

## RESUMEN ANALITICO EN EDUCACION RAE

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<b>Palabras Claves</b>	Learning environments, bilingualism, culture of thinking, opportunities for learning, process assessment, early education
<b>Descripción</b>	
<p>This research presents the design of a learning environment for the development of bilingualism and the culture of thinking in early education. The project arose from the need to offer avant-garde and innovative proposals focused on children's learning processes and, simultaneously, boost the teaching practices for the 21st Century's educational challenges.</p> <p>This research which response to a qualitative approach, was developed during the second semester of 2021 and also throughout 2022 with the support of a multidisciplinary pedagogical team who, from their role and professional experience, made significant contributions by answering a preliminary questionnaire, a semi-structured interview and finally, they as experts validated the non-specialized document (booklet) that is the result of this research proposal.</p>	

## Contenidos

### **The research report emerged from a structured organization as follows:**

1. Literature review: Designing a learning environment for early education, development of bilingualism in early education, culture of thinking in early education: foundations for an effective learning environment.
2. Method: Instruments (primary and secondary sources)
3. Analysis and findings: Preliminary analysis (Synthesis: Discussion of the initial results), core data analysis and the experts' consultancy analysis for validating the booklet.
4. Conclusions: Barriers and recommendations
5. Appendixes and annexes.

### **The product of this research (booklet) covers the following content:**

1. Learning environments
2. Bilingualism
3. Culture of thinking
4. Learning opportunities
5. Formative assessment

## Metodología

Qualitative approach articulated to an educational innovation.

Qualitative research attempts to connect global and social situations in order to explore, describe and understand them based on the knowledge of the different actors involved in them, given that individuals interact with other members of their social context by sharing the meaning and knowledge they have of themselves and their reality (Bonilla (1997) cited by Villamil (2003)).

The study is articulated to educational innovation, which is defined as a series of procedures that seek to generate a transformation of education through educational practices, changes that occur by modifying the teaching and learning processes imparted to learners (Cañal de León, 2002). From this definition, it can be understood that through the process developed in the research, it is expected that the product delivered will improve and positively transform some current educational practices in relation to three specific aspects: the environment, the development of bilingualism, and the culture of thinking in early education.

The general objective of the project is the following: to design of a learning environment for the development of bilingualism and the culture of thinking in early education, from which the following categories emerged: culture of thinking, development of bilingualism in early education, and bilingual learning environments.

## Actividades generales

The validation of the research was carried out with the HCA and Colegio Bilingüe la Enseñanza schools, authorized with the individual informed consent of the participants. The data collection was developed through the following instruments: a preliminary questionnaire, a semi-structured interview, and a validation checklist of the booklet. The following are the macro concepts of the research project: culture of thinking, development of bilingualism in early education, and bilingual learning environments.

The data collection had a specific time frame for each of the instruments. The preliminary questionnaire, the semi-structured interview, and the checklist served as an instrument for the experts' consultancy.

The preliminary questionnaire was applied through the digital format Google forms and its purpose was to make a first inquiry about the three macro concepts of the research, bilingualism, learning environments, and culture of thinking.

The semi-structured interviews were conducted through the Google Meet platform with the exception of one interview that was conducted in person. All the interviews were recorded and the corresponding transcript was kept as a basis for the subsequent analysis. For each interview, there was a technical sheet containing the basic information of each participant, the date and time of the meeting, and the respective questionnaire.

Finally, the checklist contains the minimum evaluation criteria that allow the observation and analysis of the categories selected for the booklet as well as its design and content.

As a next step, the complete categories were generated verifying that they responded directly to the research objectives. Following this process, the Research Team decided to develop a systematic method, meaning that any specialized software was used. It is worth highlighting the step-by-step process that was carried out to generate the corresponding data analysis:

- **Step 1:** It was made the transcriptions of the nine interviews.
- **Step 2:** An Excel document named Table of Categories was created to record the categories and subcategories.
- **Step 3:** One of the interviews was selected to serve as the basis for starting the data analysis and determining the main categories and subcategories. Here, the information was recorded in the first tab named: Categories per Participant. The following categories emerged from this process: culture of thinking, soft skills, development of bilingualism in early education, learning environments, alternative methodologies, and evaluation.
- **Step 4:** Based on the above, a detailed reading of the remaining eight interviews was developed and in the first tab of the Excel document (categories per participant), new subcategories were added.
- **Step 5:** A second tab was created in the Excel document named: Compilation of Categories. There, the general objective, specific objectives, meta concepts, and macro concepts of the research were displayed so that the researchers did not lose the horizon defined in the project. In this tab, all the subcategories from the nine interviews were compiled.
- **Step 6:** A third tab was included in the Excel document named Final Categories based on the categories and subcategories that emerged from the previous exercise, filtering the ones that follow the intentions of the research.
- **Step 7:** Tab No. 4 was included in the Excel document named Learning Environment Contributions (LEC), there, the subcategories of the macro concepts were integrated.
- **Step 8:** Finally, tab N. 5 was created in the Excel document named Booklet Components, responding to the first objective of the research: To determine the essential components of a learning environment for the development of bilingualism and the culture of thinking in early education.
- **Step 9:** Based on the components determined in the previous step, the research team started to work on the second objective of the project: To design a booklet proposing a learning environment for the development of bilingualism and the culture of thinking in early education.
- **Step 10:** The booklet's content was validated by a group of experts on each macro concept. Experts carried out the validation of the booklet by means of the Likert scale which eventually lead to the improvement of the product.

## Impacto a generar

Based on the research process, a booklet was designed addressed to early-childhood educators with whom we propose to generate a learning environment that promotes bilingualism and a culture of thinking.

Booklet: [Bilingual Learning is Now](#)

## Unidades

**The following titles correspond to the research report:**

### 1. Literature review

- 1.1 Designing a Learning Environment for Early Education
- 1.2 Development of Bilingualism in Early Education
- 1.3 Culture of Thinking in Early Education: Foundations for an Effective Learning Environment

### 2. Method

- 2.1 Instruments: Primary and Secondary Sources

### 3. Analysis and Findings

- 3.1 Preliminary Analysis
  - 3.1.1 *Synthesis: Discussion of the initial results*
- 3.2 Core data analysis
- 3.3 Experts' Consultancy Analysis for Validating the Booklet

### 4. Conclusions

- 4.1 Barriers and Recommendations

**The booklet is composed of the following units:**

1. Learning environments
2. Bilingualism development
3. Culture of thinking
4. Learning opportunities
5. Formative assessment

## Conclusiones

### Conclusions

The application and analysis of the preliminary questionnaire, as well as the semi-structured interview, allowed the triangulation of information. This was developed taking into account the documentary review, the analysis from the pedagogical experts' consultancy, and the contribution of the researchers to respond to the first objective proposed for this research: To determine the essential components of a learning environment for the development of bilingualism and the culture of thinking in early education.

