking at language learning, Dornyei and Csizer (1998) state that motivation is “one of the most important factors that determine the rate and success of L2 attainment: it provides the primary impetus to initiate learning the L2 and later the driving force to sustain the

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long and often tedious learning process” (p. 117). Thus, bearing in mind these ideas, motivation can be considered an aspect that influences the success of L2 learning.

Types of Motivation

One of the most well-recognized classifications of motivation is that of Extrinsic/Intrinsic Orientation (Deci, 1975; Oxford & Shearin, 1996). It is impossible to focus on these types of motivation without discussing Self-determination Theory (SDT). Based on SDT, intrinsic motivation is defined as the desire to do something because it is valuable, interesting, or enjoyable (Ryan & Deci, 2000a). Therefore, self-determined, intrinsic motivation arises from the learner’s own needs and desires rather than from outside pressure (Deci & Ryan, 1987). This theory supports the importance of intrinsic motivation in driving human behavior where autonomy, competence, feedback, and relatedness are key aspects in fostering motivation. This has a direct effect on education. According to Ryan and Deci (2002) and Reeve (1996), students’ motivation for academic performance differs in strength (amount) and quality (nature), and these variations are strong predictors of learning, achievement, and continuation to college. Therefore, a learner who is intrinsically motivated does an activity ‘for its own sake, for the enjoyment it provides, the learning it permits, or the feelings of accomplishment it evokes’ (Lepper, 1988, p. 292).

On the other hand, extrinsic motivation refers to the performance of a task to an end, for instance, a reward, social approval, or appreciation which leads to a “separable outcome” (Ryan & Deci, 2000a, p. 233). Furthermore, Santrock (2004) believes that a person with this type of motivation does something to get something and sees it as “a means to an end” (p. 418). This means that a learner’s motivation also depends on external factors or needs such as receiving rewards or avoiding punishments.

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With regards to the extrinsic motivators in the field of education, DeLong and Winter (2002) provide some examples such as parental expectations, expectations of other trusted role models, the earning potential of a particular field (monetary rewards), and good grades. Ryan and Deci (2000a) also tie in another term--engagement--with motivation. These authors state that the level of student engagement is related to student motivation because this motivation is an important precondition of student engagement during the learning process. Moreover, it is suggested by the researchers that those students with intrinsic motivation exhibit authentic engagement and those with extrinsic motivation show three types of engagement: ritual, passive compliance, and retreatism (Saeed & Zyngier, 2012; Schlechty, 2002 as cited in Nayir, 2017).

Besides these two types of motivation, Gardner and Lambert (1972) propose two other types of motivation for language learning: integrative and instrumental which are based on three elements: effort (the drive to learn a language), desire (wanting to reach a goal), and positive affect (the emotional reaction towards learning a language). The first type refers to a positive attitude towards the second language (L2) community, meaning that learners want to learn about the culture, get closer to it, and desire to interact with individuals embedded within an L2 community. The second type, instrumental motivation, is used to describe learning an L2 for practical reasons such as getting a job or fulfilling an academic requirement. Gardner and MacIntyre (1993), refer to these two types of motivation as motivation orientations and both kinds of motivation can be related to success in second language learning (Lightbown & Spada, 2001).

Factors that affect Motivation

Motivation is a core theme in psychology and different psychological theories have influenced the study of motivation as well as the different factors that affect motivation. Some of

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the most interesting theories have classified the effects according to different perspectives. The first is behavioral views of motivation which focus on extrinsic factors (external rewards or punishments) and reinforcement of desired behaviors. In this view, the internal state of the individual is overlooked. Some of the external forces that influence motivation are parents, teachers, peers, and educational requirements (Cauce et al., 1982; Wentzel, 1997). According to this theory, an extrinsically motivated student performs “to obtain some reward (good grades, teacher approval, etc.) or avoid some punishment external to the activity itself,” as opposed to a student who is “intrinsically motivated and undertakes an activity because of internal satisfaction such as enjoyment, learning, and feelings of accomplishment” (Lepper, 1988, p. 290).

In contrast to the behavioral view, from the cognitive point of view, other factors such as the environment and self-perception affect motivation. The learner’s behavior, and therefore motivation, can be influenced by the way they think about themselves and their environment. Thus, there are four important influences in this area:

1. The need to build an organized and logically consistent knowledge base
2. Personal expectations to complete a task successfully
3. Previous successes and failures
4. One’s beliefs about the nature of their cognitive ability (Biehler & Snowman, 1997).

Related to the humanistic view of psychology, Maslow (1954) proposes a hierarchy of needs that illustrates how human needs are hierarchically ranked to drive motivation. His theory is usually portrayed in five levels in which one level must be met completely before moving on to the next level. The first level contains the physiological needs which include the essential aspects for survival (i.e., the need to satisfy hunger and thirst). The second level incorporates

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safety needs (i.e., the need for safety, security, organization, and predictability), while the third level is based on the need for belonging and love. The last two relate to esteem (i.e., self-esteem, achievement, competence, recognition, respect), and finally, the fifth and highest level includes the need for self-actualization (i.e., living up to one's fullest potential). While somewhat outdated, Maslow's theory lists some important factors that affect motivation which is still important in the field of education.

Content Language Integrated Learning

Definition of CLIL

The term Content and Language Integrated Learning (CLIL) was introduced by Marsh in 1994 to refer to any educational situation in which an additional language and therefore not the most widely used language of the environment is used for the teaching and learning of subjects other than the language itself (Marsh & Langé, 2000). Consequently, CLIL was launched as an umbrella term for any teaching context in which at least part of the instruction is given in a language other than the learners' L1 (Haataja, 2007). As an umbrella term, it is important to note that CLIL is seen as a continuum where, on one side, there are different forms that are defined as a softer type (i.e., Soft CLIL) which is language-driven and the hard or strong form (i.e., Hard CLIL) which is content-driven (Banegas, Corrales, & Poole, 2020).

It is important to highlight that the concept of "additional language" refers to a learner's foreign language, a second language, or community language. Barwell (2005) adds to this definition by explaining that "language and content integration concerns the teaching and learning of both language and subject areas (e.g., science, mathematics, etc.) in the same classroom, at the same time" (p.143). Additionally, Navés (2011) explains that CLIL provides a means by which learners can continue their academic or cognitive development while they are

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also learning academic language. The definitions emphasize that CLIL methodology is on the integration of language and content learning, which is essential.

CLIL Features

Despite the diversity of definitions of CLIL and its many faces, as Mehisto et al. (2008) say, CLIL “has a converging feature of a double-barrel approach in which the content of a non-language subject is fully, largely, or partially taught through a second or foreign language” (Yassin, et al., 2010, p. 47). Besides this, Mehisto et al. (2008) also identify some characteristics of CLIL that have become known as core features. These are the following:

- Multiple focus
- Safe and enriching learning environment
- Authenticity
- Active learning
- Scaffolding
- Co-operation

These authors argue that cognition is the element that drives these core features which are embedded in the teacher’s lesson plan and teaching practices. Additionally, Banegas (2019) points out that “key concepts such as authenticity, functional grammar, cognitive skills, scaffolding language learning, materials development, and motivation are recurrent key pillars in CLIL architecture” (p. 246).

Pérez Cañado (2013) affirms that some of these characteristics mentioned previously distinguish CLIL from other approaches in language teaching, such as immersion education. First, the use of a second language, which is a means to learn the curricular content, is presented in real-life contexts to acquire the language. This also motivates the participants to take an active

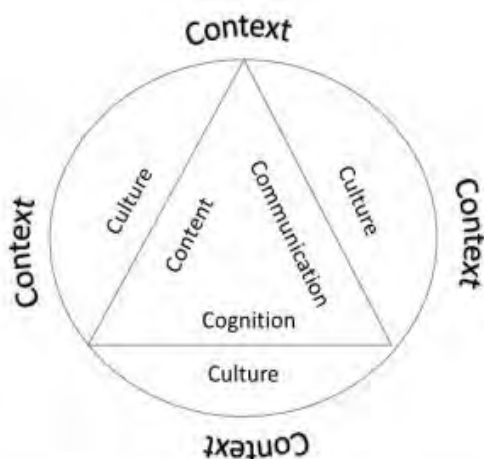
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role in their learning, which allows peer learning throughout the learning process (Cendoya et al., 2008). This means that the academic and cognitive development occurs through BICS (Basic Interpersonal Communication Skills, referred to as daily communication) and CALP (Cognitive Academic Language Proficiency, referred to as the technical or discipline vocabulary) (Cummins, 1999). Moreover, CLIL is based on the scaffolding of knowledge to build new vocabulary, ideas, and grammatical usage about the content. This is done through interaction and the use of diverse activities in the classroom to make learning appropriate for the needs of students and in tune with their level of competence.

Additionally, the integration of language and non-language content in CLIL provides an authentic context for language use. Authenticity within CLIL provides purpose and reasons for engagement (Pinner, 2013). Thus, in CLIL, the language acts as the means rather than as the end, and this aids to reduce the amount of anxiety expressed by learners significantly (Lasagabaster & Sierra, 2009).

CLIL's flexibility is another key characteristic that is underpinned as the 4Cs. The 4Cs is a framework developed by Coyle in 1999 which contains four aspects that teachers should use as their foundation when defining their teaching objectives and learning outcomes and developing their CLIL curriculum. The 4Cs framework calls for the incorporation of content, communication, cognition, culture. It also adds a fifth "C" to the mix, which is the context in the CLIL setting. Coyle et al. (2010) suggest that culture is the fundamental concept for the other three aspects (content, communication, and cognition), as can be seen in Figure 1.

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Figure 1*The 4Cs Framework*

Note. Adapted from Coyle et al. (2010, p. 40).

To understand what Coyle has termed the CLIL Triptych, this section will review each of them further:

Content. CLIL is often equated with academic subjects such as science, history, art, or music. However, content can also include themes or topics and interdisciplinary projects which can be adapted to any topic and used by anyone at any age or stage. Under those circumstances, by meeting and understanding different kinds of knowledge such as concepts, facts, and procedures, learners can apply these to problem-solving, discussion, or further development. According to Coyle et al. (2010), in CLIL, students should progress in their content knowledge and skills. This implies a methodology that promotes more engagement and interactivity during the teaching-learning process which also considers language learning and uses in the learning process.

Communication. This aspect focuses on language and is defined by Coyle et al. (2010) as a conduit for communication and for learning which can be described as “learning to use language and using language to learn” (p. 10). In CLIL, language is activated in contexts that are

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meaningful and motivating for the learners. This aspect is the key to constructing knowledge through an active exchange of thoughts, opinions, attitudes, and findings related to the lesson content. Thus, communication in CLIL has at its heart the aim to produce authentic language in diverse contexts. Thus, language is in ongoing development in terms of language “interaction, progression in language using and learning” (Coyle et al., 2010, p. 54). For communication to occur, language acts as a channel and for learning, language is used to learn whilst learning to use the language.

Cognition. Coyle et al. (2010) define cognition as the “engagement in higher-order thinking and understanding, problem-solving, and accepting challenges and reflecting on them” (p. 54). It is a key component that provides the appropriate setting to promote critical thinking skills and allow learners to build their own knowledge. Cognition provides a rich setting for developing thinking skills, basic interpersonal communication skills (called BICS), and cognitive-academic language proficiency (CALP). It is important to emphasize that learning goals and activities must be created and set for the right level.

Culture. CLIL encloses pluricultural and provides an ideal opportunity for learners to understand themselves as citizens of the world and operate in alternative cultures through studies in an alternative language. Studying a subject through the language of a different culture supports the aim of promoting international awareness and understanding. Coyle et al. (2010) argue that “studying through a different language is fundamental to fostering international understanding” (p. 54).

It is important to highlight that the 4Cs can be described individually, but they do not exist as separate elements. Connecting the 4Cs into an integrated whole is fundamental to planning in the CLIL classroom.

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Benefits of CLIL

As mentioned previously, CLIL is seen as an innovative approach where content and language outcomes are obtained simultaneously through the reinforcement of learners' knowledge of different disciplines and the development of critical thinking as well as the incorporation of cultural awareness and intercultural understanding. Therefore, the principles behind CLIL create a series of advantages that have been well studied and documented. These include the acquisition of linguistic and academic competencies, cognitive learning, and motivational benefits (Coyle et al., 2010; Cummins, 1980; Cummins & Swain, 2014; Griva & Mattheoudaki-sayegh, 2017).

Linguistically, CLIL language and its functions play a critical role and are used as a functional tool that raises awareness of both the mother tongue and target language. Coyle's language triptych concept reflects the multifunctional aspect of language (as a social artifact and as the product of social activity), which helps to achieve the goals of communicative competence. Várkuti (2010) describes studies that show students who learn in a CLIL approach have a significantly wider range of specialized vocabulary, efficient use of grammar rules, and a more self-confident and spontaneous use of the foreign language.

In terms of cognition, CLIL fosters more cognitively engaged learners. This is true because, educationally, CLIL is an interdisciplinary approach that adds multiple methodologies and learning strategies that provides diversity and flexibility to existing methods and types of classroom practice (Darn, 2006). Additionally, according to Marsh et al. (2010), in CLIL learners are active participants who build their own understanding (education) through a process of inquiry (research) and by using complex cognitive processes and means for problem-solving (innovation).

