



**Establishment of a pedagogical guideline in a primary learning environment space of
E.F.L, math and biology classes at a private bilingual school.**

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Abstract

Fostering communication within bilingual learning environments through diverse pedagogical strategies among learners has been a problematic aspect in the teaching practice of content-subject (such as EFL, math and biology) bilingual teachers. Although Colombian government and other institutions have implemented different instruments and programs to give educators several instructions in order to solve this issue, such attempts have not had the expected impact. The purpose of the current research is to establish a pedagogical guideline which will provide teachers with pedagogical strategies that will promote interaction among learners y the use the foreign language in different learning environments.

Resumen

Fomentar la comunicación dentro de los ambientes bilingües de aprendizaje a través de diversas estrategias pedagógicas entre los educandos ha sido un aspecto problemático en la práctica docente de los profesores bilingües de asignaturas de contenido (como inglés, matemáticas y biología). Aunque el Gobierno colombiano y otras instituciones han implementado diferentes instrumentos y programas para darles a los docentes varias instrucciones con el fin de solucionar ese problema, estos intentos no han tenido el impacto esperado. El propósito de la presente investigación es establecer una pauta pedagógica que proveerá a los docentes de estrategias pedagógicas las cuales promoverán la interacción entre los educandos y el uso de la lengua extranjera en los diferentes ambientes de aprendizaje.

Palabras clave (Key words)

Bilingualism, learning environments, pedagogical strategies & pedagogical guidelines.

INTRODUCTION

Currently bilingual educators, who teach different subjects, implement diverse teaching methods in class, although such pedagogical strategies have been applied, they have turned to be ineffective due to the misconceptions about bilingualism and the role it plays within learning environments, which is the development of students' language and high order thinking skills.

Despite the significant increasement on the number of the training sessions which are meant to help educators improve their pedagogical strategies within their teaching practicum, in Colombia bilingualism tends to be wrongly interpreted from a monolingual perspective, which is a predominant use of the target language (Baker, 2006). It has also been noticed that numerous students have not developed their speaking skill in accordance with the proficiency level they have in other skills; this also suggests that the strategies that several of their teachers have applied are not sufficiently effective to improve such skill. In general terms, bilingualism is defined as the ability to speak two languages: mother tongue (L1) and a foreign language (F.L). In addition, according to Sulik (2020), It is the use of two languages as a medium of instruction for a learner or a group of learners within a learning environment. Considering this, the problem of this research is based on the fact that a significant number of educators lack strategies that promote the use of a F.L in primary learners within the learning environment to interact with them and their peers in spite of having been trained in teaching this language and the implementation of electronic resources; such as ***Be (the) 1*** or the strategy ***Talkativ-E***, which is a tool that helps local people get contact with foreigners to improve their speaking skills, and the project ***Global Classroom***, which has immersed more than 215 schools from Colombia and others around

the globe (**MEN, 2021**). That is why the intention of this research was to design a guide that provides pedagogical strategies that will promote bilingualism, oral interaction, high order thinking skills and global citizenship.

Teaching in Bilingual learning environments has made educators struggle with the promotion of bilingualism as they do not know the latest trends in this topic and this situation has generated problems concerning pedagogical practices. During the first semester of the year 2023, a field diary was applied, based on a non-participant observation, as a diagnostic instrument in three bilingual subjects (English as a Second Language or ESL, mathematics and science) that belong to second and third grades of cycle 2 in the elementary section of the bilingual school San Bartolome La Merced (SBLM) in Bogotá and it was identified an issue regarding the promotion of the use of F.L from the concept of bilingualism in these subjects. Although it was observed that those teachers implemented various pedagogical strategies such as modeling, the permanent implementation of F.L or requesting their students to communicate in this language when addressing them, the use of F.L was limited or it was not present since they preferred to interact with their classmates and/or teachers in L1; this was due to the absence of the implementation or the strengthening of strategies that could develop the skills that enabled students to communicate in interesting real contexts and to solve different situations that they experienced or would face in their lives; Content and Language Integrated learning (CLIL) is one of those strategies since its 4Cs framework include Content, Cognition, Culture and Communication (**Mariño, 2014**). That is why this research project aimed to create a pedagogical strategy that will help bilingual teachers promote bilingualism in the learning environments of the second and third grades in subjects such as English as a second language (ESL), mathematics and science.

This research has two sections: the first one is the main problematic and the second one is the literature review, which has the constructs that support the background of the research. In addition, there are two studies which are similar to the current research, the first study is *“estrategias didácticas para la definición de lineamientos curriculares en la enseñanza del inglés en la educación básica secundaria y media en la Institución Educativa Distrital Restrepo Millán”* and it was carried out by Sonia Yenid Sacristán in 2006. The other study is *“análisis del currículo y las prácticas pedagógicas de aula desarrolladas por los docentes en los grados 3°, 4° y 5° de la educación básica primaria en la institución educativa Domingo Benkos Bohío de Bocachica, Cartagena-Colombia”* and Ana Teresa Blanquicett & Karina Paola Guerrero carried this research out in 2018.

Thirdly, the applied method is also described, and it includes the instruments, objectives and research question. Moreover, each instrument is described, and it is explained how each of them is linked to each specific objective. In another section of the research the analysis of the categories is specified, and such categories emerged from the frameworks which were used to analyze the data that was collected from the applied instruments. The final product of the research has the descriptions of the obtained results. And, in the last section, the research conclusions and further research recommendations are shared.

Problem statement

The context of the research was in Colombia at the primary section of the school San Bartolomé - La Merced (SBLM) in Bogotá and it involved the teachers that were in

charge of the bilingual learning environments of English as a Foreign Language (EFL), mathematics and science subjects in second and third grades. To identify the problem, different non-participant diagnostic observations were conducted at the school and it was found out that although the EFL, math and science teachers mostly used the F.L in each lesson and they also implemented some strategies to encourage their learners to use this language during the interaction process with either their teacher or their peers, such strategies did not have the expected impact and prevented them from achieving this goal.

To provide a solution to the identified problem, it was proposed to observe the teaching strategies considering the three subjects that were already mentioned and the role that second and third grade learners, educators and learning environments had taking the OCDE (2017) principles into account. The main purpose of this research was to design, as a final product, a strategy that will improve teachers' pedagogical practice and help them find new ways to use English as a foreign language (F.L) as a medium of interaction among learners and their immediate context within any kind of learning environments.

The current research project articulated with the research axis of bilingual learning environments within the research line of bilingualism since it proposed "the design of a pertinent and contextualized educational proposal for bilingual learning environments and their educational communities that reflect the application of disciplinary, pedagogical, humanistic and investigative knowledge" (Araque, & Rodríguez, p. 94). This responds to the current needs as the use of bilingualism must not be forced, but carried out in a natural way without affecting the students' motivation or leaving aside the fact that they are the center of the learning process, and they must be active agents inside and outside the classroom.

This research arose from the research question: **How to establish a pedagogical guideline in the elementary learning environment spaces in the E.F.L, math and biology classes from their characteristics and stakeholders' perception at a private bilingual institution?** Considering the following research categories: **Bilingualism, Pedagogical Strategies, Pedagogical Guideline and Learning Environments.**

LITERATURE REVIEW

To support this research epistemologically or conceptually, its **LITERATURE REVIEW** was delimited in relation to these categories: Bilingualism, Learning Environments, Pedagogical Strategies and Pedagogical Guideline. For their review and examination, a documentary analysis matrix was used (**Appendix A**), which delimited the documents as follows: research articles and books published between 1993 and 2022 in Google Academic, Dialnet, Scielo, Redalyc, CRAI-USTA, ResearchGate and Escholarship.

The review allowed the researchers to identify the most important concepts of the categories and to relate them with useful foundations to this study.

Bilingualism from the bilingual education perspective:

The core for this research was the concept of bilingualism oriented to bilingual education, which is defined, by García (2014), as an educational process of students who are proficient in two languages or individuals who are learning additional languages. Considering this, SBLM school primary students' skills partially suited this concept since a significant number of them do not have the F.L proficiency level to spontaneously interact with others using this language.

Moreover, to succeed in bilingual education it is key to understand this concept in a globalized society because there is a strong need to establish effective communication with

others especially in F.L. For that reason, it is important to consider the different existing models of bilingual education that Hurajová (2015) mentions and defines:

- 1) **Transitional model:** It seeks to switch from the minority language to the predominant one, in this way, the individual will experience social and cultural assimilation.
- 2) **Maintenance model:** In the classroom there is a promotion of the minority language since its purpose is to give recognition to its heritage and different cultural aspects through its usage.
- 3) **Enrichment model:** It is similar to the maintenance model, however, what differs one from the other is the fact that this promotes the maintenance of L1 by expanding it and improving it.