The essential components determined to fulfill the first objective are regarding bilingualism: the role of the teacher, the student, and the community, linguistic demand, translanguaging, and infrastructure and classroom architecture. Regarding culture of thinking: thinking skills, metacognition, thinking routines, and questioning. Regarding learning opportunities: multiple intelligences, meaningful learning, pedagogical resources, and active methodologies. Regarding process assessment: feedforward and use of rubrics.

All of these components are transversal and connected to the learning environments where it is also necessary to include the development of essential skills and the challenges of the 21st century.

Based on the components mentioned above, the research project addressed the implementation of the second objective: To design a booklet proposing a learning environment for the development of bilingualism and the culture of thinking in early education. This proposal to educational agents, provides tools, ideas, and strategies that enrich the pedagogical work and respond in a novel way to the educational needs of the 21st century.

To fulfill the third objective: To validate the proposal for the design of a learning environment for the development of bilingualism and the culture of thinking in early education, a group of pedagogical experts was consulted, which allowed the research team to gather perceptions in terms of form and content, giving a holistic vision that reflects a series of adjustments to the designed booklet and that finally achieved to clearly and completely include the essential components for the design of a learning environment that fosters bilingualism and the culture of thinking in early education.

As candidates for a magister degree, it was very pleasant to be able to deliver a booklet as a product of the entire educational process. This product evidences the learning obtained throughout the magister program and the reflections concluded about the educational proposals that respond to the needs of today's society. The whole process invited us to flourish as educators and researchers by opening different scenarios to promote learning, breaking the barriers of the classroom, and understanding that learning occurs in different spaces of interaction along with different people and at any time. This is, at any time, place and with different agents, there is an opportunity to strengthen and build knowledge.

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## Abstract

This research presents the design of a learning environment for the development of bilingualism and the culture of thinking in early education. The project arose from the need to offer avant-garde and innovative proposals focused on children's learning processes and, simultaneously, boost the teaching practices for the 21st Century's educational challenges.

This research which response to a qualitative approach, was developed during the second semester of 2021 and also throughout 2022 with the support of a multidisciplinary pedagogical team who, from their role and professional experience, made significant contributions by answering a preliminary questionnaire, a semi-structured interview and finally, they as experts validated the booklet that is the result of this research proposal.

*Key words:* Learning environment, bilingualism, culture of thinking, opportunities for learning, process assessment, early education

## Resumen

Este trabajo de investigación presenta el diseño de un ambiente de aprendizaje para el desarrollo del bilingüismo fomentando la cultura de pensamiento en educación inicial. El trabajo surgió de la necesidad de ofrecer una propuesta vanguardista e innovadora centrada en el proceso de aprendizaje de los niños y que a la vez, enriquezca el quehacer pedagógico de los docentes, respondiendo a los desafíos educativos del siglo XXI.

El trabajo que tiene un enfoque cualitativo se desarrolló durante el segundo semestre del año 2021 y el año 2022 contando con el apoyo de un equipo pedagógico multidisciplinar quienes desde su rol y experiencia profesional hicieron aportes significativos respondiendo un

cuestionario preliminar, una entrevista semi-estructurada y finalmente, hicieron la validación del documento no especializado (cartilla) que es el resultado de la propuesta investigativa.

*Palabras clave:* ambiente de aprendizaje, bilingüismo, cultura de pensamiento, oportunidades de aprendizaje, valoración procesual, educación inicial

## **DESIGN OF A LEARNING ENVIRONMENT FOR THE DEVELOPMENT OF BILINGUALISM AND THE CULTURE OF THINKING IN EARLY EDUCATION**

### **Introduction**

This project is developed as a result of professional work from the Master in Bilingual Learning Environments. It integrates its conceptual and methodological support for the creation and improvement of learning environments, responding in this way to communication needs in the globalized world. Multicultural communication in the current society is an essential factor in a learning environment, as it is developed based on the study and analysis of experiences related to the same purpose.

Thus, this project addresses the design of a learning environment for the development of bilingualism and the culture of thinking in early education considering the pedagogical experiences in private institutions. There, the teaching of English as a foreign language is oriented with students in the initial cycle between five and seven years old.

The context of early childhood in this project is relevant because, although the learning of a foreign language can begin at any stage of life, it also may be expanded to go beyond the focus on a single language. There are some specific characteristics in early childhood that favor learning times and the outcome of comprehension and production in the language to be developed with the students. The critical period hypothesis states that children learn a second language more easily because the neuroplasticity of their brains allows them to create more stable neuronal ramifications when they are constantly exposed to a stimulus (Rivasplata, 2020). Hence, the research focuses on expanding these criteria and reasons why the process of acquiring a foreign language should begin in early education.

In addition, considering age in the learning of a foreign language, it is also important to recognize the impact that the learning environment has on this acquisition process. For this reason, the project has the intention of proposing the essential components that a bilingual learning environment should have. Understanding bilingual learning environment as the set of conditions and pedagogical actions that help determine the ease or restriction of the learning processes of a second language (Duarte, 2003, cited by Araque, 2021).

Moreover, one of the objectives of the project is to promote a culture of thinking based on Ron Ritchhart's proposal, which defines this concept as elementary to build meaningful learning by integrating thinking routines. In his proposal on the culture of thinking, he includes the 8 forces that every teacher must master in his or her teaching practice, and in relation to thinking routines, he states that:

We must also establish learning and thinking routines in our classrooms that offer students known structures within which to operate and tools that they can take control of and use for their own learning. Ultimately a routine can be thought of as a pattern of behavior, as a manifestation of a group's way of operating. One way of thinking about a routine is simply, "This is how we do things here." (Ritchhart, 2015, p. 9)

This means that education cannot only aim at acquiring purely disciplinary knowledge but it must be extended to developing skills that allow a reflection of all knowledge. Consequently, the application of interdisciplinary learning considers the real contexts of children in the initial cycle of education to the point of converting them into thinking routines.

When speaking of thinking culture, Ritchhart points out:

There are the skills needed to work and get along with others: collaboration, empathy, good listening, and helpfulness. And those that support the ability to deal with complexity: analysis, making connections, and critical thinking. And usually, there are those that situate us collectively in the world: as a global citizen, a member of a community, someone aware of his or her impact on the environment, and able to communicate. (Ritchhart, 2015, p. 16)

From Ritchhart's contribution, three dimensions can be identified in which skills must be developed and the school is the ideal place to be contextualized. Social interaction, cognitive complexity skills, and the location of oneself as a global citizen. Therefore, the school should be the generator of that learning environment that fosters habits or thinking routines as a vehicle for learning a foreign language.