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Finally, the motivational aspect of the CLIL approach, provided through the dynamics of lessons and the use of authentic material, encourages interests and attitudes towards a global context. Experimental studies conducted by Mehisto and Marsh (2011), Doiz et al. (2014), and Banegas (2016) describe that students' motivation rises due to the integration of the learners' learning experiences and the active role of the students. These researchers also argue that the interest and motivation for learning an academic discipline such as mathematics, science, and social studies originate from the connection with its purposeful use when presenting the language content. Harop (2012) also claims that CLIL provides positive attitudes towards the content subject with language subject for the learners to learn. Consequently, CLIL enhances the learners' knowledge, skills, attitudes, and experience (Floris, 2014).

Strategies of Implementing CLIL

As mentioned earlier, CLIL does not have one model that it follows. For this reason, its implementation varies according to many aspects, as Marsh and Frigols (2012) explain in the following excerpt:

[CLIL] varies from one country to another depending on factors such as the specific linguistic situation; the linguistic needs of the population; the degree of autonomy of the education bodies; the quality of educational infrastructure; the flexibility of national curricula; and teachers' qualification and training programs. (p. 5)

However, it is important to consider that learning with CLIL requires a combination of linguistic and non-linguistic skills which are developed through different strategies. The 4Cs schema is the starting point of implementing CLIL, and its framework integrates the use and development of lower-order and higher-order skills based on Bloom's taxonomy (Krathwohl, 2002). Besides, meaningful interaction among learners must be boosted by working in cooperative groups and

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using authentic materials. It is important to highlight that CLIL lessons must provide a strong initial scaffolding and adapt to the learners' pace of learning. This means that a variety of tasks should be used according to the learning purpose and learner styles and preferences.

In the process of implementing CLIL, Coyle et al. (2010) suggest a process-oriented method divided into six stages required for effective CLIL planning:

Stage 1 involves language teachers, subject teachers, and institutional managers setting up a team and discussing the goals of implementing CLIL. According to the authors, one of these goals often includes increasing learners' engagement.

Stage 2 requires analyzing and personalizing the CLIL context. Thus, a CLIL model is built according to the special needs, type of school, size, national policies, etc.

Stage 3 relates to planning and preparing a unit. To do this, the core of every lesson is 4Cs, so these essential elements must be reflected in its design. Therefore, designers should: (1) consider content, (2) connect content and cognition, (3) focus on communication by defining language learning and using (the language of, for, and through learning), and (4) develop cultural awareness and opportunities for the students.

Stage 4 requires the unit to be prepared. For this, appropriate materials, resources, tasks, and activities are organized and revised.

Stage 5 is the step that monitors and evaluates CLIL in action. In this process, it is important to understand classroom processes as they develop to gain insights to support future planning. The final stage relates to developing inquiry-based professional learning communities. This stage focuses on teacher reflection on their own understanding of what is to be taught and learned and looks to change ideas into “teachable” and “learnable” activities (Shulman, 1999).

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Literature Review

This section presents an overview of previous studies that studied motivation in CLIL settings. The existing literature on CLIL and its effects on the motivation of primary and secondary students, its influence on language attainment and vocabulary outcomes, and how the implementation is perceived by students and instructors are reviewed in this section.

Lasagabaster and Lopéz Beloqui (2014) researched the effect of this CLIL on different types of motivation: intrinsic, extrinsic, instrumental, and integrative motivation as well as the students' interest in other cultures. The study involved 87 fifth-grade students (10-11-year-olds) in three different public schools in Navarre, Spain. A questionnaire-based on previous studies in the field (Kurzel & Rath, 2007 and Pintrich et al., 1991 as cited in Lasagabaster & Lopéz Beloqui, 2014) was designed and applied to them. The results showed that CLIL has a positive effect on some components of young learners' motivation. Thus, students had greater intrinsic motivation than extrinsic.

In addition, the results indicated that CLIL had a very positive effect on young students' integrative motivation; that is, students' interest in interacting and learning about the L2 community of speakers increased. Nevertheless, students were not instrumentally motivated, and their interest in other cultures showed that EFL and CLIL students were similarly motivated, concluding that CLIL programs did not have a specific effect on this motivational aspect. Similarly, in 2014, Doiz, Lagasabaster, and Sierra carried out a three-year longitudinal study with 393 compulsory secondary education students (aged 12–13 and 14–15) enrolled in EFL and CLIL courses in the Basque Country, Spain. The researchers analyzed the role played by CLIL in the motivation of students to learn English and their attitudes towards English as well as its interaction with individual and contextual variables, specifically age, sex, and sociocultural

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variables. The quantitative questionnaire applied in this study was based on scales used by Gardner (1985) and Schmidt and Watanabe (2001). The six scales included instrumental orientation, parental support (taken from Gardner, 1985), intrinsic motivation, interest in foreign languages/cultures, anxiety, and motivational strength (taken from Schmidt & Watanabe, 2001).

The findings showed that the students in the CLIL groups were more motivated than the non-CLIL students, revealing the importance of the teaching approach. It also reported that this difference could not be attributed to the gender variable and the difference between groups could not be attributable to the student's age. Regarding the socio-cultural variable, no differences were found in parental support towards English learning between CLIL and non-CLIL groups. Also, the contrast between EFL and CLIL groups showed a similar degree of anxiety. Thus, the differences between both groups regarding anxiety were not statistically significant. It also revealed that CLIL students are intrinsically more motivated, more instrumentally oriented, and showed a higher interest in foreign languages than non-CLIL students.

In another study, Arribas (2016) examined a CLIL school and focused on students' attitudes, motivation, and receptive vocabulary outcomes. The study included 403 students (ages 12 to 16) in the 2009-2010 school year. The school's whole population was distributed among the four compulsory years of Spanish secondary education. The researcher analyzed students' scores on different vocabulary tests and used an adapted questionnaire based on one used by the GLAUR group (Grupo de Lingüística Aplicada de la Universidad de La Rioja – Applied Linguistics Group of the University of La Rioja) to know the students' view on CLIL. The results showed that motivation affected the high scores obtained in receptive vocabulary tests, but, as in other studies, differences between CLIL and non-CLIL groups were not statistically significant. The author argues that this finding most likely relates to the irregular

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implementation of the CLIL program in the school and the lack of experience with the methodology.

Motivation and language attainment are also important variables in foreign language learning and were addressed in Navarro Pablo and García Jiménez's (2018) research. These researchers carried out an analysis of two variables in CLIL implementation: the impact of the CLIL educational approach and the influence of affective factors on pupils' language achievement. The sample included 352 students divided into non-CLIL learners (61.4%) and CLIL learners (38.6%) who were enrolled in seven state schools and one charter school in the province of Seville, Spain, in both primary (12-year-old students) and compulsory secondary education (14-year-old students). Therefore, this study compared and contrasted CLIL and non-CLIL learners' language attainment with their motivation.

The instruments used to analyze students' scores were two tests: a language proficiency test and a motivational test. The first one was designed following the Common European Framework of Reference (CEFR), the national decrees, and the regional orders that establish the official curriculum for the educational stages assessed. The language proficiency test consisted of three different batteries of six subtests each (grammar, vocabulary, reading, writing, listening, and speaking). The motivational test used was the MA test by Pelechano (1994). This test is composed of 35 items and focuses on four motivational aspects related to achievement and anxiety: (1) Desire to work and self-esteem, (2) Realistic personal self-demand, (3) Anxiety in the face of exams, and (4) Lack of interest in learning.

The results of the level of attainment of CLIL learners and non-CLIL learners were different for both primary and secondary education. In primary school, there were statistically significant differences regarding English, vocabulary, and all subtests for speaking in primary

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school students. Nevertheless, there were no statistical differences found in any of the receptive skills. In secondary, there were statistically significant differences in English and vocabulary, listening, reading, and all subtests of speaking.

Regarding the motivational variables, there was a statistically significant effect on each of the four subtests used to measure the L2 language achievement except for self-demand. In primary education, Navarro concluded that due to the oral-based, communicative, pedagogical approach used in CLIL programs, there was a higher effect on productive skills (writing and speaking). In secondary education, there are statistically significant differences for all the subtests which are always in favor of the CLIL learners. According to the author, their means are always higher than those in non-CLIL programs. Furthermore, the author concluded that CLIL students were more motivated to learn English than non-CLIL students and the effects of motivational variables seemed to be more consistent at the primary level than at the secondary level because students' motivation 'diminishes progressively with time' (p. 87), which is the same that Doiz et al. (2014) found.

To complete this review, Mede and Çinar (2018) undertook an action research study to examine the effects of integrating CLIL on the motivation of students' learning English by looking at how this approach is perceived by students and their instructor. The participants were 19 students and the instructor who was one of the researchers in a preparatory school at a private university in Istanbul, Turkey. The students were at the intermediate level (B1) and their age range was between 18 and 23 years old.

The data was collected using a close-ended motivation questionnaire adapted from the study of Schmidt, Boraje, and Kassabgy (1996) and reflective journals where learners reflected on their thoughts and experiences related to the CLIL units studied during class. Regarding the

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instructor reflected journal, it consisted in taking field notes on the students' attitudes towards the units. The quantitative data obtained from the motivation questionnaire, an independent sample t-test was used to compare the motivation level of the students before and after implementing CLIL, and the qualitative data gathered from the reflective journals were analyzed through inductive analysis.

According to the results of the paired sample t-test (at the 95% confidence level), the motivation level of the final test taken by the students after implementing CLIL was found to be higher than the motivation level of the students before implementing this learning approach. The authors concluded that CLIL-based lessons were found to be engaging and informative during teaching, learning, and practicing English in the preparatory course. They also found that the implementation of CLIL in English classes leads to a more practical, natural, and interactive educational context.

Together these studies provide important insights into the effects of the CLIL approach on motivation when learning a second/foreign language. The present study, therefore, attempts to contribute to the exploration of how the implementation of CLIL in a course affects the motivation of primary-school children.

Chapter 3. Method

This chapter focuses on how the research project was carried out. It includes a section on the paradigm of the project, the methodology, design, and method that led this study. It also gives information about the participants and the design of the implementation of the CLIL innovation. Furthermore, it details the instruments used for data collection, the procedure used in this collection, and how the data was analyzed. Finally, it describes the ethical practices used during the project.

Paradigm

The current study is framed in a pragmatic research paradigm due to its action-oriented nature. Morgan (2014) states that from a pragmatic point of view, knowledge comes from acting and learning from the experiences and outcomes of these actions. Furthermore, this author states that pragmatism is particularly appropriate for mixed methods research. In addition, Creswell (2014) states that pragmatism “opens the door to multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis” (p. 40) for the mixed methods researcher. In this sense, all data analyzed in this study are qualitative (textual data) and quantitative data (numerical data) to match the type of information that is needed to respond to the research question.

Because of this, since this research was undertaken to know the impact of the CLIL approach on students' motivation while exploring the students' perception of the use of the CLIL approach, pragmatism is the paradigm that fits the best.

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Methodology

In research, there are three main types of methodologies: quantitative, qualitative, or mixed methods. In quantitative research methods, an investigator relies on numerical data (Charles & Mertler, 2002) to explain an issue or phenomenon by analyzing it with the aid of mathematical methods, in particular statistics (Aliaga & Gunderson, 2002; Creswell, 2014). This approach tests objective theories by examining the relationship among variables and “these variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures” (Creswell, 2014, p. 5).

Alternatively, Creswell (2014) defines qualitative research as “an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (p. 5). Additionally, it is applied to enhance understanding of individuals’ cultures, beliefs, and values, human experiences, and situations, as well as developing theories that describe these experiences (Creswell & Plano Clark, 2011). In this approach the verbal symbols are not changed into numerical data; rather, the participants and/or the researcher’s words are used to describe the phenomenon being studied (Hogan et al., 2009).

For this study, both quantitative and qualitative approaches were used. According to Creswell and Plano Clark (2011) and Johnson et al. (2007), the application of both qualitative and quantitative methods within a single study strengthens the breadth and depth of understanding of the research phenomenon than either method by itself could do and reduces the limitations of both approaches. This idea is supported by (Creswell, 2014) who states that the integration of quantitative and qualitative approaches allows researchers to get a more comprehensive picture of the issues in question. Furthermore, in a mixed-methods approach, there is a potential of triangulation which enhances the validity of the findings, which are

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provided by all potential methods and sources of data to reach a valid conclusion (Cohen et al., 2007; Creswell & Plano Clark, 2011).

For this study and the research, the question posed, neither a quantitative nor qualitative approach would have supplied the necessary information. Therefore, this study uses a mixed-methods approach that integrates both numerical and text data and can be more effective than using any approach independently (Creswell, 2014). Moreover, the combination of these two types of research enables greater validity in findings and inferences (Ponce & Pagán-Maldonado, 2015) by using all potential methods and sources of data to reach a valid conclusion (Cohen et al., 2007; Creswell & Plano Clark, 2011).