Although there are learners who may keep an ambiance of bilingualism in different learning environments, there are some external factors which may abate or prevent bilingualism, and this reduces the possibility to communicate in F.L. One of those factors is some teachers and learners' attitudes towards bilingual education; they ignore or underestimate its advantages; for instance, being exposed to different languages lead students to learn about other cultures, and this enriches learners as every language has its own traits, traditions, stories and histories. Moreover, being bilingual allows the learners to be more adaptable and imaginative in their thinking as being able to switch between two languages increases the opportunities of having communication sensitivity and linguistic awareness (Baker, 1995).

Although bilingual education offers different advantages, it also represents some challenges. According to Huang (2013), the **lack of professional human resources** is one of them because there are teachers who lack training on strategies or their communicative

skills in both languages; those aspects reduce the effectiveness of their performance and this negatively impacts their students' process.

Another challenge is the **inadequacies of instructional material**, as there is no commitment from the publishing houses, Cardenas (1993) states that as the curriculum of language teaching does not include another (or other) culture(s) nor related learning material, this has discouraged publishers to keep the connection between the language and the culture it represents.

Additionally, bilingual education has become **a challenge for a significant number of students** because factors such as demotivation, fear of academic failure or even lack of interest in their schools might prevent them from considering learning a language as something important or appealing. On the other hand, many Latin American bilingual institutions have high fees and this has led numerous students to give the academic field of learning a language more importance than the development of their own life skills; all those issues negatively impact on students' learning process and motivation (Gaille, 2017).

Pedagogical strategies:

Pedagogical strategies are tools which allow students to succeed in language learning and different authors define them as a social, objective and intentional praxis (Fierro, et. al, 1999). However, since the focus of the current research was to observe pedagogical strategies applied into the classroom to promote bilingual learning environments, the concept which better suited was this one: pedagogical strategies are “a dialectic interaction between the English language teacher and the sociocultural and educational setting which permeates the roles he or she [the teacher] is expected to play in the language classroom” (Insuasty & Jaime-Osorio, 2020). Another positive aspect of implementing pedagogical strategies in a school primary section is the possibility that

students have to maintain their mother tongue and inherited culture by feeling respected and confident (Moreno, 2019).

According to Oeeshi & Panke (n.d.), there are six effective strategies that can promote bilingualism within learning environments:

1. Strategically group works: Within this strategy the teacher may organize the groups heterogeneously; this fosters the integration between languages and different cultures due to the need to communicate and the experiences that learners may gain. (Wong, 2015)

2. Maintaining a positive relationship between students: Learning is more meaningful when students interact with their immediate environment in either their L1 or F.L (Montgomery, 2008). Therefore, those learners, who have excellent social interactions with both their peers and their teachers, can perform better in terms of academic aspects (Wong, 2015); teachers should be attentive to mediate in case any stereotype or prejudice comes from any student during those interactions.

3. Establishing clear guidelines on when to use each language: As teachers encourage their students to use F.L in different parts of the lesson or assignment by outlining the requirements of its usage, even students who do not perform well, they will use their knowledge of F.L with their proficient classmates although the former experience some challenges when doing it. There are studies which evidence that teaching F.L using the monolingual method exposes learners to the improvement of their listening skill.

4. Permitting students to use translanguaging: This strategy offers learners varied opportunities to discover their linguistic options to be used within a conversation. In translanguaging bilingualism is not considered a separate linguistic system, hence this strategy combines two or more languages; this increases confidence in students and it

improves their proficiency level when they communicate using each language. (Wong, 2015)

5. Teacher preparation: Numerous classrooms have diverse students and in order to help them succeed in learning a language, educators need to participate in literature circles, book clubs or reciprocal teaching. This kind of learning, which makes it experiential, is appropriate for faculty meetings, grade-level meetings and workshops for new teachers. (Sclafani, 2017)

6. Trained teachers: Educators must be able to communicate effectively and teach the language meaningfully; when they become context experts, their students learning process makes continuous progress and this ensures goals accomplishment.

Additionally, the implementation of Content and Language Integrated Learning (CLIL) as a complementary strategy is suitable since it makes connections between language and subject specific content. CLIL provides learners with a real context that fosters not only their motivation, but also their critical thinking skills due to the authentic tasks that students must solve (McDougald & Álvarez, 2020). When educators work with CLIL, they can develop the 4Cs Framework:

1. **Content:** Teachers must consider the knowledge, skills and understanding that students intend to develop.

2. **Cognition:** Learners acquire knowledge, improve their cognitive processes and develop new life skills simultaneously through the construction of new understandings due to the use of lower and higher thinking skills.

3. **Culture:** When students participate in activities that have authentic materials about cultures, they develop a pluricultural knowledge because they become aware of the “self” and “other” under different contexts and situations.

4. **Communication:** There is an integration between content and F.L since both complement each other. Educators must create situations, questions and/or tasks that encourage learners to use F.L to interact with their teacher and classmates; this benefits each student’s learning process in different ways (Mariño, 2014).

Regarding the tasks that encourage communication, they must be focused on fostering interaction among students: It is appropriate to have them work in small groups; if they work in big groups, there are fewer opportunities for them to experience a leading role and the level of involvement may decrease as some communication barriers may appear. Before designing or creating one of these tasks, it is important to be able to differentiate Collaborative Learning from Peer-to-peer Learning and Cooperative Learning. Peer-to-peer Learning involves only two students; one of them knows more about a specific topic and their role is to clarify doubts or guide their classmate. On one hand, concerning Cooperative Learning, the task is divided into different pieces or subtasks so that everyone does their own part individually to combine each one and obtain a final product, it fosters the “I” mentality instead of “we” as well as a competitive one. On the other hand, Collaborative Learning is completely student-centered, it fosters not only meaningful communication and social skills, but also real teamwork (leading roles, group agreement, etc.) as well as respect for others’ abilities and efforts; all these elements or aspects highly contribute to each student’s learning process and engagement (Yepes, 2019).

Around 30 teachers from 3 different Colombian ASPAEN schools implement this method to promote bilingualism. After being interviewed, 40% considers this method as a competitive one since it highly benefits learners, 23% claims that educational quality may improve, 20% thinks that it will enhance learners’ academic performance and 17% argues that this method will help them with their work life.

Learning environments:

Learning environments also play an important role to promote bilingualism, according to Araque (2019), they refer to the diverse physical locations, contexts, and cultures in which students learn. Since they may learn in a wide variety of settings, such as outside-of-school locations and outdoor environments, the term is often used as a more accurate or preferred alternative to classroom, which has more limited and traditional connotations.

SBLM school has an established bilingual program led by the Educational Bilingual Program which implies their own policy and its teachers not only attend the training

sessions that the school offers, but several of them (especially math and science teachers) also seek external resources to train themselves on the second language knowledge. At the elementary section, from first to third grade, each class lasts 90 minutes and, from fourth and fifth grade, 60 minutes. Every group has 26 students approximately; this number of people is suitable to promote an effective bilingual learning environment. (Huang, 2013)

Furthermore, teachers need to take into consideration that they are responsible for being completely informed about their students' performance, which means to measure the criteria they need to meet each goal within a specific period of time. Based on the obtained results that the teachers get from the tools they used, they start making decisions on the appropriate pedagogical strategies which will be implemented with their learners. One of them is the use of space and materials arrangement because these may develop a learning environment that allows tasks which are collaborative, interactive and highly relevant to the learners (Araque, 2021). Not only concrete material is key within the learning environment, due to the pandemics event we went through back in 2020, technology has also become a strategic ally; "a successful learning environment in a classroom also incorporates technology that encourages students to use both languages" (Villarreal & Solis, 1998).