What are the criteria and reasons why the process of acquiring a second language should begin in early education? What are the essential components of a bilingual learning environment that fosters the culture of thinking in early education should have? Why is it necessary to foster the culture of thinking from the early education stage within the framework of bilingual education?

Thus, the project proposes the presentation of a booklet aimed at educational agents that explains how to design a learning environment for the development of bilingualism and the culture of thinking in early education, understanding that these ages are the most appropriate to stimulate the development of cognitive and communicative skills. This resource will be validated in the Hispanoamericano Conde Ansurez Bilingual School (HCA) during the second semester of 2022.

## 1. Literature review

### 1.1 Designing a Learning Environment for Early Education

The article by Carranza, P., Sgreccia, N., Quijano, T., Goin, M., & Chrestia, M. (2017) illustrates the learning environment concept and specifies the different types that can be presented in the educational context from the vision of Skovsmose (2000). On one hand, the first of them corresponds to the exercise paradigm; in the author's words:

Prepondera un aprendizaje mecánico, repetitivo, no significativo, donde no se busca la justificación de un ejercicio y no se prioriza su aplicación real ni la relación con otras áreas del conocimiento. El centro y guía es el profesor, quien es el que propone las actividades a realizar y conduce el proceso de enseñanza-aprendizaje. (Carranza, Sgreccia, Quijano, Goin & Chrestia, 2017, p. 4)

On the other hand, the Research Scenario environment is defined as “una situación particular que tiene la potencialidad para promover un trabajo investigativo o de indagación” (Skovsmose, 2000, P. 5) where the center of attention is occupied by both the students and the guiding teacher.

In addition, the authors Carranza, Sgreccia, Quijano, Goin, and Chrestia propose three types of references for the Environment's organization according to its purpose. Although the context proposed emerges from an exact area such as mathematics, there are elements that educators can apply to exemplify and clarify the concept of the ideal learning environment for the application of the project. In relation to the aforementioned, Espinosa and Rodríguez (2017) promote the characterization of a learning environment from the students themselves. There, factors such as social interaction are included as well as normativity, resources, evaluation strategies and certainly the teaching practice incorporating updated teaching-learning strategies.

For the study conducted, a significant sample of students contributed to the design of a learning environment that favors education based on the development of competencies. In the word of the authors: “El ambiente de aprendizaje incluye y supera las condiciones físicas y de infraestructura y recursos, que si bien son indispensables serían insuficientes en sí mismos” (Espinosa, Rodríguez, 2017, p. 5); they emphasize the change of mentality in believing that an environment refers to a physical place only since the article demonstrates in the first conclusion that the environment also involves the actions of agreements, human relationships, tools and the role of the teacher. In brief: it is everything that interacts in an academic space.

However, it is emphasized the importance of the teacher who accompanies and guides, since it depends on him/her to encourage:

Un clima social que propicie la sana y asertiva relación y el establecimiento de vínculos directivos/alumnos, profesor/alumno, alumno/alumno, pues en esta habilidad social residen las condiciones del aprendizaje autónomo y colaborativo para lograr la potencialización de las habilidades de los jóvenes y con ello garantizar el desarrollo de competencias. (Espinosa, Rodríguez, 2017, p. 5)

In addition to the two previous studies, the contributions of Sauvé (1994) cited by Araque (2021) are taken into account. There, different approaches to the concept "environment" and its implications are evidenced; he states that learning environments cannot be seen from a single perspective. There are many contextual and interdisciplinary approaches that determine their plurality. The advance in technology and the globalized world has generated a wide range of learning possibilities for students of current generations. “Ahora, los estudiantes conviven con otras comunidades e instancias culturales, creando sus propias experiencias de aprendizaje, grupos de estudio y compañeros, eligiendo también sus propias fuentes de información,

ayudados principalmente por los medios de comunicación” (Araque, 2021, p.16). It is valid then to inquire about how students are interpreting the information to which they easily have access (regardless of their age). Additionally, it is worth reflecting on how educational institutions can respond to the current need to form students capable of creating a critical stance towards the situations that surround them.

## 1.2 Development of Bilingualism in Early Education

The need to learn a language in addition to the mother tongue arises from various positive and negative factors that imply interculturality and give rise to bilingualism. The capacity to understand more than two languages taking into account the context in which the communicative act takes place is known as bilingualism (Rodriguez, 2021). This ability can be developed in all human beings; however, starting its implementation at an early age favors the cognitive development of children as well as their linguistic awareness.

Learning a foreign language brings positive effects such as metalinguistic awareness—recognition and use of semantics/lexical, phonological awareness, grammar and pragmatics—, mental flexibility, and increased cognitive control—i.e. increased executive functions—. It also promotes a better understanding of the first language or native language, this facilitates the development of cognitive skills related to attention and inhibition (Ardila, 2012). However, although authors such as Lombardi, Fernández & Nielsen, and Bialystok reaffirm the positive effects of bilingualism, there are also other authors who contrast their ideas with negative effects such as Rosselli, Gollan, and Montoya. They observed in their research that "semantic verbal fluency may be found to be decreased in bilingual individuals, possibly due to the extra time required to select the language and/or decide whether a particular name belongs to one language or the other" (Ardila, 2012, p. 8). In children who are in the process of acquiring two languages,

it can be observed that the use of the mother tongue prevails; nevertheless, they are incorporating the use of the foreign language in different contexts and even some confusions can be perceived in this process. This directly affects their communicative fluency in its initial stage.

### **1.3 Culture of Thinking in Early Education: Foundations for an Effective Learning Environment**

The early education stage is understood as the schooling process that takes place prior to primary schooling in regard to formal education. It is a stage of great importance for young learners' progress and the regular evaluation of the advance they have in all their dimensions (cognition, motor skills, language, and social behavior). Moreover, today's early childhood generation faces several challenges in understanding and participating actively in today's ever-changing world. The two main challenges that the new generations face may be centered on digitalization and technology along with the emerging consequences of climate change and, in general, care for the environment. Early education, therefore, takes on the responsibility of creating both awareness and habits that allow children to make use of their cognitive skills through processes of understanding, analysis, and reflection on their daily practices. In this way, they can suggest solutions to situations in their immediate contexts.

From the concept of cognition, the author Hernández (2006) quotes Roy who defines the concept as: “the ability to think, feel and act, expressed through motor functions such as language, body expression and movements in general; in this process, there are also involved consciousness, stimuli, emotion, perception, judgment and learning.” (Hernández, 2006, p. 70). Seeing that, cognition becomes an elementary skill for the interaction of any human being with the stimuli that surround him/her. As is proposed in the current project, initiating the development of these capacities at early age will guarantee an educational transformation that is promoted through the culture of thinking.