Design of the Study

An action research (AR) approach, also called “classroom research” (Hopkins, 2014) or “self-reflective inquiry” (Kemmis, 1982), was applied to the current study due to the focus on motivational aspects of the implementation of CLIL. As Creswell (2002) cites, “action research provides an opportunity for educators to reflect on their practices’ (p. 577). AR also permits teacher-researchers to understand their process as a ‘form of collective self-reflective inquiry undertaken by participants in social situations to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out’ (Carr & Kemmis, 1986, p. 1). In this study, the researcher is a participant-observer who interacted intensively with the participants to answer the research questions. The general process of conducting action research is divided into four stages which are described in Table 1 below:

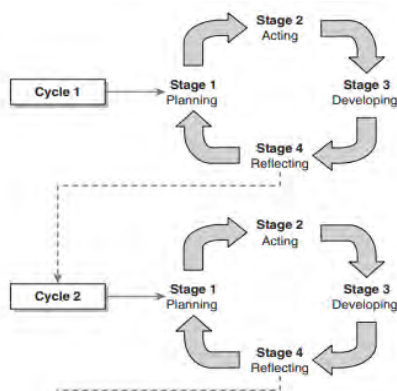
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Table 1*Stages in the Action Research Process*

Stages in A. R	Description
1. The Planning Stage	Identifying and limiting the topic Gathering information Reviewing related literature Developing a research plan
2. The Acting Stage	Collecting data Analyzing data
3. The Developing Stage	Developing an action plan
4. The Reflecting Stage	Sharing and communicating results Reflecting on the process

Note. Table made with information from Mertler & Charles (2011).

With regards to the cyclical nature of AR, Mertler & Charles (2011) propose moments of planning actions, acting, observing the effects, and reflecting on one's observations which involve a spiral that reflects the refinements of research questions, resolution of problems, and changes in the perspectives of researchers and participants. Furthermore, they state that with AR, the teacher often carries out subsequent cycles of implementation, evaluation, and revision, spiraling from semester or year to the next. This can be seen in Figure 2.

Figure 2*The Process of Action Research*

Note. Taken from Mertler and Charles (2008, p. 29).

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To summarize, Schulze et al. (2002) describe the nature of an AR as the following:

Action research is not a neat, orderly activity that allows participants to proceed step by step to the end of the process. People will find themselves working backward and forwards through routines, repeating processes, revising procedures, rethinking interpretations, leapfrogging steps or stages, and sometimes making radical changes in a different direction. (p. 58)

Therefore, Johnson (2008) argues that the AR steps are meant to provide guidelines for conducting action research projects. This author suggests that they should be adapted to a particular research problem or topic. Consequently, this study is designed to follow the basic steps of AR and implemented through just one cycle due to its small-scale nature. It was chosen to consider the flexibility offered by action research and what Parsons and Brown (2002) state in reference to the main value of teacher-conducted action research: action research projects worth resides in the questions addressed and the extent to which the results are meaningful to teacher-researcher and not necessarily in the way in which those results were obtained.

Participants

This project explores the effect of implementing the CLIL approach on the motivation of a group of fifth-graders who are the focus of the study. This is a heterogeneous group of 22 elementary students of boys and girls between ten and eleven years old. The language proficiency of the students is at A1, A2, and B1 levels according to the CEFR. The participants receive social studies, math, religion, and science in English. The school has established four hours of science per week.

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Description of the Intervention

In the phase of implementation, fourteen class sessions in seven units were developed with activities that fostered the principles of the CLIL learning approach. Each unit contained two lessons which were taught for 45 to 50 minutes per session. When planning and teaching classes, the 4Cs, an essential element in CLIL classes, were contemplated. This information is found in Tables 2 to 8.

Table 2*Unit 1. The Amazing Journey*

Content	Cognition	Communication	Culture
Stages of the “Water Cycle”	Identify different phases of the “Water Cycle”	Key Vocabulary Building simple sentences	Understand how human development affects the water cycle.
Factors that affect the water cycle	Understand the movement of water through different phases. Apply knowledge by doing an experiment	Using verbs to describe an experiment in both written and oral communication. Summarizing information	Discuss how some countries of America protect water resources

Table 3*Unit 2. Living Things and their Habitats*

Content	Cognition	Communication	Culture
Concept of Habitat	Identify habitats and its characteristics	Key Vocabulary	Reflect on the importance of different habitats in the world.
Habitats and its main features	Compare and describe the different types of habitats.	Making statements Asking questions	Be aware of how organisms adapt to different habitats.
Types of habitats		Phrasal verbs	

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Table 4*Unit 3. Living Things and their Feeding Relationships*

Content	Cognition	Communication	Culture
Concept of food chain and food web.	Identify the differences between food chains and food webs.	Key vocabulary. Write sentences to recall the sequence of events.	Be aware of the importance of feeding relationships in diverse ecosystems.
Components of a food chain Energy transfer in ecosystems.	Describe the components of a food chain. Interpret food chain and food web diagrams.	Ask questions.	

Table 5*Unit 4. Photosynthesis and Light*

Content	Cognition	Communication	Culture
Photosynthesis and energy.	Describe the process of photosynthesis.	Instructional sentences. Questions.	Be aware of the important role of forests in the world.
Parts of the leaves. Leaves and light.	Illustrate the relationship between light and photosynthesis.	Present simple. Describing functions.	
Molecules of the photosynthesis process.	Illustrate the relationship between carbon dioxide and photosynthesis. Name the inputs and outputs of the photosynthesis process.		

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Table 6*Unit 5. Cellular Respiration and Energy*

Content	Cognition	Communication	Culture
Cellular respiration and energy.	Describe the process of Cellular respiration	Instructional sentences. Questions.	Be aware of the importance of energy in chemical processes and everyday life.
Mitochondria and energy.	Illustrate the relationship between energy and cellular respiration.	Present simple. Describing functions.	
Molecules of the cellular respiration process.	Illustrate the relationship between glucose and cellular respiration. Name the inputs and outputs of the cellular respiration process.		

Table 7*Unit 6. Biotic and Abiotic Factors*

Content	Cognition	Communication	Culture
Definition of biotic and abiotic factors. Influence of biotic and abiotic factors in an ecosystem.	Describe the characteristics of biotic and abiotic factors in an ecosystem. Analyze the role of biotic and abiotic factors in an ecosystem.	Asking Questions. Compound names. Quantifiers.	Recognize how biotic and abiotic factors support life in aquatic and terrestrial ecosystems.
Examples of biotic and abiotic factors in an ecosystem.			

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Table 8*Unit 7. Recycling*

Content	Cognition	Communication	Culture
Definition of recycling.	Describe examples of recycling in ecosystems.	Asking Questions.	Develop an awareness of types of trash by classifying them into those that can and can't be recycled.
The four R's.	Identify the characteristics of materials to be recycled.	Compound names.	
Eco friendly practices to recycle.	Understand the different ways to recycle.	Modal verbs Imperatives	

Data Collection Techniques and Procedures

This section describes the research instruments that were used, and the procedure implemented for each to collect data. The following instruments for data collection, coherent with the research questions, were used to elicit information: a pre-and post-survey and pre-and post-focus. Initially, a survey to diagnose how the implantation of a learning approach affected the students' motivation was applied before and after the intervention. Then, the focus groups were carried out to corroborate and clarify the information related to student motivation. Each of these tools will be described separately.

Survey

One of the quantitative data collection techniques used was a survey. The purpose of a survey is to make inferences about a population by examining a sample from that population. This method was chosen since it can be used to obtain a variety of information about people's opinions, perceptions, and attitudes, and in planning and evaluating programs (Fink, 2009). Similarly, Gorard (2003) points out that the rationale of using a survey is generally to attain a snapshot of conditions, attitudes, and/or events at a single point in time.

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Surveys are generally conducted using some type of questionnaire, which are also variously known as “inventories,” “tests,” “batteries,” “checklists,” “scales,” “surveys,” “schedules,” “indexes,” or “indicators” (Dörnyei, 2007). Brown (2001) describes a questionnaire as any text-based instrument that provides participants a series of questions to answer or statements to respond to either by indicating a response, either by marking a page, writing a number, or checking a box on paper or online.

For this study, the survey included a Likert scaling method, also called a “scale of attitudes.” Developed by an American educator and psychologist named Rensis Likert in 1932, it is a technique to interpret qualitative survey questionnaires quantitatively. It is primarily used in questionnaires to obtain participants’ preferences or their degree of agreement with a statement or set of statements by choosing one of the five points or categories on an ordinal scale (Hernández-Sampieri & Mendoza, 2018). This instrument was adapted from Gardner’s (1985) Attitude Motivation Test Battery (AMTB), which the creator suggests can be adapted and translated, and McKeachie and Pintrich’s Motivational Strategies for Learning Questionnaire (MSLQ), created in the early 1980s.

The AMTB instrument was applied based on its high level of reliability and validity which has been used in many quantitative studies that focus on examining different affective components influencing second/foreign language learning (Gardner & Lambert, 1972; Kristmanson, 2000; Masgoret & Gardner, 1994; Williams et al., 2002). On the other hand, the MSLQ also has been used in various cultural and educational contexts all over the world. It was originally designed to measure college students’ motivation and learning strategies, but Duncan and McKeachie (2005) state that MSLQ has been proven to be a reliable and useful tool that can be adapted for several different purposes for researchers, instructors, and students. They also

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state that its reliability and validity have been tested in two other languages (Spanish and Chinese) apart from English. Furthermore, the MSLQ contains 15 different sub-scales and is completely modular, allowing the researchers or participants to use the scales together or singly, according to their specific needs (Pintrich et al., 1991).

The section related to integrative motivation and instrumental motivation was adapted from the AMTB by specifying the English language learned through the science class. For integrative motivation, Statements 1, 5, 15, and 18 were chosen (see Table 9 to view the statements). For instrumental motivation, Statements 7, 11, 14, and 20 were used. (See Table 10).

Table 9*Integrative Orientation Statements*

Statement 1	Statement 5	Statement 15	Statement 18
Learning English through a content subject like <i>science</i> is important to me because it will allow me to be more at ease with people who speak English.	Learning English through a content subject like <i>science</i> is important to me because it will allow me to meet and speak with more and varied people.	Learning English through a content subject like science is important to me because it will enable me to understand and better appreciate the English-speaking cultures.	Learning English through a content subject like <i>science</i> is important to me because I will be able to participate more freely in the activities of another cultural group.

Table 10*Instrumental Orientation Statements*

Statement 7	Statement 11	Statement 14	Statement 20
Learning English through a content subject like <i>science</i> is important to me because I'll need it for my future career.	Learning English through a content subject like <i>science</i> is important to me because it will make me a more knowledgeable person.	Learning English through a content subject like <i>science</i> is important to me because it will be useful in understanding films, videos, pop music or books and magazines in English.	Learning English through a content subject like <i>science</i> is important because other people will respect me more if I have knowledge of a foreign language.

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From the MSLQ, the extrinsic and intrinsic motivation, as well as the task value questionnaire section were adapted. The value component was selected to be administered in the AMTB questionnaire and includes the constructs' intrinsic goal orientation (Intr.), extrinsic goal orientation (Extr.), and task value (Task v) to measure the motivational beliefs of the students. Again, for this project, certain statements were chosen for the survey as can be seen in Tables 11, 12, and 13.

Table 11

Intrinsic Orientation Statements

Statement 3	Statement 13	Statement 21
In a class like this I prefer course material and activities that really challenge me so I can learn new things about Science and Language.	The most satisfying thing for me in this class is trying to understand the content as thoroughly as possible.	When I have the opportunity in this class, I choose activities that I can learn from even if they don't guarantee a good grade.

Table 12

Extrinsic Orientation Statements

Statement 2	Statement 4	Statement 17
Getting a good grade in this class is the most satisfying thing for me right now.	If I can, I want to get better grades in this class than most of the other students.	The most important thing for me right now is improving my overall grade point average so my main concern in this class is getting a good grade.

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Table 13*Task Value Statements*

Statement 9	Statement 10	Statement 12	Statement 16	Statement 19
I think I will be able to use what I learn in this class in other subject content classes.	It is important for me to learn the content material provided through English in this class.	I am very interested in the content area of this class.	I think the content material in this class is useful for me to learn English and Science at the same time.	I like the subject matter taught through English of this class.

The final instrument for this study has 23 statements that were translated into Spanish (but in this document, they are in English) and included integrative and instrumental motivation, intrinsic and extrinsic motivation, and task value motivational components. The Likert responses ranged from *strongly agree* (5) to *strongly disagree* (1) using a 5-point scale (see Appendix I). Before the administration of the survey, the set of 23 statements was piloted with a group of four students from fourth and sixth grade, and minor modifications were made regarding the language used in the statements to make them clearer for the participants of this study. The final survey was administered in class to the students by the researcher and took approximately 30 minutes to complete.

Finally, the data obtained from the AMBT questionnaire was coded by the researcher and analyzed using descriptive statistics by implementing the Statistical Package for Social Sciences software (SPSS), version 23.0.s. A preliminary non-parametric test, the Kolmogórov-Smirnov test, was done to verify whether the sample scores follow a normal distribution. The Kolmogórov-Smirnov test revealed that it did not fulfill the condition for parametric analysis; it was lower than the coefficient that was set ($p = 0,05$). Thus, for this variable, a non-parametric analysis was used.

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In addition, t-tests were performed to determine whether there was a significant difference in the impact of the CLIL approach on motivation before and after its implementation. For this, the groups are made up of the same people and the questions were answered at two different times to determine the significance of the results. The non-parametric analysis and t-tests were applied to the entire set of items of the questionnaire.

Focus Group

Cohen et al. (2007) define focus groups as “contrived settings, bringing together a specifically chosen sector of the population to discuss a given theme or topic, where the interaction of the group leads to the data and outcomes” (p. 376). Additionally, Wilkinson (2006) gives a more in-depth description of them when he states that they are a small group-based interview in which group discussion amongst participants is focused on a particular issue or area of inquiry, guided, and mediated by a group facilitator. Based on these definitions, this instrument becomes a helpful tool to gather qualitative data about students’ motivation which provides better insights, especially information related to the attitudes, behavior, opinions, or perceptions of participants on the research issues (Hennink, 2007). Furthermore, this instrument can be used to create a safe peer environment for children (Cohen et al., 2007; Adler et al., 2019).