It is important to highlight that in order to create effective learning environments the OCDE created a handbook in which they state 7 principles for effective learning environments, they are presented as follows:

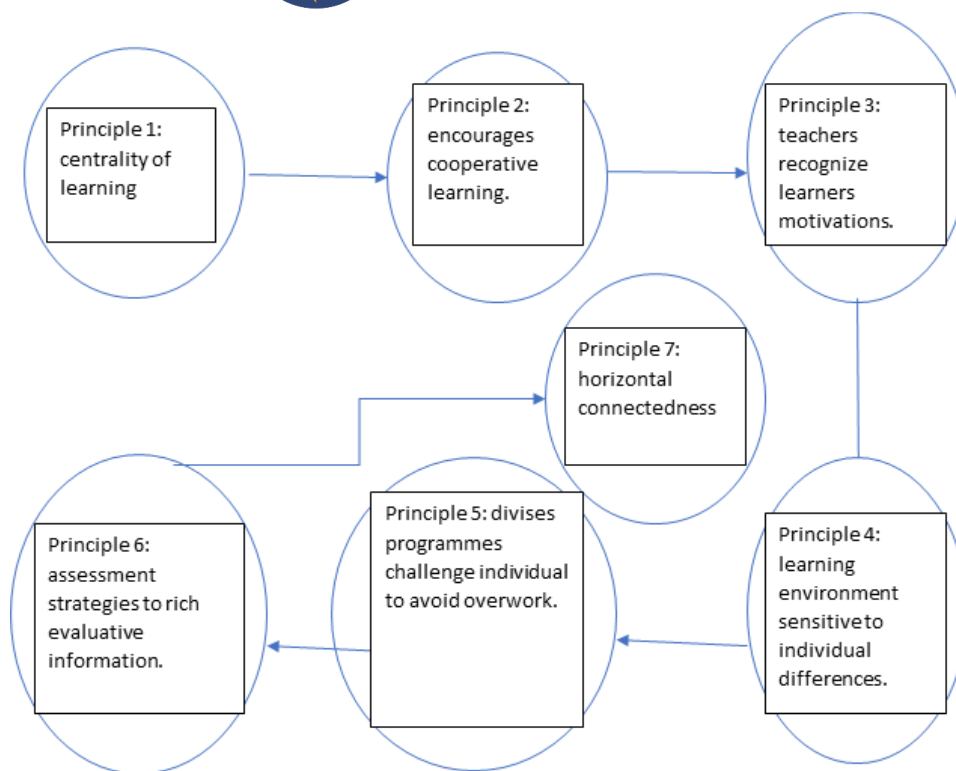


Figure 1: the authors of the research made it, which was based on the OCDE handbook for innovative learning environments.

Pedagogical guideline in primary education:

According to Bálint et al. (2019), a pedagogical guideline contains methodological material and strategies that help teachers enhance their pedagogical practice; therefore, the aim of this research was to create a set of specific strategies that primary school teachers can implement in their E.F.L, biology or science and math bilingual classes to encourage students to interact with their teachers and classmates using F.L.

As this research also seeks to enhance the creativity of bilingual educators and give clear concept about bilingualism in the community of bilingual schools, in this case, SBLM school stakeholders, it was necessary to complement the previous definition of pedagogical guideline with the Colombian Education Ministry's one: "Son los que buscan fomentar el estudio de la fundamentación pedagógica de las disciplinas, el intercambio de experiencias

en el contexto de los Proyectos Educativos Institucionales. Los mejores lineamientos pedagógicos serán aquellos que propicien la creatividad, el trabajo solidario en grupos de estudio, el incremento de la autonomía y fomenten en la escuela la investigación, la innovación y la mejor formación de los colombianos”.

In order to support the current research, two existing similar studies that were carried out in Colombia were taken into account. The first research is ***“estrategias didácticas para la definición de lineamientos curriculares en la enseñanza del inglés en la educación básica secundaria y media en la Institución Educativa Distrital Restrepo Millán”***, which was carried out by Sonia Yenid Sacristán in 2006. This research was at a public school in Bogota, and, according to the author, she noticed that a significant number of contents from the English subject did not match the learners’ needs nor interests, additionally, the teachers argued that the material they used, such as books and worksheets, were not suitable since their students’ progress was not as the expected one and their learning processes had been negatively affected. On the other hand, the students claimed that the implemented methodology was limited to memorizing vocabulary as well as grammatical structures and there was not any meaningful learning experience.

Furthermore, the educators said that the lack of training and resources prevented them from giving dynamic, motivating and interactive lessons. When Sacristán (2016) finished the research process, she proposed a foreign language learner profile, objectives to the foreign language teaching considering aspects that involve learning from English-speaking cultures and the promotion of reading habits through diverse methods to develop this skill. Besides, she states that the methodology used for this new proposal should be experimental, vivid and reflexive to promote speaking and writing skills so that the students can produce their own ideas while autonomous participation is strengthened.

Additionally, Sacristán (2016) affirms that the objective of the evaluation is to identify how the student acts under different circumstances instead of verifying if they only acquired a specific knowledge. Therefore, the main purpose of teaching is to develop students' capacity to make sense of the knowledge, how they interrelate it and seek its projection in diverse contexts.

Sacristán's research is related to the current one as both aimed to identify strategies used to teach the English language, propose new ones that make it appealing to learners and generate spaces within the learning environments that encourage students to use it to communicate under a wide variety of scenarios. Although one of these research purposes is the development of oral skills, both made an analysis from a curricular perspective based on a determined context. While this research seeks to benefit primary students, Sacristán's one was focused on secondary learners.

The second similar research project is ***“análisis del currículo y las prácticas pedagógicas de aula desarrolladas por los docentes en los grados 3°, 4° y 5° de la educación básica primaria en la institución educativa Domingo Benkos Bohío de Bocachica, Cartagena-Colombia”*** and it was carried out by Ana Teresa Blanquicett & Karina Paola Guerrero in 2018. This research was done with the purpose of analyzing this school's curricula contents, impact and meaning within a community from Cartagena. Blanquicett and Guerrero (2018) made an analysis of the curriculum and the educational changes Colombia had had, this study aimed to make educators reflect upon their teaching practices to foster innovative ones in the classroom to make a horizontal connectedness of the curricula. The research was carried out under the qualitative method approach. Firstly, the researchers made a documentary review about the most relevant concepts and several related studies to find out similarities and differences of what has already been proposed

upon this subject. Then, they implemented some instruments such as participant classroom observation and a non-structured interview to get the perceptions of the school curriculum and to observe how the teaching practices impacted on such curriculum and the existing connections between them.

The results from this research sought to generate reflexive spaces to develop a critical analysis of the students' own context as well as what concerns them and to invite the educational community to get in an agreement to establish new horizons according to the reality of the school and create an integrated curricula with academic and social relevance, in which interdisciplinarity and transversality are immersed, to contribute to the formation of emancipatory students in their context.

Although the aim of that research was not to improve the interaction of F.L in primary school and it was not carried out at a bilingual school, the similar aspects to the current one were to analyze pedagogical strategies to establish a curriculum guideline that provides new ones that can be implemented in the primary section of private schools.

METHOD

This research used **a qualitative approach** as in the research problem there was an exploration moment and it provided a deeper insight within a real-world problem (Tenny, et al, 2022). The research was developed as an **intervention** as it took place in field through classroom observations which allowed the understanding of social meanings and social processes (Needleman & Needleman, 1996).

Also, the research **involved an educational innovative project** as the main problem arose from the fact that both English teachers and content-subject teachers struggle to apply effective teaching strategies that allow the promotion and usage of bilingualism within the learning environment. For this reason, there was a pre-design stage which

entailed a review of the literature of studies that are similar to this research. During the study the designing stage took place; this one was based on the obtained results from the observations and interviews. Besides, the literature was reviewed to create a product that will provide a solution.

The project was enrolled in the **axis of bilingual learning environments** and the research line of bilingualism according to the MABA principles.

Moreover, **the intention** of the research was to intervene in the reality that some teachers faced and to improve their pedagogical practice because if the designer of the learning environment knows how to make them effective, students' learning process will be enhanced. The identified problem was the difficulty that teachers experienced when promoting the use of bilingualism among learners within the learning environment, the proposed solution to that issue was the design of a pedagogical guideline which contains pedagogical integrated strategies that the teachers could implement.

General objective:

To establish a pedagogical guideline in the primary learning environment spaces of E.F.L, math and biology classes from their characteristics, stakeholders' perceptions at a private bilingual school.

A description of the instruments and specific objectives to be used within the current research are mentioned in the following table, additionally, for each objective there

is an application purpose. From annexes C-F the formats to be used with each instrument will be shown.