From Piaget's constructivist theory, specifically in the preoperational stage, children between two and seven years old generate a cognitive development divided into two phases: in the first phase (pre-conceptual), the child is able to think and express what he/she thinks without taking into account what others may be thinking or feeling (egocentric thinking). In the second phase (intuitive thinking), he can express only one idea at a time and is not able to consider all the parts that make up a whole. Preschoolers assume that other people think like them and that a brief explanation of their thoughts makes everyone understand it.

Children learn by trying and experiencing things, comparing results, asking questions, setting new goals and finding ways to reach them. Stimulation and games are especially important. Games also favor the development of language proficiency and the ability to reason, plan, organize and make decisions. In consequence, it is an important element in the structuring of the cognitive subsystem, as well as the moral and spiritual development, which are essential for the structuring of conscience in children.

The authors Carrera and Mazzarella (2001) compile Vigotsky's sociocultural theory, which emphasizes social and cultural influences on intellectual development. Each culture transmits beliefs, values and referred methods of thinking or problem solving, that is, tools of intellectual adaptation to each generation. For this reason, culture teaches children what to think and how to do it. This egocentric thinking -according to Piaget- or private thinking -as Vigotsky calls it- is a system of cognitive self-direction that regulates problem-solving activities that the child internalizes over time, to transform into abstract verbal thinking in later stages of development. According to this author, language plays a very important role in preschool intellectual development.

In addition, neural development factors are fundamental for learning during childhood since it has been shown that the brain is more malleable. This means that during the infant period, intelligence is more flexible because it undergoes rapid and substantial changes, which favors their adaptation. Furthermore, each part of the brain is responsible for a specific function such as memory, language and abstract thinking. This suggests that these areas should be continuously stimulated from an early age. For example; babies require singing, talking, and affection to stimulate the areas of their brain in order to develop properly (Ferreira, 2012). It is in the early education stage that the foundations of development are structured and most importantly, the cognitive acquisitions take place. So, it is imperative to move from action to reflection, where children use their cognitive abilities to develop their thinking and consequently, their development and learning occur.

It is worth noting that the cognitive process in the initial stage requires experiences where perception is involved, which is where sensory-motor intelligence arises. This concept is understood as the ability to solve problems from activities in which perception, attitudes, tone and movements without symbolic evocations are mainly involved (Piaget, cited by Paolini, Oiberman, Mansilla, 2017). In other words; before the appearance of verbal expressive language, intelligence is developed in a sensory-motor plane through actions and senses, it is a practical intelligence that precedes expressive language.

According to Vygotsky's sociocultural theory, compiled on this occasion by Paolini, Oiberman and Mansilla, knowledge is a profoundly social phenomenon. Social experience shapes the ways that the individual thinks and interprets the world, and in this experience, language plays a fundamental role in a socially formed mind because it is our first avenue of mental contact and communication with others. Language serves as the most important

instrument where social experience is represented in a psychological way and, at the same time, it represents an indispensable tool for thinking (Piaget, cited by Paolini, Oiberman, Mansilla, 2017). As Vygotsky considered that language represents a very important bridge between the sociocultural world and the mental functioning of the individual, he qualified language acquisition as the cornerstone of the child's cognitive development.

Autores como Morrow (2009) plantean que la alfabetización no se restringe a las habilidades de lectura y escritura, sino que involucra también todas las habilidades de comunicación oral. El desarrollo de habilidades lingüísticas orales enriquece y fortalece a las habilidades relacionadas con el lenguaje escrito y viceversa.” (Rugerio, Guevara, 2015, p. 26).

In initial literacy, the interpretations that children make of printed symbols (drawings, scribbles, letters, or logos) are included as well as their writing approximations.

Vygotsky indicates that the role of literacy and the role of education is to provide children with experiences with language that are in their zone of proximal development (ZPD) (Rugerio, Guevara, 2015): activities that constitute a challenge, but that can be achieved through adequate guidance.

Therefore, adults have a great responsibility to ensure that children can achieve optimal learning through their active guidance that supports their development. Rather than instructing children in what they are already prepared for, or assigning them tasks for which they have already acquired the necessary mental operations, the teacher's role is to keep activities at or just above the children's independent level of functioning. In this way, adults can "awaken to life" cognitive processes that are just emerging in a rudimentary form.

Given these points, understanding the conception and cognitive development and how language is considered a vital bridge to these processes, the educational goal is to achieve progress on critical thinking, this ought to be linked with pedagogical practices applied to bilingualism. Classical authors such as Vygotsky and Piaget, and authors of the current century such as Richhart contribute to this research with a theoretical basis that leads to the design of a learning environment for the development of bilingualism and the culture of thinking in early education.

Their theories allow the project's authors to go in depth and redefine the concepts of bilingualism development and process assessment considering the variables that affect students' learning; it also empowers a new perspective for acquiring a foreign language highlighting the importance of it regardless of their level of proficiency and the mother tongue. Furthermore, the theories supported the proposal of a learning environment that balances the academic and formative processes in terms of the application of new learning opportunities to acquire a foreign language offering a student-centered approach.

## 2. Method

The project entitled, Design of a learning environment for the development of bilingualism and the culture of thinking in early education validated in the HCA Bilingual School addressed a qualitative approach since it started from some needs and/or situations that lead to design and propose a learning environment. Qualitative research attempts to connect global and social situations in order to explore, describe and understand them based on the knowledge of the different actors involved in them, given that individuals interact with other members of their social context by sharing the meaning and knowledge they have of themselves and their reality (Bonilla (1997) cited by Villami (2003)).

The study is articulated to educational innovation, which is defined as a series of procedures that seek to generate a transformation of education through educational practices, changes that occur by modifying the teaching and learning processes imparted to learners (Cañal de León, 2002). From this definition, it can be understood that through the process developed in the research, it is expected that the product delivered will improve and positively transform some current educational practices in relation to three specific aspects: the environment, the development of bilingualism, and the culture of thinking in early education.

The general objective of the project is the following: to design of a learning environment for the development of bilingualism and the culture of thinking in early education, from which the following categories emerged: culture of thinking, development of bilingualism in early education, and bilingual learning environments.

### 2.1 Instruments: Primary and Secondary Sources

The research will be validated with the educational community from a private institution, which will involve different stakeholders such as teachers of the initial cycle, an occupational

therapist, a school counselor, two families, and an educational leader. Likewise, experts related to the research categories and the school principal are going to validate the final product resulting from the project.

For the compilation of information, three instruments were designed to allow a complete inquiry process to identify the appreciation and knowledge of the population sample that will serve as inputs in the design of the proposal.