Regarding the number of participants that should be part of a focus group, Morgan (1988) suggests that focus groups should have between 4 and 12 people, and Krueger and Casey (2000) state that five to 10 participants per group are an appropriate number. However, Cronin (2008) argues that focus groups should consist of between six to 10 people to obtain an ample scope for

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the different viewpoints and opinions, avoiding the competition among participants while making contributions.

The present research was carried out considering the recommendations, and two focus groups before the intervention and two focus groups after the interventions (for a total of four groups) were formed and served as part of a “multimethod study” (Morgan, 1996). For this case, they were carried out using a semi-structured group interview format to collect data specifically about students’ perceptions on the implementation of the CLIL approach in the science class and the possible elements of the CLIL approach that could influence their motivation.

The first focus groups were performed before teaching students using the CLIL approach, and the second occurred after the fourteen sessions had been completely implemented. The focus groups were conducted in Spanish to make the students feel more comfortable since they expressed themselves in their native language. Concerning the questions (see Appendix 2), they were adapted based on an earlier study in the field of CLIL and motivation in modern language learning (see Bower, 2013).

Each focus group took approximately one hour. Before the session, the participants were invited to speak freely, and it was clarified there were no right or wrong answers or opinions. Also, students were assured that their names would not be used in the study. The researcher moderated the discussions and audio recorded the session. These recordings were transcribed and analyzed (see Appendix II). After transcribing the pre-and post-focus groups, the analysis of the data was carried out through content analysis (Elo, et al., 2014) to code the information and organize it into categories related to the different types of motivation and other aspects of motivation related to the theoretical foundation of this study and to its research questions (see Appendix III).

Ethical Considerations

Before the questionnaire was administered, the researcher introduced the boys and girls to the research study and their role as participants. The students' willingness as well as their parent's and school's consent were received by the researcher respectively. Furthermore, when working with the data and in this thesis, students were assigned a number (e.g., Student 1) to ensure data anonymity and confidentiality.

Chapter 4. Results

This chapter shows the results about the effect of the implementation of the CLIL approach on students' motivation. As explained in the previous chapter, the data was collected from a pre-and post-questionnaire and two pre-and-post focus groups. The quantitative results are shown first, and then the qualitative results.

Pre-Post-Questionnaire

After applying a standardized questionnaire to the study population, various responses were obtained in relation to the motivation of 5th-grade students regarding the CLIL methodology. Likewise, a simple Paired Test (Student t-test for related samples) was used which compares the means of two variables of a single group. This test is intended to see whether the mean of a variable is the same or different in two determined groups. The results of the t-test are found in Table 14 below and compare the motivation that students have before and after implementing the CLIL methodology in each of the four areas of motivation.

Table 14

Results of T-test of CLIL on Student Motivation

	Pre -Test		Post-Test		t	dF	Sig. (bilateral)
	Mean	S.D.	Mean	S.D.			
Integrative	3.9	.750	4.4	.398	-3.008	21	.007
Instrumental	3.9	.639	4.2	.453	-5.924	21	.000
Intrinsic	4.1	.700	4.3	.528	-2.714	21	.013
Extrinsic	4.2	.613	4.2	.490	-.839	21	.411
Task Value	4.3	.563	4.5	.300	-2.942	21	.008

Note. SD= Standard deviation, t= T test, dF= Degree of freedom, Sig= Significance level.

The results show significant differences between integrative motivation, since the pretest has a mean of 3.9 (SD = .750) and the posttest has a mean of 4.4 (SD = .398) ($t = -3.008$, $gl = 21$,

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$p < 0.010$). Regarding instrumental motivation, the pre-test has a mean of 3.9 (SD = .639) and the post-test of 4.2 (SD = .453) ($t = -5.924$, $gl = 21$, $p < 0.001$). When looking at intrinsic motivation, the pretest has a mean of 4.1 (SD = .700) while the posttest has a mean of 4.3 (SD = .528) ($t = -2.714$, $gl = 21$, $p < 0.050$); and the value of tasks in the pretest presents a mean of 4.3 (DS = .563) and in the posttest of 4.5 (DS = .300) ($t = -2.942$, $gl = 21$, $p < 0.010$). In general, there are no significant differences in extrinsic motivation ($t = -.839$, $p > 0.050$).

To summarize the results of the data, when determining the effect of the CLIL methodology on the motivation of fifth-grade students, significant differences were observed before and after implementing the CLIL methodology in integrative, instrumental, intrinsic motivation, and the task value since there were higher means after the implementation of the strategy. On the other hand, no significant differences were found in extrinsic motivation. This analysis clearly shows that CLIL did affect students' motivation in the areas mentioned.

When looking at the specific sections related to each type of motivation, many more students expressed their desire to learn about people who speak the language and to know about the culture from a positive attitude and were even interested in joining those groups and places where this language is considered native. Similarly, in the case of instrumental motivation, the results demonstrate that students began to consider learning this language for utilitarian purposes for their lives. Regarding intrinsic motivation, which also showed a higher mean after the strategy, it reflects that students consider learning English to a greater extent as an action based on autonomy and competence, satisfaction, and enjoyment, obtaining better results, which also resulted in the value of the task which had a higher mean after implementing CLIL.

The one area that did not change significantly is extrinsic motivation. This is probably true because this type refers to learning being motivated to avoid punishment, obtain a reward, or

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a good grade. Most likely from the students' perspective, none of these aspects changed from before or during the implementation of the CLIL intervention.

Focus Group

This section focuses on the analysis of the responses expressed by the students during the focus groups which were applied before and after the implementation of CLIL. As mentioned in the method section, answers were given in Spanish, so their responses here have been translated into English. The results of each focus group have been combined and described separately according to the types of motivation that emerged in the coding process.

Focus Group before Implementation

Starting with the interview carried out before the intervention with CLIL, the Extrinsic Motivation category was dominant in the responses of both groups, followed by the Intrinsic one, and the Integrative and Instrumental in similar tendencies. With regards to extrinsic and intrinsic motivation, specific topics emerged about learning to avoid punishment or the execution of activities in English to obtain medals. The students highlighted that; certain activities are the ones that attract attention when learning science with English.

They found the activities that the teacher planned, for example, dynamic lab and computer activities to be interesting. In general, these are related to Extrinsic Motivation, regarding that these are stimuli that come from outside of the students themselves and that encourage the desire and interest of students to learn this second language. This can be seen from the following quotes from students:

“I like that she takes us to the computer room and the laboratory because I can use materials other than the big book.” (Focus Group # 1, turn #24)

“I like that the teacher is affectionate, and I also like when she takes us to the laboratory

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or to the computer room.” (Focus Group #1, turn #38)

“Because I want to feel well with a good average to get a medal too.” (Focus Group #1, turn # 80)

Basically, the results showed that students were extrinsically led than intrinsically and they were oriented to the motivation towards learning Science due to the charisma of the teacher or the subject itself not arousing interest, as the following excerpts of the interview show:

“I get bored if we don't do something fun to learn.” (Focus Group #2, turn #61).

“I don't know, sometimes it doesn't catch my attention and I don't make any effort.”
(Focus Group #2, turn #75).

“I enjoy if we do something like games and by doing that, we learn English and science too.” (Focus Group #2, turn #50).

“I also like my teacher and when he lets us play.” (Focus Group #1, turn #27).

In relation to the integrative motivation, the students pointed out their interest in learning so they could communicate with other people, along with the intention of learning a second language to know other places and cultures. Such topics arose due to the responses of the students when they stated that English is important “to be up to date with the world, to meet people, to learn from other cultures” (Focus Group #1, turn #6).

Regarding the responses on instrumental motivation before the intervention with the CLIL approach, the interest in learning English as a mechanism for personal and professional improvement was stated to a lesser extent, possibly because of their age. However, there were a few comments in this category such as “I think it's important to know another language to get a job, that's what my dad says, that one can be better if you know another language (Focus Group #1, turn #7), “it is beneficial because I want to be a doctor and that of learning cells and

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laboratories would help me a lot to learn what I like” (Focus Group #1, turn #22), and “learning it in another language can help us to know many other things about this subject” (Focus Group #1, turn #21).

Focus Group after Implementation

When comparing the previous results with the responses after the implementation of CLIL, certain variations were noted with regards to the types of motivation in both groups, since these emphasized much more intrinsic motivation, while extrinsic motivation decreased its frequency. Regarding integrative and instrumental motivation, they showed practically no variation after the intervention.

Related to intrinsic motivation in the post-interview, students mentioned they liked the activities carried out in science class and built an even greater interest in science even if it is taught in English.

“I like activities a lot more lately.” (Focus Group #1, turn #93).

“Especially in the lab, I feel super good.” (Focus Group #1, turn #94).

“I am comfortable, especially when we do activities outside the classroom.” (Focus Group #2, turn #99).

“I like the practices even now that we use English but in a more fun way and I understand better.” (Focus Group #1, turn #36).

They also manifested a greater intention to participate in class and their rejection to do reading activities. Consequently, the enjoyment of learning a language and the interest in mastering new concepts, including science concepts, which shows the main principle of CLIL, stands out.

Important examples confirming this in the following responses from students:

“I like that now it is different from the other classes and subjects.” (Focus Group #1, turn

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#25).

“Now I enjoy it (the science class) and participate more.” (Focus Group #1, turn #46).

“I intend to participate rather than distract myself.” (Focus Group #1, turn #55).

Students mentioned the preference for virtual activities that are done in the subject, which shows that the activities still motivate the students. One student said, “The best thing is to see the class in the computer room and the laboratory because we do different things” (Focus Group 1 #, turn 50).

Regarding extrinsic motivation, there was a decrease in the number of the students' responses that highlighted the influence of external factors to do the activities proposed in the class, but some of the same types of comments mentioned earlier appeared such as getting good grades:

“I want to get good grades and that's why I make an effort.” Focus Group #2, turn #79).

“I want to maintain a good average.” (Focus Group #1, turn #74).

Regarding the integrative and instrumental motivation, there was no variation after the CLIL methodology or new emerging themes in the responses. Again, students stated that “knowing the language is perhaps good for those who decide to live in another country” (Focus Group #1, turn #6) or knowing about other cultures or going to other countries. They also mentioned again that learning science in English “maybe...can help me learn things about science that are in English” (Focus Group #2, turn #20). One very positive aspect was that they realized that “using English [they] could learn important words and concepts” (Focus Group #1, turn #23), again, which is the purpose of CLIL.

In the next chapter, the results of these two instruments will be discussed and compared with the literature of the area.

Chapter 5. Discussion

This chapter discusses the results of this research project obtained from the analysis of the results of the pre- and post-standardized questionnaire and focus groups and compares them to other studies found in the literature of the area. In this study, the results showed that after implementing the CLIL methodology, the students began to consider that science taught in English could be interesting, fun, and enjoyable. Such findings lead to assert that the CLIL methodology intervenes on intrinsic motivation, while extrinsic, integrative, and instrumental motivation is also affected, but these changes might depend on other factors.

When analyzing the results, the quantitative data showed significant differences before and after implementing the CLIL methodology, especially in integrative, instrumental, intrinsic motivation, and task value. However, this was not true in the case of extrinsic motivation. Given the fact that students enjoyed the activities and showed a preference for those which required interaction and involvement for the learning of science, these marked differences before and after the implementation of the approach seem to indicate that CLIL helps to boost students' motivation while doing their class activities. It can be said that this is because students felt internally motivated (Ryan & Deci, 2000) during the CLIL sessions through the variety of tasks of the CLIL lessons which were framed by the 4Cs.

Also, the lessons included dynamic activities and the use of authentic materials which encouraged interest and a positive attitude towards the subject taught. These findings are like those of Doiz et al. (2014) in which the students in the CLIL groups were more motivated than the non-CLIL students, revealing the importance of the CLIL approach in this aspect. Doiz et al. also found that the CLIL students were intrinsically more motivated, more instrumentally

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oriented, and showed a higher interest in foreign languages than non-CLIL students, which was partially confirmed in this study.

When contrasting this finding with the qualitative results, after the intervention with CLIL, intrinsic motivation was higher, and the extrinsic factor was lower. However, there was little change in the themes and topics that students mentioned related to integrative and instrumental motivation. This may be because they are young learners who are just becoming interested in knowing more about the English-speaking people and their societies' cultures. Also, students may have not yet become aware of the importance of the language for their professional and work future or as a vehicle for deepening and understanding other cultures which relate to Csizér and Dörnyei's (2005) assertion that instrumental motivation is not directly relevant for young students. Regarding integrative motivation, it can be said that students considered that English was important to communicate with people from other countries and English is the common language used in the CLIL classroom.

With regards to extrinsic motivation before the intervention with CLIL, it seems the students were more motivated by external reasons to learn science in English, leaving aside even the possibility that this language offers the opportunity to deepen the knowledge of cultures or may serve as a tool for personal and professional improvement. However, after the intervention, responses related to intrinsic motivation increased more than those that aligned with extrinsic motivation. These results make sense because, according to Ryan and Deci (2000), intrinsic motivation usually increases when extrinsic motivation tends to be low.