Table 1: method used in research

Research objective	Data collection technique.	Application purpose	Instrument (attached as an annex)
To recognize existing pedagogical and curricular strategies that promote F.L usage in bilingual learning environments at a private bilingual school.	1. Documentary review. 2. Non-participant observation of the strategies applied. 3. Curriculum framework analysis.	To identify the pedagogical strategies used within the learning environment. To recognize the guidelines from the school in the primary learning environments that promote foreign language interaction.	Annex A: Grupo 1 Instrumentos de recolección de información y Matriz de planificación.xlsx Annex C: Field notes for research. Annex D: Field notes framework analysis.xlsx Annex E:



			Second grade: Curricular framework analysis second grade.xlsx Third grade: Curricular framework analysis third grade.xlsx
To contrast the pedagogical exercise of a BLE in primary school that promotes F.L usage in the school San Bartolome La Merced with the perceptions of stakeholders at the primary level at a private bilingual institution.	1. Non-participant observation. 2. Questionnaire	1. To contrast the real practice of the school scenarios and the pedagogical strategies applied with the literature. 2. To contrast the stakeholders' perceptions about bilingualism, learning environments, pedagogical guidelines and strategies with the real practice of the school scenarios and the pedagogical strategies applied.	Annex F Final field notes Annex G Final field note analysis: Field notes framework analysis.xlsx Annex H Teachers' questionnaire: https://forms.office.com/r/VSWFLjAq9k Administrative s' questionnaire https://forms.office.com/r/Tysd1UEcDy Annex I

			Questionnaire analysis: Matriz análisis cuestionario.xls x
To design a primer with pedagogical strategies that help E.F.L, math and biology primary teachers build effective learning environments spaces that increase the student's self-confidence as well as willingness to participate and promote student-teacher and student-student interaction using F.L.	1. Didactic sequence (depending on the chosen strategy, the technique will be determined)	To provide a solution that enables the school bilingual teachers to promote the use of bilingualism within different kinds of learning environments.	Annex J Pedagogical guidelines link: https://drive.google.com/drive/folders/1-C47Ko0X2hLn_eFLXdZ1yCm_xs3jIm1HNN

Context:

This research was carried out at a bilingual school. This school has a kindergarten, a primary, and a secondary section. For this research, the elementary students were the aimed population, and the sample was the elementary school teachers. There were 6 teachers in charge of the different bilingual learning environments in this section.

The name of the school is **Colegio San Bartolomé - La Merced**, which is located in Bogota. The context of the research was developed there. It is a B calendar school and, since it is bilingual, most of its classes are taught in English. This bilingual school works under the Ignatian methodology since it belongs to the Jesuit religion and it also works under the educational model of MAGIS 21st, which assesses its students in a formative and a qualitative way, and the learners are part of active methodologies in the classroom.

Below there is a brief description of the instruments which were implemented to carry out the current research.

Firstly, it was used the **field notes** instrument as they are some specific formats that contain written descriptions, statements, attempts and explanations of the different aspects that appear during a specific situation or time (Schatzman & Strauss, 1973, p 105). In this research, using them came from the viewpoint of field notes as the vehicle for ordering information, which means specific information about the aspects of the lesson that would be analyzed. It contributed to the research because it was applied in two occasions; firstly, for diagnostic purposes to identify the problem statement and to compare the real teachers' practice and the learners' performance taking into account the theoretical aspects that contribute to this research.

Secondly, a **curricular framework analysis** was carried out, according to Eraut et al in 1975 in Ariav (1986), this instrument will allow the evidence of curriculum instead of the curriculum itself, considering that this concept is wide broader to be explained in a complete analysis; this process could be done from a documentary perspective as it involves the study of written planning, curriculum materials and the environment setting. Therefore, this instrument facilitated the analysis of the curricular documents from SBLM school, and it was possible to contrast it with what was found out in the non-participant observations. This instrument allowed the researchers to explore the perceptions of bilingualism and how strategies were applied within the learning environments.

Finally, a **questionnaire** was implemented to collect information from respondents, according to Cohen (2013), this can be done through written or oral channels and be comprised in an interview-style format, its application does not require the assistance of a researcher. A '*questionnaire*' is the instrument for collecting the primary data. '*Primary data*' by extension is data that would not otherwise exist if it were not for the research process and it can be collected through both questionnaires or interviews (O'Leary, 2014). During the research there was a compilation of answers that showed the perceptions of teachers and stakeholders in the learning process regarding the learning environment field, the conception of bilingualism and the applied pedagogical strategies.

The next analysis discussion has a description of the obtained result and there is a comparison with the literature review that is found along the current research.

ANALYSIS & FINDINGS

The purpose of the current research aimed to establish a pedagogical guideline in the primary learning environment spaces of E.F.L, math and biology class from their characteristics, stakeholders' perceptions at a private bilingual school. This guideline seeks to enhance bilingual teachers' strategies to encourage learners to interact with their teachers and classmates using the foreign language (English) in this kind of spaces. To do so, the data analysis for this research emerged from a thematic analysis technique, which is used in qualitative research to explore and interpret patterned meaning across datasets. It means that this method of analysis patterns the important data, and it helps determine and describe an issue. According to the authors, thematic analysis addresses two levels of themes; the first one is semantic theme, which is '...within the explicit or surface meanings of the data and the analyst is not looking for anything beyond what a participant has said or what has been written.' (Braun & Clarke, 2006, p. 84). In this case, there is no need to read between the lines and there is a literal meaning of what is being analyzed within the existing categories and emergent ones. The second theme is the latent level, which '...starts to identify or examine the underlying ideas, assumptions, and conceptualizations – and ideologies - that are theorized as shaping or informing the semantic content of the data' (Braun & Clarke, 2006, p. 84).

Due to the nature of this research, the latent level was the one that best fitted it as the analysis moved beyond describing what was said in the data and focused on interpreting and explaining it. Moreover, the authors propose a six-phase guide for conducting this kind of analysis; it is not necessary to follow the steps in a linear way because it depends on the nature of the research and it is up to the decision that the researchers make. The steps, which were implemented in the current research, are defined as follows:

1. **Become familiar with the data:** in this step it is important to read and re-read the collected data as this will help the researchers to be familiarized with the concepts and this information, it is appropriate to make notes about early impressions to obtain a first draft version of the data codification process.

2. **Generate initial codes:** data starts to be collected in a meaningful and systematic way, according to the authors the coding process is attached to the research question and nature of how it was carried out, there are different kinds of coding methodology, the first one is inductive as, to make the coding process, it is needed to take line by line of what it was expressed or found in the different data collection instruments. Nonetheless, there is another coding process which is open: in this stage the researchers need to modify the codes depending on how the process goes through; initially, in this research, it was done by hand selecting and highlighting common patterns to create the emergent categories by grouping them and give a general name which is compound and may compiled the collected information. The coding data at this stage was transcribed into different excel sheets, one per research instrument and there is evidence of the researchers' discussions when they made an interpretation of the data and they started organizing the coding into themes.

Questionnaire framework analysis: [Matriz análisis cuestionario.xlsx](#)

Curriculum framework analysis third and second grade: [Curricular framework analysis second grade.xlsx](#) [Curricular framework analysis third grade.xlsx](#)

Field notes framework analysis: [Field notes framework analysis.xlsx](#)

3. **Search for themes:** it is key to recall that a theme is the one which captures interesting or relevant data from the research, in the current research there was an examination of the codes, and these fitted in themes; the researchers assigned each one a general name, which were based on the codes they had in common. As it was previously mentioned, the open coding method was used by using the analysis excel sheets instruments the themes started to emerge as the data was organized and based on common patterns which were named by the researchers. These patterns were colored to organize them into subthemes, which are defined in the next step.