In the first place is the questionnaire which, according to Sánchez (2015), "es una herramienta fundamental para realizar encuestas y obtener conclusiones adecuadas sobre muestras o poblaciones" (p. 178); to the author, this instrument allows the elaboration of precise questions that delimit the aspects to be analyzed with clear language adapted to the sample and objectives of the project.

As a second instrument, the semi-structured interview is established. It allows the exchange of ideas, meanings, and feelings about a specific topic or reality given through words (Gaskel, cited by Bonilla and Rodríguez, 2005). For the authors, the interview defines some topics that will be addressed during the meeting, where the interviewers incorporate an interpretative framework to understand the narratives of the interviewees (Bonilla, 2005).

Data collection is a vital part of the research field since it is the input that will give clarity to the information and therefore, the development and quality control of the study will be more valuable and effective. The following table shows the instruments and techniques used throughout the project's course:

- a. The preliminary questionnaire in which some experts in education participate authorizing the use of the answers given as input for the initial analysis of results through informed consent.

- b. The semi-structured interview in which ten experts from the educational institution participate with their respective informed consent.
- c. The checklist is used as a validation technique in which experts will revise the booklet.

**Table 1 A Detailed Description of the Data Collection Instruments and Techniques**

<b>Instrument and Data Collection Technique</b>	<b>Period of Data Collection</b>	<b>Purpose</b>
<b>a. Preliminary questionnaire</b> <a href="#">Click here</a> to access the questionnaire	From April 4th to 8th, 2022  The preliminary analysis was made during the first week of June.	To make an inquiry and a first finding that will allow us to identify some categories that contribute to the compilation of the essential components that a bilingual learning environment should have to foster a culture of thinking in early education.
<b>b. Semi-structured interview (Justification, Validation)</b> <a href="#">Click here</a> to access the interview	June and July 2022	To know the interviewee's ideas and opinions about a learning space for the development of bilingualism and culture of thinking in the initial cycle as input for the design of the proposal.
<b>c. Checklist (Validation)</b> <a href="#">Click here</a> to access the checklist	September and October 2022	Validate the elements required by the proposal, in order to make the necessary adjustments to it.

### 3. Analysis and Findings

#### 3.1 Preliminary Analysis

Understanding that the project being developed responds to a qualitative approach and that its main objective is: to design a learning environment for the development of bilingualism and the culture of thinking in early education. The first data collection instrument proposed is a questionnaire applied to 30 experts, who in their professional work are educators, English teachers, or psychologists.

Based on the information gathered, we hope to make an inquiry and a first finding that will allow us to identify some categories that will contribute to the compilation of the essential components to design a learning environment for the development of bilingualism and the culture of thinking in early education.

**Table 2. Preliminary analysis of the information provided by the instrument**

Main objective of the project	Instrument and data collection techniques	Unit of analysis	Category
To design a learning environment for the development of bilingualism and the culture of thinking in early education	Google forms	<b>Question N. 1</b> <b>What does being bilingual means?</b> Closed question to determine the meaning or perception of what it means to be bilingual. <b>Result:</b> 56.7% consider that it means being competent in the use of two languages even if the level of proficiency is not the same in both. 43.3% consider that it means being competent in handling the two languages with the same level of proficiency.	<b>- Category:</b> Bilingualism conception  <b>-Main finding:</b> Being bilingual implies being proficient in the use of two languages even if the level of proficiency is not the same in second one.
		<b>Question N. 2</b>	<b>- Category:</b>

**What age range do you consider appropriate to start a bilingual education?**

Closed-ended question that allows to determine the age range to start a bilingual education.

**Result:**

50%: 0-5 years

33.3%: 6-11 years

16.7%: Age is not relevant

Bilingualism development in initial education.

- **Main finding:**  
0-5 years old is the ideal age.

**Question N. 3**

**Write an advantage of developing bilingualism at an early age (6-10 years old).**

Open-ended question that asks about the advantages of starting bilingual processes at early education.

**Result:**

- The second language is learned more naturally.
- Proficiency in both languages is achieved.
- Develops communicative and intercultural skills.
- Less frustration and fear of making mistakes.

- **Category:**

Development of bilingualism in early education.

- **Main finding:**

Neural plasticity as a reason for easy learning, naturalness of learning and flexibility in thinking.

**Question N. 4**

**Write about the disadvantages of developing bilingualism at an early age (from 6 to 10 years old).**

Open-ended question that asks about the disadvantages of starting bilingual processes in early education.

**Result:**

63% consider that it interferes with the process of consolidation of the mother tongue.

- **Category:**

Development of bilingualism in early education.

- **Main finding:**

Interference with the mother tongue process (confusion in oral and written production skills in both languages).

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37% do not find any disadvantages.

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**Question N. 5**

**What is the main challenge you observe in your daily context to develop effective bilingualism processes?**

Closed-ended question that allows experts to choose the main challenge to developing effective bilingualism processes.

**Result:**

33.3% Low level of companionship and support from families.

33.3% Low interaction of the students with the foreign language outside the classroom.

13.3% Low intensity of time in bilingual classes.

13.3% Level of proficiency in the use of the foreign language by the teacher.

3.3% Consolidation of the mother tongue in process.

3.3% Graduates trained in foreign language teaching specialized areas.

0.2% Lack of technological resources.

**- Category:**  
Bilingualism

**- Main finding:**  
Most experts consider the main challenges to developing effective bilingualism processes to be the low level of student interaction with the foreign language outside the classroom and the low level of accompaniment and support from families.

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**Question N. 6**

**What factors are essential to generate a bilingual learning environment in the initial cycle?**

**Please rate from 1 to 5, with 1 being the least relevant and 5 being the most relevant.**

Closed-ended question that ranks the factors that are essential to create an effective early childhood learning environment.

**Result:**

**- Category:**  
Bilingual learning environments

**- Main finding:**  
The teacher's level of the second language is fundamental, as well as the inclusion of technological resources in the practices.

- 
1. Teacher's level of proficiency in English
  2. Technology resources and access to technology
  3. School facilities
  4. Consolidation of the mother tongue
  5. Study materials
- 

**Question N. 7**

**When you hear the concept "learning environment", the first ideas that come to your mind are: Type three words.**

Open-ended question that allows experts to list some ideas concerning learning environments.

**Result:**

The learning environment includes aspects such as: interaction, context, resources, and experiences, didactics, people and infrastructure.

**Category:** Learning environments

**Main finding:**

From the answers, most of the experts include that aspects such as: interaction, context, resources, experiences, didactics, people and classroom infrastructure are part of a learning environment.