Additionally, these results indicate that the type of instruction is an important element. This could be true because the CLIL methodology implies the design of structured tasks focused on learning discipline concepts and skills (in this case, science) that are more guided, and the

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language acts as the means of learning this area rather than being an end in itself (Lasagabaster & Sierra, 2009). Consequently, in this case, students do not perceive English as a barrier while learning science, and this motivates them to take an active role in their learning (Cendoya et al., 2008). Furthermore, it seems that students realized that the use of different activities and methodology implemented in the classroom, as well as the support obtained from the teacher, made the class more interesting and they could gain more understanding of the subject. Regarding positive attitudes towards the content subject with language subject for the learners, Harop (2012) claims that CLIL supports students having a positive attitude, and according to Floris (2014), CLIL enhances the learners' knowledge, skills, attitudes, and experience. Therefore, in general, the results of this study are like what research on the motivational aspect of the CLIL approach studied by Mehisto and Marsh (2011), Doiz et al. (2014), and Banega (2016) have found. These researchers highlight that CLIL lessons raise the interest and motivation for learning in academic disciplines such as mathematics, science, and social studies due to the connection with its purposeful use when presenting the language content.

Overall, it can be inferred that there was a change in the motivation of the students concerning learning in English, now focused on intrinsic and very personal reasons, although their vision of this language as a means of professional, work, and cultural knowledge empowerment remained similar before and after implementing the CLIL methodology.

Chapter 6. Conclusion

This study set out to explore how the use of CLIL in a course affects the motivation of primary-school children. This project aims to answer the following research question: How does the implementation of the CLIL approach to teaching science in a group of fifth-graders at a private bilingual school in Santa Marta affect the students' intrinsic, extrinsic, integrative, and instrumental motivation?

In the light of the evidence presented in this mixed-method study, it can be concluded that CLIL has a positive effect on students' motivation, and the results show that students were more intrinsically motivated than extrinsically after the implementation of the learning approach. The results also give evidence of CLIL's influence on instrumental and integrative motivation.

These findings seem to show that CLIL is an effective approach to implement at the institution of this study because it could help raise the motivation of the students and improve academic performance. Therefore, teachers must receive professional development in CLIL implementation since they should learn what type of activities drive students' motivation in the classroom. This is true because participants in this study indicated they felt more engaged and willing to participate in class after the intervention and found the use of technology to develop some CLIL activities as a fun and engaging form of facilitating learning. If CLIL is implemented correctly, it can be an interesting tool to raise learner motivation.

This study had several limitations that are important to discuss. First, it was carried out in only one class in a specific context, so it was small in scale. However, a larger sample of classes that include other subjects taught in English could have provided greater insight into the connection between motivation and CLIL. This could be explored in future research projects. Furthermore, future research could include different types of participants such as teachers and

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students from different educational levels and expand the time of the study to increase the level of generalization of the research. Another limitation is that this did not use observations.

For future researchers, it can be recommended to use not only questionnaires and interviews but also classroom observation to report on students' behavior towards the activities and to get a more complete picture of how they interact with other elements of the CLIL approach in class that may influence their motivation. A final limitation relates to the fact that instrumental and integrative motivation is usually hard to see in primary grades but focusing on higher grades might allow this aspect to be measured as it relates to the CLIL approach and observe if there are additional motivational variations. This could allow researchers to see more clearly CLIL's effect in the school setting since it seems that it may be a valuable and useful way to engage students in language learning.

In congruence with the prevailing status of the English language as a lingua franca, CLIL will likely continue to grow in Colombia and especially in bilingual schools since not only is it a way to combine content learning with language development, but it also seems to raise students' motivation towards this learning. Because of the strong connection between motivation and learning, CLIL could become an important factor in strengthening the teaching-learning process in schools.

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Appendices

Appendix 1

Motivation Questionnaire

CUESTIONARIO I

**Preparado por: Karen Rodríguez
TH**

Grado: 5

Las siguientes preguntas son acerca de tu motivación y actitudes acerca de esta clase. Recuerda que no hay respuesta incorrecta o correcta, solo responde lo más acertadamente posible. Usa la escala debajo para responder las preguntas.

Instrucciones:

Por favor responde los siguientes ítems encerrando en un círculo el número de la alternativa que te es favorable. Me gustaría que tu respuesta sea tan precisa como sea posible ya que esta investigación depende de ello.

1 = Totalmente en desacuerdo (TD)

2 = En desacuerdo (D)

3 = Ni de acuerdo ni en desacuerdo (N)

4 = De acuerdo (A)

5 = Totalmente de acuerdo (TA)

No						
1	Aprender inglés a través de Ciencias es importante para mí porque me permitirán sentirme más relajado con la gente que habla inglés.	1	2	3	4	5
2	Si yo puedo, quiero obtener mejores notas en la clase de ciencias que el resto de los estudiantes.	1	2	3	4	5
3	En una clase como esta, yo prefiero utilizar materiales y hacer actividades que realmente me retan a aprender nuevas cosas acerca de ciencias y lenguaje.	1	2	3	4	5
4	Obtener una buena nota en esta clase es lo más satisfactorio para mí en este momento.	1	2	3	4	5
5	Aprender inglés a través de Ciencias es importante para mí porque me permitirá conocer y hablar con más gente y provenientes de diferentes culturas.	1	2	3	4	5
6	Yo quiero hacerlo bien en esta clase porque es importante mostrar las habilidades a mis amigos, familia u otros.	1	2	3	4	5
7	Aprender inglés a través de Ciencias es importante porque me convierte en una persona más educada y con más conocimientos.	1	2	3	4	5

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8	En una clase como esta, yo prefiero utilizar materiales y hacer actividades que despierten mi curiosidad, aunque sean difíciles para aprender.	1	2	3	4	5
9	Yo estoy muy interesado en los contenidos que se enseñan en esta clase.	1	2	3	4	5
10	Es muy importante para mí aprender los temas a través del Inglés en esta clase.	1	2	3	4	5
11	Aprender inglés a través de Ciencias es importante porque lo necesitare para mi futura carrera profesional.	1	2	3	4	5
12	Yo creo que seré capaz de usar lo que aprendo en esta materia; en clases de otras materias.	1	2	3	4	5
13	Lo más satisfactorio para mí en esta clase es tratar de entender tanto como me sea posible.	1	2	3	4	5
14	Aprender inglés a través de Ciencias es importante porque me será útil para entender las películas, videos, música o libros y revistas en ese idioma.	1	2	3	4	5
15	Aprender inglés a través de Ciencias es importante para mí porque seré capaz de participar más libremente en actividades de otro grupo cultural.	1	2	3	4	5
16	Yo creo que el material de contenido en esta clase es útil para mí aprender el inglés y Ciencias al mismo tiempo.	1	2	3	4	5
17	Lo más importante para mí en este momento es mejorar mi nota promedio general; así que mi mayor preocupación es obtener una buena nota.	1	2	3	4	5
18	Aprender inglés a través de Ciencias es importante para mí porque me permitirá entender y apreciar mejor las culturas que hablan este idioma.	1	2	3	4	5
19	Me gustan los contenidos enseñados a través del inglés en esta clase.	1	2	3	4	5
20	Aprender inglés a través de Ciencias es importante porque las otras personas me respetarán más si tengo conocimientos de una lengua extranjera.	1	2	3	4	5
21	Cuando tengo la oportunidad en la clase de Ciencias, yo escojo actividades de las que puedo aprender, aunque no me garanticen obtener una buena nota.	1	2	3	4	5
22	Entender los contenidos de la materia de Ciencias a través del inglés es muy importante.	1	2	3	4	5
23	Aprender inglés a través de Ciencias es importante porque tomare la prueba Saber de Estado en un futuro.	1	2	3	4	5

Appendix 2.***Focus Group Questions***

1. ¿Por qué es importante aprender otro idioma?
2. ¿Qué tan interesante es para ti saber acerca de la cultura y los países donde se habla el idioma inglés?
3. ¿Crees que recibir la clase de Ciencias Naturales en inglés representa un beneficio para ti en un futuro?
4. ¿Qué es lo que más te agrada de tu clase de Ciencias Naturales dictada en inglés? ¿Por qué?
5. ¿Cuál ha sido la actividad más interesante que has hecho en clase de Ciencias naturales dictada en inglés?
6. ¿Qué es lo que menos te agrada de la clase de Ciencias Naturales dictada en inglés? ¿Por qué?
7. ¿Disfrutas la clase de Ciencias dictada en inglés?
8. ¿Mientras estás en clase de Ciencias Naturales dictada en inglés te distraes o participas?
9. ¿Durante la clase deseas que se termine la clase pronto?
10. ¿Te esfuerzas por aprender y trabajar en la clase de Ciencias Naturales dictada en inglés?
11. ¿A qué se debe el poco / gran esfuerzo?
12. ¿Colocas el mismo empeño para desarrollar las actividades en otras asignaturas?
13. ¿Qué actividades realiza la profesora para ayudarte a aprender Ciencias Naturales inglés durante la clase?
14. ¿Cómo te sientes cuando realizas las actividades propuestas por la profesora durante la clase?

- 15.** ¿Es para ti agobiante o retador el desarrollo de actividades complejas en clase de Ciencias Naturales en inglés? ¿Por qué?

Appendix 3.***Pre-Intervention Focus Group*****Interview****Focus Group 1**

Setting: _____

Date: _____

Time: _____

Interviewer: _____

Turn #	Participant	Participation	Comments for analysis
1	M	Buenos días ... en este momento vamos a iniciar la entrevista para conocer sus percepciones acerca de la clase de Science que se dicta en inglés, cómo se sienten y que opinan de ello.	
2	M	Les pido justificar sus respuestas. Muchas gracias por su participación.	
3	M	¿Por qué es importante aprender otro idioma?	
4	P1	Porque al viajar a otros países donde no hablen tu idioma natal, puedes comunicarte y convivir con las personas de allá sin dificultad,	Integrative
5	P2	Porque si vas a un país que hable en otro idioma, podrás comunicarte y no te vas a sentir confundido.	Integrative
6	P3	Es importante para que estés actualizado del mundo, para conocer gente, para aprender de otras culturas.	Integrative
7	P4	Yo creo que es importante saber otro idioma para trabajar, eso dice mi papá, que uno puede ser mejor si sabe otro idioma.	Instrumental
8	P5	Si claro, es importante Ms. para salir adelante, para viajar, para conocer gente, para entender otras culturas.	Integrative
9	P6	Si es importante. Creo que su importancia es para poder comunicarnos mejor, aunque estemos en nuestro país podemos entender a los extranjeros.	Integrative
10	M	¿Qué tan interesante es para tí saber acerca de la cultura y los países donde se habla el idioma inglés?	

11	P1	La verdad a mí no me interesa saberlo y no me parece importante. Pues creo que conocer el idioma es fundamental, también la cultura de los países.	Integrative
12	P2	No me parece muy interesante saber de la cultura, pero los países que hablan en inglés como estados unidos me llaman la atención conocer sus formas de vivir la gente y que hacen.	Integrative
13	P3	Si claro quiero conocer las culturas de esos países donde se usa el inglés porque yo quiero viajar por el mundo. Quiero ser piloto de aviones.	Instrumental
14	P4	Si, Ms. Yo también considero que si, que es muy importante para nuestras vidas y pasear a otros países y saber quienes son y qué hacen.	Instrumental
15	P5	La cultura es importante para comprender a la gente. Si me gustaría ir y conocer otros lugares donde se hable inglés.	Integrative
16	P6	Si creo que saber un poquito de las culturas nos ayudan a conocer más de otros y saber de los países donde se habla inglés me llama la atención.	Integrative
17	M	¿Crees que recibir la clase de Ciencias Naturales en inglés representa un beneficio para ti en un futuro?	
18	P1	Yo no creo que sea un beneficio porque los términos y temas que se enseña es mejor aprenderlos en tu idioma natal	Intrinsic
19	P2	Sí porque el inglés es universal y si no lo sabes te perjudicas y en las ciencias pues aprendemos cositas.	Instrumental
20	P3	Bueno, yo no sé qué beneficio tiene para mi, yo quiero sacar las mejores notas de mi clase.	Extrinsic
21	P4	Si yo si creo que me beneficia porque aprendo un poco más de otras cosas como lo hacemos en P.E o en Social Studies.	Instrumental
22	P5	Si es beneficioso porque yo quiero ser doctora y eso de aprender de células y los laboratorios me ayudarían mucho para aprender lo que me gusta.	Intrinsic
23	P6	Si es beneficioso para nosotros los estudiantes para aprender otros conceptos, pero yo si no quiero ser científico.	Instrumental
24	M	¿Qué es lo que más te agrada de tu clase de Ciencias Naturales dictada en inglés? ¿Por qué?	