Table 2 Preliminary themes

Theme environments	Learning	Theme Bilingualism at SBLM school	Theme pedagogical strategies
Codes		Codes	Codes



Seating arrangement to promote effective ambience and to prevent misbehavior in the classroom.	Use of key expressions such as "Sorry?" or "I don't understand Spanish" to encourage learners to use F.L; it is effective in some students.	Absence of tasks that promote collaborative learning.
Learner as a core when explaining concepts in all subjects.		Interaction with other people is promoted so that the student is clear that communication is not only about giving a message, but there are different elements that are involved depending on the purpose of the dialogue.
Positive ambience of the classroom when songs are played at the beginning of some lessons.	Lack or necessity of improvement of additional information or context that promotes previous topics association and/or multicultural awareness.	
Ambience of the environment with a famous English pop song.	The possibility to use L1 when learners interact with their teachers because the former struggle to express themselves in F.L or when they make questions about concepts	F.L graded language use in order to be understood by learners.
The use of the virtual room as a resource.	Learners' tendency to use L1 when they do not fully understand F.L or when they ask for some instructions or relevant explanations clarification.	Advanced learners as tutors to explain in F.L or L1 to those who do not understand instructions or concepts.
The student is recognized as the central figure because their needs are first priority for the institution. The pace at which they acquire knowledge is progressive while favoring their integral development regarding principles and Christian values through interactions that enrich these processes.	Use of a 'dual-language' modality in the science class; it is a class which is shared between the social studies and natural science teachers.	Various learning ecosystems are proposed to encourage communication between student-teacher and peers as well as the use of different tools, including technological tools (e.g., graphics, scale models, etc.) as well as common materials (e.g., puppets), and strategies that encourage communication between student-teacher and peers.
Necessity to include some tasks that help students associate some topics with their own and other cultures.	Necessity of additional information or context that promotes multicultural awareness.	Use of worksheets in all classes to provide learners with content in F.L in different kinds of topics.
The proposed learning environments are not only built to establish a relationship between student and teacher, but they also propose ecosystems that establishes a connection between each student and other people such as classmates, family	Contextualizing learners at the moment of using key vocabulary or grammar expressions may contribute to the understanding of	The necessity to include varied strategies that encourage students to increase the number of



members, etc., and with other physical, virtual or technological spaces that encourage them to explore and inquire.	either the concept or the use of the language.	interactions in F.L. when they participate and communicate with their classmates orally.
Factors such as lack of attention, motivation, exposure of the foreign language in learners' immediate context (home, surroundings, at school) may impact on the learning process.	The teachers' role as models of F.L. may reduce anxiety and encourage students to communicate using F.L. while interacting with their classmates, this helps them build confidence and prevent frustration in case they make mistakes.	F.L. proficient students interpret some situations in L1 to help their less-proficient peers.
To involve learners in the bilingual classes, it is key to use a certain kind of resources such as singing, TPR activities, concrete material, etc., to not only engage them with interesting elements that are linked to the lesson, but also develop their thinking skills.		L1 is sometimes used to catch some students' attention under certain circumstances.
Two participants agree that how students feel is a relevant aspect that could contribute to the promotion of collaboration as well as interaction since respect and empathy are attitudes that improve their confidence.		
The teachers are counselors and, having direct contact with the students helps them become aware of the learners' interests, learning pace and styles; this allows them to propose motivating and meaningful topics and, in turn, they determine the way to teach each class.		
The teachers, in their role of evaluators, identify students		

who present difficulties during their process and propose different ways in which they can support learners.		
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4. **Review themes:** in this part of the analysis the researchers associated the data with each theme and considered if this supported the research itself and it could contribute to answer the research question: **How to establish a pedagogical guideline in the elementary learning environment spaces in the E.F.L, math and biology classes from their characteristics and stakeholders' perception at a private bilingual institution?**. Braun & Clarke suggest that in this part the themes should be coherent, but distinct one from the other. In this research there were some modifications as the themes' names were changed, their names were determined considering the research categories, the sub-themes were given names that represent the main themes in a specific dimension; all the presented information was collected from the excel sheets and it was converted into codes. Another change was in the codes since they were summarized in comparison with the ones presented in table 1.

In addition, the position of the code "necessity to include some tasks ..." was changed from the theme learner as a core to sociocultural integration as the researchers concluded it suited that theme.

Table 3: themes at the end of step 4

Theme: Learner as a core Subtheme: The student is a central figure in the learning process. Learner as a core when explaining concepts in all subjects. The student is recognized as the central figure because their needs are first priority for the institution.	Theme: Sociocultural integration Subtheme: Adaptability model using L1 as a transition model to improve students' learning process. Use of key expressions to encourage the use of F.L in learners. The possibility to use L1 when learners interact with their teachers because the	Theme: Active learning Subtheme: Language context interaction Use of varied strategies including concrete or technological material to encourage interaction between teacher-learner. Interaction with different people from school or
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Subtheme: Use of resources focused on the learner. Positive ambiance of the classroom when songs are played at the beginning of some lessons. The use of the virtual room as a resource. Use of TPR activities, concrete material can keep the learner engage with the lesson. Subtheme: Building a good rapport in the relationship of teacher-learner and among peers. The teachers, in their role as evaluators, identify students who present difficulties during their process and propose different ways in which they can support learners. To consider how students feel contribute to the promotion of collaboration and interaction as respect and empathy are key. External factors may impact on the learning process.	former struggle with the language or for questions. Teacher as a model to keep using F.L so learners do not feel demotivated nor frustrated. Subtheme: Contextualizing language learning. Use of dual-language method to interact in the enquiry class. Using contextualization as tool to make the learner conscious of communicating in a determined culture. Subtheme: Linguistic and sociocultural education. It is necessary to include some tasks that help students associate some topics with their own and other cultures. Need to promote multicultural awareness and sense of identity.	outside the school for interviews. Proficient learners help to understand indications or concepts in L1. Use L1 to catch learners' attention. Subtheme: Contextualized language interaction. Absence of strategies that promote F.L interaction in the class. F.L graded language use to be understood by learners. Subtheme: Immediate language context learning interaction. Absence of tasks that promote collaborative learning. The environment should connect the learner with their immediate context. Use of worksheets in all classes to provide learners with content in F.L in different kinds of topics.
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5. **Define themes:** the idea of this part is to '...identify the 'essence' of what each theme is about.'. (Braun & Clarke, 2006, p. 92) and the next questions were made: What is the theme saying? If there are subthemes, how do they interact and relate to the

main theme? In the next figure the themes and sub-themes for the current research are presented. After establishing them, an analysis was made from a micro-level, going through a meso-level and ending up with a macro level; this process was done to answer the research question: **How to establish a pedagogical guideline in the elementary learning environment spaces in the E.F.L, math and biology classes from their characteristics and stakeholders' perception at a private bilingual institution?**

Guidelines dimension	Learner as a core	Sociocultural Integration	Active learning
Social interaction	The student is a central figure in the learning process.	Adaptability model using L1 as a transition model to improve students' learning process.	Language context interaction.
	Use of resources focused on the learner	Contextualizing language learning.	Contextualized language interaction
	Building a good rapport between teacher-learner and their peers	Linguistic and sociocultural education	Immediate language context learning interaction.

Figure 2: Thematic table

6. **Write-up:** in this final step, the report is presented, the findings which were obtained from the instruments and the analysis were discussed. Furthermore, each theme and sub-theme were also compared with those findings and the literature review from this research.

1. Learner as a core: In this first theme it is found one of the cores of the research since the learning environments are defined as a set of characteristics of the location contexts and cultures from which the learners acquire knowledge (Araque, 2021). For this research the core is enhancing the learning environments to benefit the learner, that was why the first theme was related to the OCDE (2017) first principle of the learning environments. During this first part of the analysis, the focus was on how beneficial the learning environment was to the learners as they were the main actors and their role had to be active. It is essential to mention that, within this theme, three sub-themes emerged from the findings.

Firstly, **the student is a central figure in the learning process** has a pivotal role because it favors the teacher labor and engages the student with the learning process itself as it is described on the first principle from the OCDE in 2017 in the educator's perspective; "the learning environment recognizes its learners as its core participants...". This is noticed in the diagnostic field notes from the three observed subjects as in the classes the advanced learners who have got a better mastery of the language over the rest of learners are asked to paraphrase either indications or to recall the activities done in previous classes, here the learner receives and active role in the learning process.

To follow the principle of learning centered, it is important to get an engaging lesson, so students are encouraged to organize and monitor their learning process in an autonomous way. To succeed in giving an active role to the learner, it is key to center learning on this agent of the learning environment; educators must consider the development stage in regards of their ages and the learners' capabilities to interact within the environment.

Within this learning environment of the research it was observed from both moments of the field notes instrument that classes were focused on the content of the subject leaving aside the cultural background or association of this content in a determined culture, recalling one of the characteristics of the first principle for effective learning environments, it is key to give lessons that can be meaningful to the learners and, to start giving an answer to the research question in the pedagogical guideline, it is a must to have strategies that are implemented in the lessons to keep learners engaged while making students aware of how their knowledge can be implemented in a determined culture. Although in the lessons its application in context of the different learnt contents was not observed, the SBLM school's curriculum framework promotes the learning centered on the student as the pace at which they acquire knowledge must be progressive while favoring their integral development in both principles and Christian values through interactions that enrich these processes.