**Question N. 8**

**Mention a strategy to strengthen the bilingual process in children 5-7 years old.**

Open-ended question that allows us to inquire about the methodologies and strategies to develop the bilingual process in early education.

**Result:**

- Experiences in diverse contexts where meaningful learning is generated (games-experiences-contextualize-TPR).
- Involve parents both to reinforce and to accompany the student in the classroom.
- Implementation of diverse resources.

**- Category:**

Development of bilingualism in early education.

**- Main finding:**

Promote diverse learning contexts, involve families and make use of resources based on authentic material.

- 
- Constant use of the language inside and outside the classroom, involving the family.
  - Immersion with the language through music, reading, strengthening of skills.
  - Having consolidated their mother tongue.
- 

#### **Question N. 9**

**When you read "culture of thinking", what are the first three words that come to your mind?**

Open-ended question that allows you to inquire about prior knowledge and understanding of the culture of thinking.

#### **Result:**

- Most of the people interviewed relate culture of thinking with: Reflection- Thinking development
- Analytical thinking.
- Critical thinking, autonomous thinking, coherence, divergent thinking, viewpoints, process, new knowledge production process.

#### **- Category:**

Culture of thinking

#### **- Main finding:**

Culture of Thinking promotes: critical thinking with reflective analysis, habits that are part of a learning life style, knowledge acquired through study, reading, comprehension, and understanding.

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#### **Question N. 10**

**In your opinion, what strategies should be taken into account to encourage or promote thinking in students? Write three words.**

Open-ended question that allows us to inquire about the strategies that should be taken into account to encourage thinking in students.

#### **Result:**

Question development, thinking routines, didactic metacognition, tools, Thinking routines and autonomy, structuring of thinking, questions, riddles, and problem solving.

#### **-Category:**

Culture of Thinking

#### **-Main finding:**

-Teaching with thinking routines, teaching based on children's interests. Application of appropriate didactics.

### **3.1.1 Synthesis: Discussion of the initial results**

From the table above that relates the main objective of the project, the preliminary analysis of the questions, their main purpose and along with the results obtained in each question, we highlight the following findings:

#### **Question 1: What does bilingualism mean?**

The meaning or perception of what means to be bilingual is divided among the group of experts consulted, 56.7% consider that to be bilingual is to be competent in the use of two languages even if the level of proficiency is not the same in both, and the other 43.3% consider that it is to be competent in handling the two languages with equal proficiency.

The above finding leads to the conclusion that there is no unified definition of bilingualism and its implications among experts. It is clear that the definition of bilingualism has evolved over time and that there are several factors that determine whether or not a person is consider him or herself bilingual. However, and considering that being bilingual includes the performance of communicative skills in the foreign language, for the present project we adopt the definition offered by Butler & Hacuta who propose the following "Bilingualism can be defined as psychological and social states of individuals or groups of people that result from interactions via language in which two or more linguistic codes (including dialects) are used for communication" (Rodriguez, 2021, p. 3) As can be seen, the definition refers to states resulting from communicative interactions, but does not determine the level of performance with which they are presented.

#### **Question 2: What age range do you consider appropriate to start bilingual education?**

Categorically, 50% of the experts agree with starting bilingual education with the population chosen for this research proposal. In a range of 0 to 5 years, students acquire more

naturally the basis for the development of a foreign language. The above data was a finding from experts and it is also reaffirmed by the author Ferreira, who states that the factors of neural development are more important for learning during childhood, since it has been shown that the brain is more malleable. In the infant period the intelligences are more flexible because they undergo rapid and substantial changes, which favors their adaptation. On the other hand, each part of the brain is responsible for a specific function such as memory, language and abstract thinking. This means that these areas should be continuously stimulated from an early age, for example: babies require singing, talking and affection to stimulate the areas of their brain in order to develop it properly (Ferreira, 2012).

**Question 3: Write an advantage of developing bilingualism at an early age (6 to 10 years old).**

Regarding the advantages of developing bilingualism from an early age, it was again observed that the neuroplasticity described by Rivasplata (2020), allows children in early education to develop the use of a foreign language when they have stimuli that motivate them to practice it. Experts mention the expansion of vocabulary, the development of communicative skills and the facility to appropriate grammar and linguistics as the main advantages. They also mention that by developing a foreign language from an early age, students were able to achieve proficiency in both languages. In summary: neural plasticity justifies the ease of learning in early childhood, the naturalness in which this process occurs and also promotes flexibility of thinking.

**Question 4: Write about the disadvantages of developing bilingualism at an early age (6 to 10 years old).**

In contrast with the previous information, the experts included some disadvantages they have observed when developing bilingual processes in early childhood. 63% percent of the

respondents considered that learning a foreign language at an early age interferes with the process of mother tongue consolidation, due to the confusion children may present when developing their comprehension and production skills in both languages. The authors Ardila (2012) nominate this confusion as the interference that is created with phonological, lexical and grammatical systems, however, they also argue that "bilingualism can have a negative effect on verbal skills, but after a certain age, positive effects are found" (Ardila, 2012, p. 109). It makes evident that although the process of acquiring a foreign language may present some challenges in early education, they eventually overcome them and the advantages of having started the process at an early age become evident.

**Question 5: What is the main challenge you observe in your daily context to develop effective bilingualism processes?**

Based on the findings, the experts define a similar result in relation to the challenges they observe in their context when developing bilingualism processes: the low level of interaction of students with the foreign language outside the classroom (33.3%) and the low level of accompaniment and support from families (33.3%). Considering these responses, it can be noted that the child is constantly learning and growing from his/her context. The socio-cultural environment is the necessary scaffolding or support system that allows the child to move forward and continue building new competencies, for that reason, continuous exposure and interaction with the foreign language in diverse contexts is necessary to promote an effective bilingualism process.

In the same way, and in reference to the accompaniment and support from the families, it is found that children between 5 and 7 years old begin their bilingual learning process as an initiative from their parents, which is part of the first support they can offer them. However, from

the teaching experience, it is worth noting that most of the parents do not have a proficiency level in the use of English as a foreign language and therefore the support they can offer their children is low or almost null.

**Question 6: What factors are essential to generate a bilingual learning environment in the initial cycle?**

To generate an effective bilingual learning environment, a series of components are required, starting from physical spaces, concrete materials until the analysis of the interpersonal relationships that are evident in the educational community. In this particular question, the essential factors that generate a bilingual learning environment in the initial cycle were chosen and the experts ranked them according to the importance they give to each one. The results are presented below, in the following order:

1. Teacher's level of English proficiency
2. Technology resources and access to technology
3. School facilities
4. Native language consolidation
5. Study materials

Taking into account the previous information, it is concluded that in order to develop a foreign language in early childhood education, it is essential that teachers have a proficient language level. In addition, it is not enough to have an intermediate or high level of language proficiency, since technological resources have become essential to promote the use of the foreign language, as well as the facilities or physical spaces in which bilingual practices are promoted. The results found contribute significantly to the determination of the essential components of a learning environment for the development

of bilingualism, they also invite us to go deeper into the subject to know what practices are currently in place and how they can be enriched. In short, it will be a category to be taken up again in the construction of the semi-structured interview proposed for the experts.