25	P1	lo que más me gusta es mi profesora porque me cae muy bien	Extrinsic
26	P2	Las actividades de laboratorio me encantan mucho, pero es enredado. Me gusta porque veo cosas diferentes y estoy trabajando en grupo y obtenemos mejor nota.	Extrinsic
27	P3	Me agrada también mi profesora y cuando nos deja jugar.	Extrinsic
28	P4	Me gusta que nos lleve a la sala de informática y al laboratorio porque puedo usar materiales diferentes al libro gordo.	Intrinsic
29	P5	Llevarnos al laboratorio, nos da puntos, es chévere y me gusta también.	Extrinsic
30	P6	Los juegos me gustan y el laboratorio también me siento libre.	Extrinsic
31	M	¿Cuál ha sido la actividad más interesante que has hecho en clase de Ciencias naturales dictada en inglés?	
32	P1	la sopa de letras que hicimos, que a veces hacemos en el tablero porque es lúdica.	Intrinsic
33	P2	Las actividades de laboratorio también los laboratorios virtuales.	Extrinsic
34	P3	La huerta que hicimos fue muy chévere poder hacerlo y aprender de las aromáticas.	Intrinsic
35	P4	El laboratorio de la vaca, del ojo de la vaca es encanto. Debemos hacer más para ganar más nota.	Extrinsic
36	P5	Si ese laboratorio estuvo buenísimo, me gusta ir allá con lo que la profe nos lleve hacer.	Intrinsic
37	P6	Me gusta que la profe es cariñosa y también me gusta cuando nos lleva al laboratorio o a la sala de computación.	Extrinsic
38	M	¿Qué es lo que menos te agrada de la clase de Ciencia Naturales dictada en inglés? ¿Por qué?	
39	P1	los temas porque la verdad no me llama mucho la atención	Extrinsic
40	P2	Las actividades largas porque son muy aburridas y las tareas de leer me aburren y hay que escribir y eso.	Extrinsic

41	P3	Lo de leer ese poco de cosas del libro no me agrada para nada por las palabras y no me llama la atención.	Extrinsic
42	P4	Pues no me agrada mucho ese libro gordo tampoco y enredado.	Extrinsic
43	P5	No me agrada que la clase sea bastante. Tenga muchos temas.	Extrinsic
44	P6	No me gusta que no tenga las notas que yo quiero obtener.	Extrinsic
45	M	¿Disfrutas la clase de Ciencias dictada en inglés?	
46	P1	Yo participo en las clases, pero a veces me distraigo, pero siempre trato de ser participativa	Intrinsic
47	P2	A veces me distraigo y a veces participé. No es que esté muy perdido, pero me elevo a veces profe.	Intrinsic
48	P3	Si las disfruto cuando estamos jugando o haciendo lo que me llama la atención.	Intrinsic
49	P4	Si me agrada la profesora, pero la clase no la disfruto tanto como quiero.	Extrinsic
50	P5	La disfruto mucho cuando nos ponemos a hacer nuestros labs.	Intrinsic
51	P6	Si también la disfruto, pero si hacemos algo que nos gusta.	Intrinsic
52	M	¿Mientras estás en clase de Ciencias Naturales dictada en inglés te distraes o participas en la clase?	
53	P1	Si participo, nos ponen buenas notas por eso.	Extrinsic
54	P2	Si participo, no mucho, no es así muchas veces, pero si lo hago si me llaman.	Extrinsic
55	P3	Participo porque si no lo hago me ponen mala nota bueno nota regular.	Extrinsic
56	P4	Si participo en clase, me gusta participar cuando hay que jugar y competimos.	Extrinsic

57	P5	Si participa cuando sé algunas cosas de lo que preguntan y a veces no, bueno muchas veces me llaman para que diga algo.	Extrinsic
58	P6	Yo participo poquito, es que me da pena embarrármela, Ms.	Intrinsic
59	M	¿Durante la clase deseas que se termine la clase pronto?	
60	P1	Si, profe no puedo negarlo. Me aburro sobre todo los viernes que tenemos dos horas.	Extrinsic
61	P2	a veces tengo flojera y aburrimiento y quiero que se acabe la clase pronto.	Intrinsic
62	P3	Si muchas veces lo deseo, pero si es algo que me gusta no.	Intrinsic
63	P4	Si me aburro quiero terminar rápido para irme a mi salón.	Intrinsic
64	P5	No me aburro si estamos haciendo algún trabajo en el laboratorio, pero si es de leer pues no me interesa mucho.	Extrinsic
65	P6	Si a veces me entran ganas de que se termine la clase para irme al recreo o a mi salón, pero no es por usted profe.	Extrinsic
66	M	¿Te esfuerzas por aprender y trabajar en la clase de Ciencias Naturales dictada en inglés?	
67	P1	Si me esfuerzo porque trato de mantener el promedio para ganar mi medalla.	Extrinsic
68	P2	Me esfuerzo lo normal para tener bien mi promedio y no me regañen en la casa.	Extrinsic
69	P3	Si hago lo que puedo para que no me vaya mal.	Extrinsic
70	P4	Si me esfuerzo, pero no logró mucho y me cuesta.	Extrinsic
71	P5	No le pongo así mucho esfuerzo solo lo normal para pasar.	Extrinsic
72	P6	Si hago esfuerzo para sacar buenas notas y aprender lo que me gusta	Extrinsic

73	M	¿A qué se debe el poco / gran esfuerzo?	
74	P1	Quiero mantener un promedio excelente.	Extrinsic
75	P2	creo que la clase es aburrida. Bueno Ms., tú no eres, pero eso de leer y el libro me da una pereza.	Intrinsic
76	P3	Porque no estoy muy comprometido, pero a veces no entiendo cosas.	Intrinsic
77	P4	Porque no entiendo, no me llama la atención muchas veces y tampoco me explican mis amigos.	Extrinsic
78	P5	Porque, no sé, creo que me toca ser más atento, pero no tengo mucha ayuda.	Intrinsic
79	P6	Porque quiero estar bien con un buen promedio para tener una medalla también.	Extrinsic
80	M	¿Colocas el mismo empeño para desarrollar las actividades en otras asignaturas?	
81	P1	Si todas son importantes y no quiero bajar mi promedio, me regañan mis papas y me sentiría mal por eso.	Extrinsic
82	P2	No es igual, me aburren, pero trato de hacer las cosas bien.	Intrinsic
83	P3	No en Math debo hacer más esfuerzo porque me cuesta un poco entender.	Intrinsic
84	P4	Pongo el mismo esfuerzo para las otras materias.	Intrinsic
85	P5	Si pongo mucho esfuerzo para hacer lo que me piden por que es muy importante para mi sacar unas buenas notas.	Extrinsic
86	P6	Creo que, si hago esfuerzo como para estudiar las otras, también.	Intrinsic
87	M	¿Qué actividades realiza la profesora para ayudarte a aprender Ciencias Naturales e Inglés durante la clase?	
88	P1	Pues nos pone muchas lecturas que no son chéveres a veces vamos a la sala de informática para hacer los laboratorios virtuales.	Extrinsic

89	P2	Vamos al laboratorio cuando podemos y el resto en el salón de clase y leemos y eso no es así llamativo que digamos.	Extrinsic
90	P3	A veces jugamos, vamos a informática y también vemos videos y vamos al laboratorio. Es poco divertido.	Extrinsic
91	P4	Si vamos al laboratorio, los worksheets los hacemos después de leer, a veces jugamos y cantamos como la canción de la célula.	Extrinsic
92	P5	Las tareas del libro son aburridas, los laboratorios allá en computación y el laboratorio de observación.	Extrinsic
93	P6	Se hacen las tareas del libro, de las fotocopias, los juegos y lo que hacemos en el laboratorio.	Extrinsic
94	M	¿Cómo te sientes cuando realizas las actividades propuestas por la profesora durante la clase?	
95	P1	Las actividades y juegos en grupo me hacen sentir bien y feliz a veces las actividades.	Intrinsic
96	P2	Me siento bien contigo profe, pero algunas actividades me aburren.	Intrinsic
97	P3	Se siente bien si tenemos que trabajar juntos y si vamos al laboratorio me siento súper.	Intrinsic
98	P4	Si se siente bien a veces otras veces estoy con pereza.	Intrinsic
99	P5	Si estamos trabajando en grupo alguna actividad chévere, me siento bien. La mayoría de las veces no es que sea súper, estoy normal.	Intrinsic
100	P6	Normal, estoy bien, pero me encanta cuando nos piden hacer cosas como investigar allá afuera o en el laboratorio.	Intrinsic
101	M	¿Es para ti agobiante o retador el desarrollo de actividades complejas en clase de Ciencias Naturales en inglés? ¿ Por qué?	
102	P1	Me agobian muchas veces, profe. Me gustaría que se hicieran más juegos para practicar los temas y así le pondría más entusiasmo a la clase.	Intrinsic
103	P2	Si es bastante pesado esas lecturas y Ms. a veces no entiendo palabras.	Intrinsic
104	P3	No son agobiantes, pero sí difíciles creo cuando no entiendo lo que dicen que debo hacer.	Intrinsic

105	P4	Son agobiantes para mi sobre todo si no trabajamos con nuestros amigos.	Intrinsic
106	P5	No es retador, pero si a veces me estreso con algunas actividades por la nota.	Extrinsic
107	P6	Si es retador cuando quiero hacer las actividades, pero no es que sean tan dificiles.	Intrinsic

Appendix 4.*Interview*

Name of the Teacher: _____

Setting: _____

Date: _____

Time: _____

Interviewer: _____

Turn #	Participant	Participation	Comments for analysis
1	M		
2	M		
3	M	¿Por qué es importante aprender otro idioma?	
4	P1	Lo mejor de hablar otro idioma es que podemos conocer mucho más de otros lugares, personas y que en algún momento podemos necesitarlo al estar allí.	Integrative
5	P2	Nos ayuda a comunicarnos con otras personas que no hablan nuestro idioma, a conocer gente.	Integrative
6	P3	Es algo importante porque siempre se necesita saber de otras partes del mundo	Integrative
7	P4	Es una forma de mejorar mientras estamos creciendo, aprendiendo y cuando nos toque trabajar será mucho mas importante	Instrumental
8	P5	Hablando otro idioma podemos conocer otras culturas.	Integrative
9	P6	Lo mejor de saber otro idioma es viajar y entender a las personas de ese país	Integrative
10	M	¿Qué tan interesante es para tí saber acerca de la cultura y los países donde se habla el idioma inglés?	Integrative
11	P1	Al conocer otras culturas tenemos más conocimientos del mundo	Integrative
12	P2	Hay países cuya cultura es interesante y hablar otro idioma es importante para entenderlos	Integrative

13	P3	Me gusta siempre conocer otras culturas, nosotros tenemos costumbres, pero en todo el mundo hay distintas tradiciones por conocer	Integrative
14	P4	No es muy importante para mi, aunque me gusta viajar, pero no por la cultura	Intrinsic
15	P5	Creo que conocer otra cultura nos ayuda a entender otras vidas y cosas interesantes que se hacen	Integrative
16	P6	No me interesa mucho la cultura, aunque en los países donde se habla inglés me gustan ciertas cosas que se hacen	Intrinsic
17	M	¿Crees que recibir la clase de Ciencias Naturales en inglés representa un beneficio para ti en un futuro?	
18	P1	Creo que eso nos ayudaría a conocer de las ciencias y a aprender inglés, por ejemplo, todo a la vez	Instrumental
19	P2	Bueno si nos dan la clase en otro idioma como el inglés deben hacerlo siempre que conozcamos varias palabras en ese idioma para entender.	Extrinsic
20	P3	No lo sé, creo que deben enseñarnos por un lado inglés y por las otras ciencias, cada cosa separada.	Extrinsic
21	P4	Me gustaría mucho porque me encanta la ciencia y aprenderla en otro idioma puede ayudarnos a conocer muchas otras cosas de esta materia	Instrumental
22	P5	Sería genial para hacer a la ciencia mas interesante mientras aprendemos a experimentar saber como se dice en español y en ingles.	Instrumental
23	P6	Creo que debemos aprender mucho sobre ingles para que lo usen en otra materia como las ciencias	Instrumental
24	M	¿Qué es lo que más te agrada de tu clase de Ciencias Naturales dictada en inglés? ¿Por qué?	
25	P1	Sin duda que me agrada aprender muchas palabras de la ciencia en inglés	Intrinsic
26	P2	Las actividades son interesantes, pero debemos conocer mas de ingles para entenderlas mejor	Intrinsic
27	P3	Me gusta mi profesora	Intrinsic

28	P4	Me gustan las actividades que son diferentes en el laboratorio donde conocemos materiales y como se llaman en inglés	Extrinsic
29	P5	Me gustan los juegos y actividades que son mejores	Extrinsic
30	P6	Aún no me gusta mucho la clase de ciencias en inglés	Intrinsic
31	M	¿Cuál ha sido la actividad más interesante que has hecho en clase de Ciencias naturales dictada en inglés?	
32	P1	Juegos en el tablero.	
33	P2	Cuando vamos al laboratorio o experimentamos en casa un trabajo asignado	
34	P3	Una vez hicimos experimento en el colegio y en la casa eso me gusto	
35	P4	No hay muchas actividades interesantes que contar.	
36	P5	Todas las que se hacen en laboratorio son actividades interesantes	
37	P6	Si hacemos algo fuera del salón nos gusta más	
38	M	¿Qué es lo que menos te agrada de la clase de Ciencias Naturales dictada en inglés? ¿Por qué?	
39	P1	Que no siempre sabemos que quieren decir las palabras	Intrinsic
40	P2	Cuando tenemos que entender la teoría es muy difícil porque no sabemos bien inglés.	Intrinsic
41	P3	No me gusta cuando nos quedamos en el salón solo a hablar de ciencias, no se entiende siempre	Extrinsic
42	P4	Tenemos a veces que leer libros para hacer una tarea, eso me aburre.	Extrinsic
43	P5	Si la clase es muy larga no me gusta	Intrinsic

44	P6	Cuando la profe hace larga la clase nos aburre.	Intrinsic
45	M	¿Disfrutas la clase de Ciencias dictada en inglés?	
46	P1	A veces, si entiendo me gusta, pero si no entiendo no me gusta	Intrinsic
47	P2	Creo que me gusta solo lo que hacemos como práctica en ciencias o divertido, lo demás no me gusta	Extrinsic
48	P3	Me llama la atención y me gusta cuando hacemos experimentos	Extrinsic
49	P4	No siempre me divierto en ciencias, a veces no entiendo en inglés.	Extrinsic
50	P5	Yo disfruto si hacemos algo como juegos y haciendo eso aprendemos ingles y ciencias también	Extrinsic
51	P6	No disfruto si no entiendo el tema, tengo que entender el tema en inglés	Extrinsic
52	M	¿Mientras estás en clase de Ciencias Naturales dictada en inglés te distraes o participas en la clase?	
53	P1	Me gusta participar, pero siempre que entienda,	Intrinsic
54	P2	Creo que me distraigo mucho, en especial cuando la clase es larga	Extrinsic
55	P3	Trato de participar para obtener buena calificación	Extrinsic
56	P4	Yo participo en las actividades divertidas o prácticas si dan nota.	Extrinsic
57	P5	Si entiendo el tema o la actividad participo y algunas cosas, aunque a veces me distraigo si me aburro.	Intrinsic
58	P6	No participo mucho porque al ser inglés a veces no entiendo.	Intrinsic
59	M	¿Durante la clase deseas que se termine la clase pronto?	