To keep learning centered on the student and an active role within an environment, assigning roles and the use of material or resources are essential. This leads to the second subtheme named **use of resources focused on the learner**: it is the material which is implemented in class. If its design is appealing as well as meaningful to the student and it also meets their needs, it can guarantee such centrality and it highly benefits their learning

process. As observed in both second grade class observation moments, the use of pop songs at the beginning of the lesson generated an ambiance that promoted the use of English as a Foreign Language (EFL) within this kind of environment since many people enjoy music because of its rhythm, lyrics and even the people or bands that play it. Additionally, when a famous song is played, it is probable that a significant number of people who listen to it feel familiarized and associate it with a positive experience while they work on a task or activity during the lesson; this also strengthens the bonds that students have with their teacher and this can be an additional reason to keep learning that language.

The inclusion of e-resources within the lesson also makes a class meaningful to students as they are familiar with technology, and it benefits their learning process at the early primary stage in which they are. During the class observations, these kinds of resources were used as warm-up activities or as a way to complement some explanations that their teacher gave; it was noticed that they offered students different experiences and they were also motivated to interact and using F.L, however, their answers were short and limited to what they were assigned to do. On the other hand, these resources helped them deepen the topic understanding and improved the joy of learning this language.

Technological and concrete material as resources are not only the ones needed to promote effective learning environments, but the application of knowledge is also necessary and, to achieve this, different kinds of resources may be used as the questionnaire suggests:

What pedagogical strategies do you consider are key to implement in a bilingual class with primary learners? Why? Respondent number 5 mentioned that using visual and concrete material allows students to have a notion of what they are taught or conceptualize it according to their ages.

Various learning ecosystems are proposed to encourage communication as well as the use of different tools, including technological tools (e.g., graphics, scale models, etc.) and common materials (e.g., puppets, etc.), and strategies that promote interaction between student-teacher and among peers: To achieve this, the learning environments that are proposed here have as one of their multiple purposes the development of skills that involves critical thinking to identify the problem, know its causes as well as the reasons for those causes and the impact that this problem has in both the present and the future while

exchanging opinions, positions, experiences and, in this way, the student can propose one or more solutions. Taking into account the curriculum analysis instrument, it is concluded that a connection is observed between what was learned in the previous grade and the use of narratives that reflect situations which awaken the students' interest to facilitate the understanding of what they will learn in this grade and to help them develop the expected skills to achieve the established objectives, which are oriented to be applied in the students' daily lives.

The impact of the previous sub-themes improves significantly when **building a good rapport between teacher-learner** theme is integrated since the “learning professionals within the learning environments are highly attuned to the learner’s motivations and the key role of emotions in achievement” (OCDE, 2017) and this also engages the learner with the process of generating effective learning environments itself. For this element of the research, the role of the educator is noticeable as the teachers, according to the curriculum analysis, in their role as evaluators, identify the students who present difficulties during their process and they also propose different ways in which those learners can be supported. Although the teacher should be flexible with the student when they want to express themselves in L1 and F.L to prevent the affective block in their learning process, it is appropriate to constantly encourage students to use F.L; in a way that involves them more while avoiding negative feelings that may discourage them from participating or expressing themselves.

Considering the response that participant number 6 gave in the questionnaire in regard to the question: “What aspects do you consider affect primary section learners’ language learning process in a bilingual class?” She answered that “factors such as lack of attention, motivation, exposure of the foreign language in learners' immediate context (home, surroundings, at school) may impact on the learning process”. That is why it is essential to generate a stress-free atmosphere. On the other hand, taking into account the responses of all participants considering the question “What aspects do you consider are key to build learning environments to foster collaboration and interaction between the primary section’s learners in a bilingual class?” Two of them agreed that how students feel is a relevant aspect that could contribute to fostering collaboration as well as interaction since respect and empathy are attitudes that improve their confidence. In addition, two answers highlighted the importance of comprehension because learners need to be sure about the kind of information

that is involved so that they can assimilate it to interact with their classmates effectively. And one participant explained how useful seating arrangement, assigning roles in groups and the implementation of methods that encourage participation are to facilitate interaction.

In addition, while the observations were carried out it was found out that in science class second graders were capable to talk about different topics because of the impact that their families had on their own learning process, a main trait from this bilingual learning environment where the research took place was that learners found reading appealing as they read about diverse topics and this positively influenced their learning process, this shows that the concept of learning environments should not be limited to the classroom itself, but also it needs to include different kind of scenarios.

It is important to highlight that the effective learning environments not only are built to establish a relationship between students and teacher, but they also propose ecosystems that interconnect each student with other people such as classmates, family members, etc., and with other physical, virtual or technological spaces that encourage them to explore and inquire in diverse ways, offering them meaningful experiences that help the student develop different cognitive levels that allow them to solve everyday problems, which occur in their immediate, general and hypothetical environment under narratives that reflect sub-scenarios that are adjusted to their interests.

2. Sociocultural education: The second theme has this name since learning a F.L must not be limited to use a language as a tool to communicate, in fact, a language represents different communities, traditions, interests, viewpoints, realities and millions of people who speak it as their mother tongue. The researchers made this assumption considering the concept of bilingualism, which is defined by García (2014) as an educational process of students who are proficient in two languages or individuals who are learning additional languages. Furthermore, the misconception that numerous educators and learners have about bilingual education has made that learning a language is seen as an imposed element from the educational system. On the other hand, bilingual education has several advantages because it allows learners to get closer to know more about the culture(s) it represents as every language has its own traits, traditions, stories and histories (Baker, 1995). With these definition and, by compiling the responses to what bilingualism is, the results obtained from

that section of questionnaire are: most participants provided general definitions, which were limited to the use of two languages to communicate an idea in a fluent and proficient way regarding the language grammatical structures, however, they did not include many aspects that bilingualism involves such as interaction, cultural and personal experiences exchange, collaboration, etc. There was only one participant whose answer included several of such aspects.

One important sub-theme is the **adaptability model using L1 as a transition model to improve students' learning process**, this theme is analyzed under the perception of the concept of interpersonal communication, which is defined as the process in which individuals exchange information and influence on each other through a common system of symbols and signs (Higgins & Semmin, 2001) and this fosters L1 and F.L interaction. To promote that interpersonal communication it was observed in the science and math classes diagnostic field notes that the teachers used expressions such as “sorry” “I don’t understand you using Spanish” and they could decrease the learners’ confidence. In order to create an F.L-speaking ambiance, the teachers need to avoid or complement those expressions with strategies that encourage a greater number of students to express themselves using F.L when they want to interact or share their opinions in a spontaneous way.

It was observed that, in both moments of the non-participant observation, the teachers allowed students to use L1 when they struggled with the language or they wanted to make a question using specific vocabulary. The researchers consider that implementing this practice should not be forbidden; as Pan, Y (2009) states “Students use L1 to facilitate their process of comprehension and to reduce any insecurities that may arise from their limited language proficiency. Teachers use L1 to consolidate the knowledge that students have learned about the foreign language, such as its vocabulary, sentence structures, and cultural aspects.” This shows that she approves of this, especially in young learners, because using L1 would not cause any kind of emotional block in the language learning process, however, the language use policy from SBLM school claims the opposite since it states that the use of English in the E.F.L classes should be at 100%, whereas the dual-language modality is implemented in math and science classes; L1 and F.L are used alternatively during the lessons.

Learners see their teacher as a model is another aspect that belongs to this subtheme, it is a key strategy to maintain a good F.L usage as the teacher constantly speaks in this language, students are familiarized with it and this prevents most of them from feeling uncomfortable or frustrated if they make mistakes when using it in a bilingual class. To support this interpretation that was taken from the analysis of the instrument of the curriculum analysis and the final class observations, the researchers took into account Hurajová's (2015) assertion which involves three models of bilingual education; two of them belong to the transitional model, which is the F.L use as a minority language and, in this context, learners will be capable of experiencing social and cultural assimilation. The second model is the maintenance one in which the F.L is the minor language, and it is used to be recognized by individuals to experience social and cultural assimilation.

To conclude, interpersonal communication is the way people interact with each other to exchange information on any subject, the intention of this exchange is to influence on each other in a significant way by recognizing that learning a language implies not only the acquisition of the symbols meaning, but also the cultural background behind the use of a language and, to complement this finding from the diagnostic field notes, the teachers constantly modelled F.L in that interpersonal communication to show their students how this language is used and to persuade or encourage them to implement it to communicate their ideas and interact. Although this strategy contributes significantly to their learning process, numerous students speak in L1 more often, therefore, other strategies should be implemented to complement this one and, in this way, improve the number of spontaneous interactions using F.L.