**Question 7: When you hear the concept "learning environment," the first ideas that come to your mind are: Write 3 words.**

From the category of learning environment and reviewing the findings from the answers given by the experts in a categorical way, it is found that aspects such as interaction, context, resources, experiences, didactics, people and classroom structure are part of a learning environment. With reference to this, it is possible to take into account what Araque (2021) states:

“To understand learning environments first must be explored different positions and recognize that they are related to educational processes that involve several interconnected factors. These include people, objects, time, actions, cultures, philosophies, and experiences related to spaces”.

It can be concluded that the experts share with us some elements that should be part of a learning environment; however, in order to have more clarity, it is necessary to delve a little deeper into the semi-structured interview that will be conducted later with 10 experts.

**Question 8: Mention a strategy to strengthen the bilingual process in children 5-7 years old.**

From the findings obtained from the experts' responses, we find that some of the strategies they propose to strengthen the bilingual process of students between the ages of 5 and 7 are: promoting diverse learning contexts, involving families and making use of resources based on authentic material. In agreement with the experts, authors Cohan, Honigsfeld and Dove in

their book "Team up, Speak up, Fire up" show us the enriching possibilities that can happen when we work collaboratively with all the agents who are part of the educational process engaging foreign language students.

**Question 9: When you read the culture of thinking, what are the first 3 words that come to your mind?**

When the experts were asked about three words related to culture of thinking, a highly varied list was made. Therefore, they were gathered in three categories: one, critical thinking with reflective analysis; another, habits that are part of a lifestyle for learning; and finally, knowledge acquired through study, reading, and understanding.

For this reason, in order to apply a good use of experimental sciences to our students, it is essential to start making their thinking visible. Through the project called Visible Thinking (Ritchhart, Church and Morrison 2014) it has been possible to appreciate the importance and the benefits obtained in educational practice by making the students' thinking visible. For this purpose, we use thinking routines as instruments (cited by Gil, 2021 p. 3).

**Question 10: What do you consider should be taken into account to encourage or promote thinking in students? Write 3 words.**

As in the previous question, when we asked experts about strategies that encourage or promote thinking in students, the experts listed a series of ideas that show mostly to activities that could be done in the classroom. For this reason, it was necessary to gather them into the following categories: Teaching with thinking routines; Teaching based on children's interests; and Application of appropriate didactics.

Ron Ritchhart in his book Creating Culture of Thinking proposes the 8 Forces that teachers must master to achieve a truly transformation in education from the classroom. They

are: expectations, language, time, modeling understood from the role of the teacher where he/she is a guide but at the same time a learner, opportunities, routines, interactions and the environment. (Ritchhart, 2015, p.6).

Based on the preliminary analysis of the results found after the application of the first instrument, a semi-structured interview is constructed to be applied to ten experts in education. They will allow us to know their perspectives regarding the constructs of the current research, in turn; with the results obtained from the application and analysis of this second instrument, we will be able to elaborate a booklet<sup>1</sup> that provides the foundations to design a learning environment for the development of bilingualism and the culture of thinking in early education.

### 3.2 Core data analysis

The main objective of the project is to design a proposal for a learning environment for the development of bilingualism that promotes the culture of thinking in early education.

The qualitative project focused on educational innovation aims explicitly to: determine the essential components of a learning environment for the development of bilingualism and the culture of thinking in early education, design a booklet proposing a learning environment for the development of bilingualism and the culture of thinking in early education, and validate the proposal for the design of a learning environment for the development of bilingualism and the culture of thinking in early education. The delivery of a booklet is determined from the execution of the objectives proposed in the project.

The validation was carried out with the HCA and Colegio Bilingüe la Enseñanza schools, authorized with the individual informed consent of the participants. The data collection was

<sup>1</sup> This booklet is a contribution generated by the project and in coherence with the SNCTI (National System of Science, Technology and Innovation of Colciencias), it is evidenced in the category of multiformat contents of public disclosure of science, is the primer defined as a non-specialized publication. (MinCiencias, 2021)

developed through the following instruments: a preliminary questionnaire, a semi-structured interview, and a validation checklist of the booklet. The following are the macro concepts of the research project: culture of thinking, development of bilingualism in early education, and bilingual learning environments.

The data collection had a specific time frame for each of the instruments. The preliminary questionnaire took the week between April 4th and 8th, 2022; the semi-structured interview, which involved a virtual meeting with each of the participants, took place between June and July 2022; the checklist that served as an instrument for the experts' consultancy was prepared and filled out between September and October 2022. Finally, it should be clarified that the documentary review has been an exercise developed during the research process.

Regarding the times for the analysis of the instruments, they were established as follows: the preliminary questionnaire was analyzed between May 30th and June 4th, 2022; the analysis of the semi-structured interviews was carried out during the entire month of August 2022; and the analysis of the checklist was carried out between October 10th and 14th, 2022.

The preliminary questionnaire was applied through the digital format Google forms and its purpose was to make a first inquiry about the three macro concepts of the research, bilingualism, learning environments, and culture of thinking.

The semi-structured interviews were conducted through the Google Meet platform with the exception of one interview that was conducted in person. All the interviews were recorded and the corresponding transcript was kept as a basis for the subsequent analysis. For each interview, there was a technical sheet containing the basic information of each participant, the date and time of the meeting, and the respective questionnaire.

For the selection of the participants, the profile and role of the participant within the educational community to which he/she belongs were taken into account. Thus, the participants included teachers from early education, an occupational therapist, a school counselor, two mothers, and an educational leader.

The purpose of each interview was to identify the knowledge, experience, perceptions and ideas of the interviewees in relation to learning environments, the development of bilingualism and the culture of thinking in early education.

The three researchers took part in the interviews on a rotating basis, i.e., two of the researchers conducted the interview, participating alternately in the formulation of the questions and a third researcher played the role of reporter, which means, she took notes of the answers given without participating verbally in the interview.

Finally, the checklist contains the minimum evaluation criteria that allow the observation and analysis of the categories selected for the booklet as well as its design and content.