60	P1	Si, la verdad si el tema es muy largo quiero que termine pronto	Extrinsic
61	P2	Me aburro si no hacemos algo divertido para aprender	Extrinsic
62	P3	Muchas veces quiero que termine, pero cuando participo me espero más tranquilo	Extrinsic
63	P4	Quiero que termine pronto si estamos puro en el salón y dele que dele a la clase larga	Extrinsic
64	P5	Cuando estamos en el laboratorio no quiero que termine, solo allí.	Extrinsic
65	P6	A veces me da flojera en la clase y quiero que termine.	Intrinsic
66	M	¿Te esfuerzas por aprender y trabajar en la clase de Ciencias Naturales dictada en inglés?	
67	P1	Si, tengo que hacerlo para entender lo que se dice en ingles y poder hacer las actividades	Extrinsic
68	P2	Yo creo que no me esfuerzo mucho en la clase, creo que seria mejor si me esfuerzo	Intrinsic
69	P3	Bueno no me esfuerzo tanto, pero trato de hacer las cosas y pasar el curso	Extrinsic
70	P4	Cuando me dicen cosas que no entiendo me tengo que esforzar, pero me gustaría más bien entender y esforzarme menos	Intrinsic
71	P5	A veces me esfuerzo y otras veces me da flojera.	Intrinsic
72	P6	Si me esfuerzo para obtener buenas notas	Extrinsic
73	M	¿A qué se debe el poco / gran esfuerzo?	
74	P1	Para sacar buenas notas	Extrinsic
75	P2	No sé a veces no me llama la atención y no me esfuerzo	Intrinsic

76	P3	Porque a veces entiendo y otras veces no	Intrinsic
77	P4	Eso depende si entiendo o no lo que se dice en la clase	Intrinsic
78	P5	Tal vez que no me gusta mucho la clase	Intrinsic
78	P6	Bueno se trata de que quiero salir bien eso hace que me esfuerce	Extrinsic
79	M	¿Colocas el mismo empeño para desarrollar las actividades en otras asignaturas?	
80	P1	Tengo que hacerlo para pasar la materia.	Extrinsic
81	P2	No, porque lo hago con las materias que me gustan y algunas que no me gustan me empeño, pero no tanto	Intrinsic
82	P3	El problema es que si no nos empeñamos salimos mala nota, entonces tenemos que hacerlo en todas las materias.	Extrinsic
83	P4	Yo creo que pongo el mismo esfuerzo en todo	Intrinsic
84	P5	Me esfuerzo para hacer las actividades, pero mucho más en las materias que me gustan	Intrinsic
85	P6	Bueno profe hago el empeño en esta y en todas si no me regañan en casa	Extrinsic
86	M	¿Qué actividades realiza la profesora para ayudarte a aprender Ciencias Naturales e Inglés durante la clase?	
87	P1	A veces hay que hacer lecturas o experimento, eso por lo general	Extrinsic
88	P2	Visitamos el laboratorio o en el salón de clase tenemos que leer.	Extrinsic
89	P3	La clase puede ser que la tengamos en el laboratorio que me interesa o en el salón.	Extrinsic
90	P4	A veces trabajamos en el salón de informática, y las clases normales en el salón.	Extrinsic

91	P5	Tenemos que realizar actividades leyendo en el salón o practicando en el laboratorio	Extrinsic
92	P6	Se hace lectura y luego se observa en el laboratorio.	Extrinsic
93	M	¿Cómo te sientes cuando realizas las actividades propuestas por la profesora durante la clase?	
94	P1	Me siento bien si hacemos algo divertido	Extrinsic
95	P2	La profe es agradable, con ella me siento bien, pero a veces estoy aburrido	Extrinsic
96	P3	Solo cuando hacemos experimento me siento feliz y me gusta	Extrinsic
97	P4	A veces me da flojera la verdad,	Intrinsic
98	P5	Estoy bien cuando hacemos algo fuera del salón de clase	Extrinsic
99	P6	Bueno muchas veces me aburro, pero eso es culpa de la materia que a veces no entiendo	Extrinsic
100	M	¿Es para ti agobiante o retador el desarrollo de actividades complejas en clase de Ciencias Naturales en inglés? ¿Por qué?	
101	P1	Me agobian la verdad si son muchos los temas	Intrinsic
102	P2	No se no creo que sea retador andar leyendo, tal vez tratar de entender las palabras en inglés, pero no es divertido si no entiendo	Extrinsic
103	P3	No tanto como agobiantes, pero tampoco retadoras, creo que deben ser más entretenidas	Intrinsic
104	P4	Siento que agobian a veces si son largas y no se entienden	Intrinsic
105	P5	Podría decirse que es un reto saber lo que nos enseñan en inglés y eso a veces nos puede agobiar	Intrinsic
106	P6	Creo que nos agobia no entender, pero cuando entendemos eso no pasa	Extrinsic

Appendix 5

*Post-Intervention***Focus Group 1**

Setting: _____

Date: _____

Time: _____

Interviewer: _____

Turn #	Participant	Participation	Comments for analysis
1	M	Buenos días ... en este momento vamos a iniciar la entrevista para conocer sus percepciones acerca de la clase de Science que se dicta en inglés, cómo se sienten y que opinan de ello.	
2	M	Les pido justificar sus respuestas. Muchas gracias por su participación.	
3	M	¿Por qué es importante aprender otro idioma?	
4	P1	Cuando se viaja a otros países podemos comunicarnos sin problema conociendo otro idioma.	Integrative
5	P2	Si vamos a un país donde hablen otro idioma podremos entenderlos mejor	Integrative
6	P3	Debemos estar actualizados con otro idioma, ya que podemos conocer otras culturas.	Integrative
7	P4	Conociendo otro idioma podemos tener mejores trabajos al ser mayores. Bueno, eso dicen mis papás.	Instrumental
8	P5	Creo que si manejamos otro idioma podemos avanzar, viajar, entender otras culturas.	Instrumental
9	P6	Bueno, creo que lo más importante es que nos ayuda comunicarnos cuando estemos en otro país	Integrative
10	M	¿Qué tan interesante es para tí saber acerca de la cultura y de los países donde se habla el idioma inglés?	
11	P1	Bueno conocer el idioma quizá es bueno para quien decide vivir en otro país	Integrative

12	P2	Saber otras culturas no es mi interés ahorita, pero si me gustaría saber mas inglés para cuando viaje a Estados Unidos por ejemplo	Instrumental
13	P3	Si me gustaría conocer lo que hacen en esos países donde hablan inglés ya que mi sueño es viajar a todas partes	Integrative
14	P4	Creo que sí es muy importante que conozcamos cómo viven y que hacen en otros países.	Integrative
15	P5	Para comprender a las personas de otro país debes saber su cultura	Integrative
16	P6	Creo que saber de otras culturas nos ayudará a conocer otros países como en los que se habla inglés	Integrative
17	M	¿Crees que recibir la clase de Ciencias Naturales en inglés representa un beneficio para ti en un futuro?	
18	P1	Pienso que tal vez me puede servir, aunque me gusta mas aprender en mi idioma	Instrumental
19	P2	El inglés se habla en muchas partes del mundo por eso es importante saberlo desde ahorita.	Integrative
20	P3	Bueno, tal vez pueda ayudarme a aprender cosas sobre la ciencia que están en inglés, aunque no me gusta mucho.	Instrumental
21	P4	Creo que me ayudaría a aprender otras cosas mientras compartimos con los demás	Integrative
22	P5	Aprender sobre la ciencia en inglés me ayudaría mucho para conocer muchas más cosas en el mundo de la ciencia	Integrative
23	P6	Usando el inglés podríamos aprender palabras y conceptos importantes. No sé, si se podrían utilizar en otras situaciones, creo.	Instrumental
24	M	¿Qué es lo que más te agrada de tu clase de Ciencias Naturales dictada en inglés? ¿Por qué?	
25	P1	Me gusta que ahora sea diferente a las otras clases y materias.	Intrinsic
26	P2	Me sigue gustando lo que hacemos en laboratorio, aunque aun me enredo con el inglés.	Intrinsic

27	P3	Cuando hacemos actividades divertidas me gusta mucho más la clase.	Intrinsic
28	P4	Lo mejor es ver la clase en la sala de informática y en el laboratorio porque hacemos cosas diferentes y podemos escoger que hacer.	Intrinsic
29	P5	El laboratorio es lo que más me gusta.	Intrinsic
30	P6	Si las actividades son divertidas y con juegos, aunque sea en inglés, es lo que me gusta	Intrinsic
31	M	¿Cuál ha sido la actividad más interesante que has hecho en clase de Ciencias naturales dictada en inglés?	
32	P1	Hicimos competencia de palabras científicas en inglés, fue muy bueno y los trabajos en grupo.	Intrinsic
33	P2	Las actividades de laboratorio y los laboratorios virtuales han sido más interesantes que antes y pues tiene más explicación.	Intrinsic
34	P3	Hacer experimentos y presentarlos en inglés ha sido divertido.	Intrinsic
35	P4	Todo lo que hacemos en el laboratorio es interesante	Intrinsic
36	P5	Me gustan las prácticas incluso ahora que usamos el inglés, pero de una manera más divertida y entiendo mejor.	Intrinsic
37	P6	Hemos hecho actividades de grupo y me gusta porque las vemos como juegos y aprendemos.	Intrinsic
38	M	¿Qué es lo que menos te agrada de la clase de Ciencias Naturales dictada en inglés? ¿Por qué?	
39	P1	Bueno, los temas que no me gustan creo que siguen siendo largos.	Intrinsic
40	P2	Las actividades aburridas que tienen lectura, aunque eso ha cambiado un poco.	Extrinsic
41	P3	No me gusta leer tanto... Hmmm creo que eso no me anima a veces.	Intrinsic

42	P4	Ya casi no usamos ese libro gordo pero ese libro no me gusta todavía.	Intrinsic
43	P5	No me agrada el horario de la clase cómo es antes de recreo la siento larga.	Intrinsic
44	P6	Creo que me comienza a gustar mas la clase ya no hay tanta lectura	Intrinsic
45	M	¿Disfrutas la clase de Ciencias dictada en inglés?	
46	P1	Ahora la disfruto y participo más.	Intrinsic
47	P2	Si, veo que ha cambiado un poco las actividades, me parecen más interesantes.	Intrinsic
48	P3	Cuando estamos haciendo una actividad divertida la disfruto.	Intrinsic
49	P4	Disfruto un poco la clase. Ya es un poquito mejor.	Intrinsic
50	P5	La disfruto ahora en el salón tanto como en el laboratorio porque es diferente.	Intrinsic
51	P6	Ha mejorado un poco, si la disfruto.	Intrinsic
52	M	¿Mientras estás en clase de Ciencias Naturales dictada en inglés te distraes o participas en la clase?	
53	P1	Yo participo siempre.	Intrinsic
54	P2	A veces trato de participar.	Intrinsic
55	P3	Me gusta participar más ahora que antes.	Intrinsic
56	P4	Veo que hay actividades en las que puedo participar y no andar distraído.	Intrinsic
57	P5	A veces no se que decir, pero trato de no distraerme.	Intrinsic

58	P6	No me gusta hablar mucho, pero entiendo mas ahora la clase de ciencias en inglés.	Intrinsic
59	M	¿Durante la clase deseas que se termine la clase pronto?	
60	P1	Últimamente me aburro menos en la clase.	Intrinsic
61	P2	Si quiero que se acabe la clase pronto, aunque a veces me divierto con las actividades.	Intrinsic
62	P3	Ya casi no me aburro y me gustan algunas clases.	Intrinsic
63	P4	A veces sí y a veces no.	Intrinsic
64	P5	Me gusta cuando estamos en el laboratorio, me gusta que dure.	Intrinsic
65	P6	A veces quiero que se termine pronto, pero a veces me gusta que la clase siga.	Intrinsic
66	M	¿Te esfuerzas por aprender y trabajar en la clase de Ciencias Naturales dictada en inglés?	
67	P1	Me siento interesado por aprender más cada día.	Intrinsic
68	P2	Me esfuerzo porque es importante para mi familia que salga bien.	Extrinsic
69	P3	Trato de trabajar, aunque a veces no entienda, pero siempre trabajo para que la nota sea buena.	Extrinsic
70	P4	Últimamente me cuesta menos esfuerzo aprender en la clase.	Intrinsic
71	P5	La verdad me esfuerzo lo normal.	Intrinsic
72	P6	Trato de salir muy bien, me gusta últimamente.	Intrinsic
73	M	¿A qué se debe el poco / gran esfuerzo?	