The second sub-theme is the **contextualizing language learning** seen from the conception of intercultural communicative competence and it refers to the understanding of the context that is beyond the language, the development of the ability to navigate belief systems, values as well as behaviors and the willingness to not only engage with, but also respond to otherness. (Byram, 2021). The importance of this sub-theme is due to globalization and how easy traveling to different countries around the world is, the possibility to interact with different people using an electronic device with Internet connection and even in the learner's immediate context they need this competence because they may communicate with people who have different traditions and cultures; for example, SBLM students live in

a cosmopolitan city like Bogota and people from different parts of Colombia also live there. In fact, one of the goals of this school is to educate its students to be global citizens and developing this competence is a way to achieve it.

The use of the dual-language method is useful since both languages are combined in a way they complement each other, and this represents different advantages such as comprehension enhancement and the increase of the number of interactions that improves intercultural awareness while each learner interacts with their teacher as well as classmates, who could come from different cities or countries that have some variations regarding cultural aspects. The learner can also enrich their perspectives on interculturality due to the type of material, examples, situations and tasks they are exposed to (Lachance, 2018).

Additionally, when teachers contextualize a topic or a task in a way that they link it to a determined culture, their students have more opportunities to improve their social and communicative skills while they get familiar with such culture. They also explore the possibilities as well as benefits that diversity has, and this helps them become global citizens; they will be able to work with anyone without considering customs, habits, religions or communication as barriers.

The final sub-theme within this theme is **linguistic and sociocultural education**. An effective learning environment must integrate the use of F.L and different cultural features with which students can or cannot be familiar. It is important to remember that the linguistic aspects of any language were created due to agreements among different people throughout history, indeed, as a language is dynamic and it is living organism, it constantly changes in accordance with the way people socialize, share different cultural aspects during those interactions and shape their identity (Bucholtz, & Hall, 2005). In addition, when a context with those characteristics is included, learning a language becomes more meaningful, interesting and easier because students can associate its linguistic elements with situations or tasks that they or people they know have experienced or, if they have not, they can live.

During the classroom observations, it was identified that several lessons lacked or needed to improve information, context and tasks that could help students associate some topics with their own and other cultures. Though some teachers provided their students with some real-life situations in their lessons, such situations could be improved or changed to

foster a type of interaction that could connect the use of F.L as well as its linguistics elements with meaningful communication to promote multicultural awareness. In the questionnaire, respondent number 3 wrote about the importance of diversity and how useful it is for overcoming learning barriers when this type of information is provided in the lessons, but this participant's answer did not mention anything about the creation/implementation of tasks or activities that could give their students the opportunity to interact and show that diversity. On the other hand, respondent number 4 said that the first strategy is to focus on students' learning since it helps students build their knowledge using grammar in context, however, this participant did not associate this with culture or some aspects that students could find fascinating.

3. Active learning: this final theme is defined under the perspective that “it engages students in the process of learning through activities and/or discussion in class, as opposed to passively listening to an expert” (Freeman et. al, 2014)

Suárez & Rodríguez (2018) affirm that **language context interaction** provides a learner with a sense of purpose to communicate with other people since they have the opportunity to share personal interests, opinions and life experiences. Furthermore, learning is more enjoyable and meaningful when people put what they have been taught into practice under contexts, activities or tasks that simulate real situations since the experiences that are obtained during this process facilitates assimilation (Piaget, 1964). Additionally, as we are social beings and languages were created for communicative purposes, interaction has a pivotal role in the success of F.L learning.

After analyzing the questionnaire and respondents' answers, it was noticed that several of them agreed that a way to involve learners in the bilingual classes is using varied strategies that include a certain kind of resources such as singing, TPR activities, concrete and technological material, etc., to encourage interaction between their teachers and their peers. Besides, during this process students not only improve their communicative competence, but they also develop their thinking skills. One of the respondents highlighted the importance of gamification implementation since it could be an appropriate resource to foster participation and to do or solve different tasks because students' interest increases; gamification can also represent real scenarios that involve interaction, and it can even

promote appropriate behavioral attitudes that suit some of the current rule-based system which protects people's rights. On the other hand, during the classroom observations it was noticed that some of such strategies could be improved to favor the students' interaction using F.L.

Although the SBLM school curricular framework promotes teacher and peer interaction, especially in the classroom, and in few sections it fosters the interaction between learners and their family members, it is considered that teachers should design more activities or tasks that encourage their students to communicate with their relatives in L1 or F.L and report their experiences in diverse ways using F.L. Besides, it is also suitable to provide them with new opportunities to interact with students that belong to other grades or groups whether using letters, virtual platforms and/or performing in person interaction.

Another aspect that was observed during a couple of lessons was how the most F.L proficient students helped some of their peers when the latter did not understand teachers' instructions or specific information or concepts, they sometimes supported their classmates voluntarily and, in other occasions, those teachers asked the whole group to interpret some instructions or situations they already explained in L1 to check comprehension and to make sure that some of the students who were not as proficient as the former ones could completely understand or confirm if the message was grasped as it was intended. It would be suitable to implement additional strategies and design tasks in which both kinds of learners work together in a way they benefit each other while empathy is also promoted. It was also observed that several teachers used L1 as a strategy to catch students' attention when they were not focused because they were doing another activity or when most of them were talking while the teachers were explaining a topic or giving an instruction; this strategy was highly effective.

According to Wong (2015), when **contextualized language interaction** is implemented to promote communication among students and their teacher, they not only develop their social skills, but they also perform better in terms of academic aspects. And this is not limited to F.L usage, indeed, the concepts as well as tasks or activities performance in the other subjects such as math and science can be considerably improved since through communication students can clear their doubts directly with their teachers or those students

who have performed well or seem to comprehend the concepts or procedures, moreover, this process strengthens students' empathy and confidence.

In most of the lessons was observed that there were not clear strategies that promoted the use of F.L when the students wanted to express themselves in a spontaneous way with their teachers and classmates, indeed, the only two strategies that sometimes were implemented were to directly ask the learners to use F.L or to use expressions such as "Sorry?" or "I don't understand Spanish" when they interacted with their teachers, although it is effective in some students, this is useless in most of them. On the other hand, the teachers did not implement any strategy to promote F.L oral interaction when their students expressed their opinions with their peers when they were doing a task in groups in spite of the fact several of those phrases, vocabulary and grammatical structures were simple; this lack of effort from a significant number of students persisted during the classroom observations that were made several months later.

Although during the early stages of learning a language it is important to avoid making students feel stressed or anxious about F.L use, the teachers should differentiate the moments in which L1 use is suitable and the occasions the learners can use F.L according to their proficiency level and skills; how tasks are planned as well as the implementation of persuasive strategies, a supportive attitude and consistency are fundamental aspects that can help them achieve this goal.

It was also observed that all teachers graded their speech to make sure that all or most of the students could understand them and to keep fluent communication in F.L. Moreover, when teachers explained or provided some examples or instructions, the use of pictures complemented the written information. Students listening comprehension skill seemed to be highly benefited due to the way teachers spoke; a part of the vocabulary they used had words that were related to Latin or romance languages such as the learners' L1 while the other words were the ones that their teachers usually used during the previous lessons. It is also relevant to mention that the teachers' speech pace also helped students comprehend what they said.

On the other hand, **immediate language context learning interaction** is an important element that significantly contributes to the students' learning process, indeed,

Mariño (2014) affirms that educators must create authentic and relevant situations, questions and/or tasks because, in this way, learners feel they need to use F.L to interact with others. Suárez & Rodríguez (2018) also add that such interactions help them make decisions that can benefit themselves or others and they can also plan or create and/or carry out projects collaboratively.

Despite some of the teachers' efforts to assign tasks that fostered pair or group work, those activities did not reflect real teamwork or collaboration. There was only one lesson, the science one, in which the students had to carry out an experiment, and the way it was done met the characteristics of a collaborative learning strategy. In order to promote interaction and show evidence of the usage of F.L in a class it is essential to design collaborative tasks because, as it was observed in the science class, the learners are encouraged to communicate their ideas in F.L to work in pairs or groups (they can assume leading roles, group agreement, etc.) to achieve a common goal, additionally, this kind of tasks also offer students a real purpose to use this language (Yepes, 2019).

Another way to foster genuine interaction is by including, in the learning environment, elements that connect the learner with their immediate context; during the questionnaire analysis it was found out that respondent number 5 claimed that real contexts or situations that students find familiar are important to engage them and promote written or spoken communication in F.L. During the different classroom observations, it was noticed that several teachers could ask their students or create situations that made them wonder about what they already knew or found familiar in order to connect it with the topic the teachers wanted to introduce; this would have increased students' participation in a significant way.