74	P1	Quiero mantener un buen promedio.	Extrinsic
75	P2	Me parece que la clase ha cambiado y me interesa más.	Intrinsic
76	P3	Creo que no me comprometo mucho porque no entiendo aun ciertas cosas en inglés.	Intrinsic
77	P4	Le he puesto más esfuerzo ahora que me gusta	Intrinsic
78	P5	Creo que puedo esforzarme más de lo normal y en especial en actividades divertidas	Intrinsic
79	P6	Quiero tener buenas calificaciones	Extrinsic
80	M	¿Colocas el mismo empeño para desarrollar las actividades en otras asignaturas?	
81	P1	Para mí todas las materias son importantes.	Intrinsic
82	P2	Me he dedicado un poco más a ciencias y a Lenguaje me parece, las demás no me gustan mucho.	Intrinsic
83	P3	Aún no entiendo mucho en esta clase, pero me comenzó a interesar tanto como otras materias.	Intrinsic
84	P4	Hago el mismo esfuerzo en esta y en las otras materias.	Intrinsic
85	P5	Me esfuerzo en todas.	Intrinsic
86	P6	Me he estado esforzando en las que me gustan y en esta un poco más que antes.	Intrinsic
87	M	¿Qué actividades realiza la profesora para ayudarte a aprender Ciencias Naturales e Inglés durante la clase?	
88	P1	Hacemos ejercicios en la sala de informática de vocabulario y de experimentos virtuales.	Intrinsic
89	P2	Practicamos en el laboratorio, realizamos lecturas y actividades divertidas en grupo.	Extrinsic

90	P3	En la sala de informática vemos videos interesantes sobre las ciencias en inglés y laboratorios virtuales.	Extrinsic
91	P4	Jugamos y cantamos y mientras tanto aprendemos.	Intrinsic
92	P5	Hacemos actividades con nuestros amigos en la sala de informática, afuera o en la clase.	Intrinsic
93	P6	Hacemos actividades más divertidas en el laboratorio y afuera del salón.	Extrinsic
94	M	¿Cómo te sientes cuando realizas las actividades propuestas por la profesora durante la clase?	
95	P1	Me siento bien con todo en la clase	Intrinsic
96	P2	Últimamente las actividades me gustan mucho más.	Intrinsic
97	P3	Especialmente en el laboratorio me siento súper bien	Extrinsic
98	P4	Creo que ya me siento bien con todas las actividades	Intrinsic
99	P5	En general todo bien, teacher.	Intrinsic
100	P6	Normal, me encanta ir al laboratorio.	Intrinsic
101	M	¿Es para ti agobiante o retador el desarrollo de actividades complejas en clase de Ciencias Naturales en inglés? ¿Por qué?	
102	P1	Me parecen retadoras, ya no me agobian porque están más cortas y son diferentes.	I Intrinsic
103	P2	A veces no entiendo, pero ya no me agobian tanto porque la profesora nos ayuda más.	Extrinsic
104	P3	No son agobiantes en verdad porque tengo más instrucciones y me ayudan en la clase.	Extrinsic
105	P4	Me agobian un poco pero cuando no entiendo y bueno pido que me expliquen y resuelvo.	Intrinsic

106	P5	A veces me estreso con algunas actividades, pero me agobian menos. Me estreso porque soy muy desesperado.	Intrinsic
107	P6	Es retador últimamente y menos agobiante por que ya hay actividades que nos dejan que nos ayudemos los compañeros entre sí y bueno se entiende un poco más.	Intrinsic

Appendix 6

Interview

Focus Group 2

Name of the Teacher: _____

Setting: _____

Date: _____

Time: _____

Interviewer: _____

Turn #	Participant	Participation	Comments for analysis
1	M	¿Por qué es importante aprender otro idioma?	
2	P1	Que podemos conocer a mas persona, lugares, culturas	Integrative
3	P2	Es importante para comunicarnos en cualquier lugar	Instrumental
4	P3	Podemos conocer mas personas y lugares en el mundo	Instrumental
5	P4	Creo que no solo para conocer personas si no para aprender y trabajar mejor	Instrumental
6	P5	Lo mejor es comprender a los demás que hablan otro idioma	Integrative
7	P6	Que al viajar vamos a entender a las personas	Integrative
8	M	¿Qué tan interesante es para tí saber acerca de la cultura y los países donde se habla el idioma inglés?	
9	P1	Al conocer otras culturas conocemos mucho más el mundo	Integrative
10	P2	Hay lugares con una cultura interesante que se conocen mejor si se sabe inglés	Integrative
11	P3	Siempre me gusta conocer que hacen en otros países, me ayuda a aprender más	
12	P4	No veo muy importante eso de las culturas, aunque si viajar y conocer mas	Intrinsic
13	P5	Nos ayuda a entender lo que hacen otras personas	Integrative

14	P6	En los países donde se habla inglés me gusta conocer lo que se hace	Integrative
15	M	¿Crees que recibir la clase de Ciencias Naturales en inglés representa un beneficio para ti en un futuro?	
16	P1	Si porque podemos conocer sobre una materia difícil y aprender inglés que también es difícil	Instrumental
17	P2	Nos ayudaría a aprender las dos cosas	Instrumental
18	P3	Tal vez nos ayude a entender la ciencia o lo contrario podemos aprender inglés	Instrumental
19	P4	Bueno me encanta la ciencia y en inglés nos ayudaría a conocer más sobre ella	Instrumental
20	P5	Podría ser beneficioso para quien le gusta el inglés	Intrinsic
21	P6	Debemos aprender inglés en muchas materias podría usarse, pero hay que hacerlo bien	Instrumental
22	M	¿Qué es lo que más te agrada de tu clase de Ciencias Naturales dictada en inglés? ¿Por qué?	
23	P1	Cuando tenemos que descubrir nuevas palabras en inglés me animo.	Intrinsic
24	P2	Saber responder a preguntas en inglés sobre algo de ciencias.	Intrinsic
25	P3	Me gustan las actividades que son divertidas	Intrinsic
26	P4	Que antes sabía menos de inglés y ahora se más con las clases de ciencias	Intrinsic
27	P5	Me gustan las actividades que son mejores y divertidas	Intrinsic
28	P6	Me gusta de pronto que aprendo ciencias y el inglés también	Intrinsic
29	M	¿Cuál ha sido la actividad más interesante que has hecho en clase de Ciencias naturales dictada en inglés?	

30	P1	Competencias de palabras para recordarnos el nuevo vocabulario.	Intrinsic
31	P2	Observar y experimentar en el laboratorio	Intrinsic
32	P3	Hacer actividades virtuales, los videos en ingles me encantan	Intrinsic
33	P4	Las actividades en la sala de computación.	Intrinsic
34	P5	Todo lo que hacemos en la sala de computación y el laboratorio	Intrinsic
35	P6	Cuando trabajamos en el laboratorio de computación con videos y eso.	Intrinsic
36	M	¿Qué es lo que menos te agrada de la clase de Ciencias Naturales dictada en inglés? ¿Por qué?	
37	P1	Que a veces no se responder a las preguntas en inglés si no me se el vocabulario bien.	Intrinsic
38	P2	Tratar de entender mucha teoría en inglés no me gusta.	Intrinsic
39	P3	Me parece difícil cuando tenemos que hablar de ciencias en inglés.	Intrinsic
40	P4	En general me agrada la clase.	Intrinsic
41	P5	Si la clase es muy larga me aburre.	Intrinsic
42	P6	Si pasamos todo el tiempo en el salón eso no me agrada, me gustan las actividades en el laboratorio	Intrinsic
43	M	¿Disfrutas la clase de Ciencias dictada en inglés?	
44	P1	La verdad si me gusta.	Intrinsic
45	P2	Creo que me gustan en especial las actividades divertidas, me hacen aprender de ciencias.	Intrinsic

46	P3	Me gusta porque vemos la ciencia diferente.	Intrinsic
47	P4	A veces no entiendo en inglés, pero las actividades me gustan.	Intrinsic
48	P5	Disfruto los juegos, videos y las actividades que hacemos en inglés sobre las ciencias.	Intrinsic
49	P6	Creo que disfruto más o menos.	Intrinsic
50	M	¿Mientras estás en clase de Ciencias Naturales dictada en inglés te distraes o participas en la clase?	
51	P1	Casi no me distraigo, me gusta participar.	Intrinsic
52	P2	Ya casi no me distraigo, a menos que la clase sea larga	Intrinsic
53	P3	Me propongo participar en vez de distraerme.	Intrinsic
54	P4	Yo participo últimamente más.	Intrinsic
55	P5	Siento que participo algunas veces y me distraigo otras veces la verdad	Intrinsic
56	P6	Participo un poco más que antes, que no me distraía me aburría de pronto.	Intrinsic
57	M	¿Durante la clase deseas que se termine la clase pronto?	
58	P1	Ahora me gusta más que antes la clase.	Intrinsic
59	P2	Si hacemos algo divertido quiero que no se termine.	Intrinsic
60	P3	Cuando estamos en laboratorio o en la sala de computación no quiero que se termine.	Intrinsic
61	P4	Quiero que se termine en el salón y que dure en el laboratorio.	Intrinsic

62	P5	Ya espero mas tranquilo que se termine	Intrinsic
63	P6	A veces quiero que termine y a veces me gusta.	Intrinsic
64	M	¿Te esfuerzas por aprender y trabajar en la clase de Ciencias Naturales dictada en inglés?	
65	P1	Si me esfuerzo, siempre quiero salir bien en la materia.	Extrinsic
66	P2	Me estoy esforzando más ahora porque me gusta un poco más hacerlo.	Intrinsic
67	P3	Trato de hacer las cosas para salir bien calificado.	Extrinsic
68	P4	Siento que me esfuerzo más cuando, me gusta la actividad para aprender más de eso.	Intrinsic
69	P5	A veces me esfuerzo por aprender.	Intrinsic
70	P6	Si la verdad me esfuerzo para aprender.	Intrinsic
71	M	¿A qué se debe el poco / gran esfuerzo?	
72	P1	Tengo que ganar buenas notas y aprender.	Extrinsic
73	P2	Creo que cuando no me esfuerzo es que no me gusta la actividad.	Intrinsic
74	P3	A veces me gusta la actividad y por eso me esfuerzo.	Extrinsic
75	P4	Si entiendo lo que debo hacer siento que me esfuerzo menos.	Extrinsic
76	P5	Cuando no me gusta mucho la clase no me esfuerzo.	Intrinsic
77	P6	Quiero salir bien con buenas notas y por eso me esfuerzo.	Extrinsic

78	M	¿Colocas el mismo empeño para desarrollar las actividades en otras asignaturas?	
79	P1	Colocó empeño en todas las materias, la verdad.	Intrinsic
80	P2	Lo hago con la materia que me gustan sus actividades, esta me ha gustado más.	Intrinsic
81	P3	Pongo empeño en todas las materias para aprender	Intrinsic
82	P4	Yo creo que pongo el mismo esfuerzo en todas las materias, en especial si me gusta la actividad	Intrinsic
83	P5	Me esfuerzo más en las materias que me gustan	Intrinsic
84	P6	Pongo el empeño en esta materia y en todas	Intrinsic
85	M	¿Qué actividades realiza la profesora para ayudarte a aprender Ciencias Naturales e Inglés durante la clase?	
86	P1	Ha puesto actividades divertidas, diferentes.	Intrinsic
87	P2	Actividades en el laboratorio y en la sala de informática.	Intrinsic
88	P3	Nos pone a hacer actividades de grupo en el laboratorio o en el salón.	Intrinsic
89	P4	Pone trabajos en el salón de informática, el laboratorio y en la clase normal del salón.	Intrinsic
90	P5	Lecturas, prácticas, videos, preguntas y respuestas.	Intrinsic
91	P6	Observaciones en el laboratorio y actividades de clase, leer, trabajos en la sala de informática y otras cosas.	Intrinsic
92	M	¿Cómo te sientes cuando realizas las actividades propuestas por la profesora durante la clase?	
93	P1	Me siento bien con la clase en realidad.	Intrinsic

94	P2	Últimamente me siento mejor en la clase que antes.	Intrinsic
95	P3	Cuando hacemos algo divertido me siento mucho mejor.	Intrinsic
96	P4	Me han gustado más las actividades.	Intrinsic
97	P5	Estoy a gusto, en especial cuando hacemos actividades fuera del salón.	Intrinsic
98	P6	Me siento bien siempre que entienda la actividad.	Intrinsic
99	M	¿Es para ti agobiante o retador el desarrollo de actividades complejas en clase de Ciencias Naturales en inglés? ¿Por qué?	
100	P1	No me agobia la clase en verdad.	Intrinsic
101	P2	No creo que me agobie, tal vez me rete a aprender de otra forma.	Intrinsic
102	P3	No me agobian, hago las cosas lo mejor que puedo.	Intrinsic
103	P4	Tal vez son retadoras para que aprendamos ciencias y también inglés.	Intrinsic
104	P5	Es retador saber lo que nos enseñan en el idioma inglés, pero no debe agobiarse.	Intrinsic
105	P6	Nos agobia cuando no entendemos, pero cuando entendemos es un reto profe.	Intrinsic