Although technological devices can complement lessons, the use of worksheets was still necessary since students could check the texts or situations or tasks at any moment they wanted. Apart from that, the topics as well as content of this material were in F.L and it included activities that made the students use this language in its written form. When students manipulated this type of material, they had the opportunity to underline, highlight, circle, write, draw, etc., on it and these activities had a positive impact on their memory and thinking skills. Some worksheets promoted genuine interactions in the classroom, one of the lessons

in which this occurred was the math one; the learners had to go to different stations and answer some questions on their worksheets taking into account the information they gathered from each station and their teacher monitored the process, nevertheless, while students were doing this activity, many of them were using L1 to interact with their teacher. This shows that worksheets are very useful, but their effectiveness regarding fostering F.L implementation can be reduced depending on the task and the strategies that teachers implement while students do an activity.

Findings

Currently, the teaching of English as a foreign language has been extended to a significant number of bilingual schools and one of their main purposes is to develop the skills that students need to communicate in any type of learning environment. To contribute to this process, this research, which is named as "establishment of a pedagogical guidelines in a primary learning environment space of E.F.L, math and biology classes at a private bilingual school", was carried out to provide teachers with strategies that will help them improve their pedagogical practice and generate spaces that will encourage their students to interact with them and their classmates. However, it is necessary to continue strengthening those strategies to guarantee suitable learning environments for their students. In order to answer the research question, the current research pedagogical guideline was created, and it is represented in a primer.

In this pedagogical primer, two essential moments were addressed, the first one was based on the research which was carried out at San Bartolome La Merced bilingual school in Bogota and to help its teachers build the appropriate learning environments to foster interaction using F.L. This primer uses the pedagogical guidelines as a strategy since the Ministry of National Education defines them as "those that seek to promote the study of the pedagogical foundation of the disciplines, the exchange of experiences in the context of the Institutional Educational Projects. The best pedagogical guidelines will be those that promote creativity, solidarity work in study groups, increased autonomy and encourage research, innovation and a better educational system for Colombians". The analysis of the information which was obtained in this research was also crucial for the second moment, which allowed the researchers to propose and create the material that bilingual primary teachers will take into account to implement such strategies that will promote interaction in F.L.

The second moment was to base the primer on the OECD 7 principles of learning in diverse learning environments, and they represent the perspectives of educators. Such principles were fundamental since the research focused on the pedagogical practices of teachers.

The creators of this primer invite teachers to read the proposed questions and to continue exploring additional theoretical information as the field of education is vast and fascinating. These proposed questions or issues were made to illustrate the methodology of the strategies to be implemented.

Purpose of the primer

The primer contains pedagogical material that will support the practice of not only the SBLM teachers that took part in this research, but also educators who are in bilingual areas and work at other schools or institutions, and help them foster student-student and teacher-student interaction using an F.L while they develop additional skills that will improve their and others' lives.

The primer proposes:

- To support bilingual teachers by providing them with strategies that will promote bilingualism among their students.
- To enlighten educators about the creation of enriching activities, tasks and materials that suit students' needs as well as interests to encourage them to interact with their teachers and classmates in bilingual learning environments, and to foster collaborative learning.
- To provide different examples and situations that illustrate all the strategies which are included in the primer so that educators can adapt them according to their students' reality or contexts and plan their lessons in ways that not only stimulate learners, but also help them develop their social and critical thinking skills while they use F.L.
- To make teachers aware of the importance that certain attitudes have to build up a good rapport with their pupils and how this can increase the latter's confidence as well as willingness to participate, develop different abilities and become global citizens.

- To guide and show teachers how the students' L1 can be implemented to enhance F.L comprehension, self-confidence and learn to think in a way that allows them to express their opinions or thoughts using F.L in accordance with their current proficiency level.

- To help educators integrate the F.L aspects that involve not only different cultures, but also traditions as well as history; these aspects encourage students to explore all the possibilities that learning a language offers and they also contribute to the process that will make learners global citizens.

- To ensure a suitable foreign language acquisition process in different learning environments.

Link of the primer: <https://drive.google.com/drive/folders/1-C47Ko0X2hLneFLXdZ1yCmxs3jIm1HNN>

Conclusions

To answer the research question *how to establish a pedagogical guideline in the elementary learning environment spaces in the E.F.L, math and biology classes from their characteristics and stakeholders' perception at a private bilingual institution?*, it was necessary to keep in mind the context where the guideline and the different pedagogical strategies were going to be implemented; that was why, the researchers made several non-participants classroom observations, and this also allowed them to identify the elements that needed to be enhanced in those learning environments. Moreover, the researchers took into account the school curriculum as well as the perceptions of stakeholders and the teachers who were involved to complement the observations and consider all the aspects that had to be analyzed to establish a pedagogical guideline.

The results of those analyses were classified under these themes: First, **learner as a core** since the learning environment had to be built to benefit their learning process. Second, **sociocultural education** because it was important to observe interaction patterns and the ways L1 was used from a bilingual and educational perspective to promote social interaction in F.L. Third, **active learning** was also an essential part of the pedagogical strategies to be implemented to promote interaction and F.L use within any kind of learning environment.

Considering the first theme, which is **learner as a core**, a teachers' duty is to build a learning environment with settings that can engage their students when they explain topics or concepts and when they provide learners with tasks that make them use what they have learnt to deepen their understanding of different aspects of the world to solve varied real-life situations using different resources and tools such as technological ones. Furthermore, another element that plays an important role is a good rapport in the relationship between teachers and their students since positive feelings increase students' confidence to participate and willingness to learn.

Regarding the second theme, which is **sociocultural education**, it helps students associate the F.L with different cultures and this is not limited to the ones that represent people who speak it as L1, but also the persons who speak it as a F.L. This theme also increases students' awareness and interests in learning about those cultures and how to use F.L to obtain information and communicate under determined contexts. On the other hand, to prevent students from having negative experiences, such as affection block, teachers should create tasks or spaces in which L1 use contributes to the students' learning process and this improves not only comprehension, but also communicative skills.

Finally, in order to keep learning environments meaningful, strategies that foster an **active learning** are essential as these enhance participation through physical and virtual resources while they develop their social and thinking skills. Additionally, such strategies make students feel important and they also value their opinions as well as contributions and these aspects encourage them to support their classmates under different circumstances. It also promotes real-scenario interactions and additional appropriate behavioral attitudes that enrich the learning environments that benefit the students' F.L learning process.

Limitations and recommendations:

Limitations:

One of limitations of this project was the fact that math school teachers were still learning the F.L, however, their proficiency level was higher than the one their students had. Although this could reduce the effectiveness of some elements that are part of the promotion of bilingualism, their students will probably make significant progress when they implement the proposed strategies. Another limitation was the modification that the SBLM school

assessment system had for 2023-2024 school year and this research was carried out under this new system.

An additional limitation was the class of enquiry because the science and social studies educators teach both subjects in the same class space as part of the dual-language methodology that the school policy stipulates; the teachers' roles must be balanced within the classroom and they plan their lessons according to the role-sharing modality, role interchange (complementarity) and collaborative work (Rottier, 2001). Through this method, teachers can explore and reflect together on the results of the pedagogical actions which are performed in the classroom.

Recommendations:

Future researchers should keep in mind that this research was carried out within three bilingual learning environments of a private school in Bogotá, and it has been bilingual for a long period of time. If there is a school interested on this research and it is in the initial process of being a certified bilingual institution, it is important to analyze the curriculum and make observations of the bilingual classes to verify the pedagogical strategies its teachers do and compare them to the ones that are proposed in the primer of the current project.

Since in the current research there was a curricular framework analysis, it is recommended that future researchers consider the possibility to broaden its pedagogical guideline as well as its elements (for example, the implementation of translanguaging, languaging, contextualization, etc.) and transform it into a curricular one to provide educators with the guidance that will improve their teaching practices and achieve the school's objectives more easily.

The contribution of this research to the learning environments is a pedagogical guideline that compiles a set of strategies that may help bilingual teachers to support or complement their teaching practices to promote the interaction in bilingual environments and it may also give them an insight into the creation of authentic material that the learner can use to improve their F.L communicative skills while the appropriate integration of L1 benefits their learning process. Although the research project was written in English, the primer that is presented as a final product was created in Spanish to especially contribute to Latin American bilingual schools and those which are in a transitional process to be bilingual,

furthermore, the information of the primer will be comprehensible to the schools' administrative personnel who only speak Spanish and/or the teachers whose English proficiency level is not high.

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