Taking into account the information emerging from the application of these instruments, the analysis of the information was proposed based on the theory of the author Hatch, which defines this process as:

Data analysis is a systematic search for meaning: It is a way to process qualitative data so that what has been learned can be communicated to others. Analysis means organizing and interrogating data in ways that allow researchers to see patterns, identify themes, discover relationships, develop explanations, make interpretations, mount critiques, or generate theories. It often involves synthesis, evaluation, interpretation, categorization, hypothesizing, comparison, and pattern finding. It always involves what Wolcott calls "mindwork". (Hatch, 2022, p. 148)

The analysis of the information responds to a deductive and inductive analysis since, on one hand, part of the analysis arose from the responses of the interviewees as well as from the objectives defined in this research. On the other hand, the authors' contributions presented in the literature review were contrasted with the results obtained from the instruments appliance. Additionally, once this reading of the interviews was completed, the qualitative analysis was closed.

As a next step, the complete categories were generated verifying that they responded directly to the research objectives. The author who oriented this phase of the research with his theory proposes three questions for revising this analysis of the information: "Can the analysis be explained and justified? Can a complete story be told? Can the analysis be organized into coherent written findings?" (Hatch, 2002, p. 150).

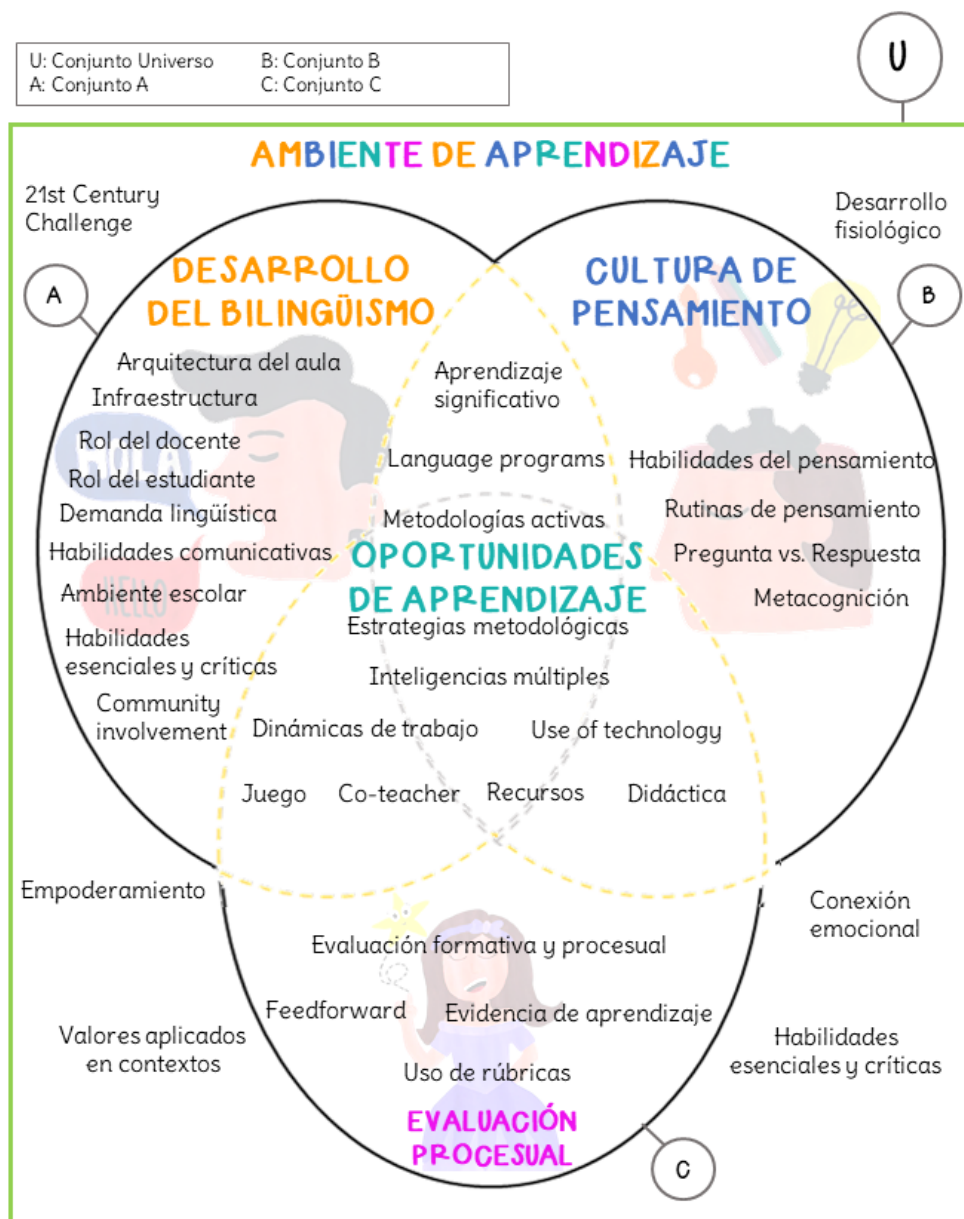
Following this process, the Research Team decided to develop a systematic method, meaning that any specialized software was used. It is worth highlighting the step-by-step process that was carried out to generate the corresponding data analysis:

- **Step 1:** It was made the transcriptions of the nine interviews.
- **Step 2:** An Excel document named Table of Categories was created to record the categories and subcategories.
- **Step 3:** One of the interviews was selected to serve as the basis for starting the data analysis and determining the main categories and subcategories. Here, the information was recorded in the first tab named: Categories per Participant. The following categories emerged from this process: culture of thinking, soft skills, development of bilingualism in early education, learning environments, alternative methodologies, and evaluation.

- **Step 4:** Based on the above, a detailed reading of the remaining eight interviews was developed and in the first tab of the Excel document (categories per participant), new subcategories were added.
- **Step 5:** A second tab was created in the Excel document named: Compilation of Categories. There, the general objective, specific objectives, meta concepts, and macro concepts of the research were displayed so that the researchers did not lose the horizon defined in the project. In this tab, all the subcategories from the nine interviews were compiled.
- **Step 6:** A third tab was included in the Excel document named Final Categories based on the categories and subcategories that emerged from the previous exercise, filtering the ones that follow the intentions of the research.
- **Step 7:** Tab No. 4 was included in the Excel document named Learning Environment Contributions (LEC), there, the subcategories of the macro concepts were integrated.
- **Step 8:** Finally, tab N. 5 was created in the Excel document named Booklet Components, responding to the first objective of the research: To determine the essential components of a learning environment for the development of bilingualism and the culture of thinking in early education.
- **Step 9:** Based on the components determined in the previous step, the research team started to work on the second objective of the project: To design a booklet proposing a learning environment for the development of bilingualism and the culture of thinking in early education.

In order to perform a detailed review of the corresponding analysis previously described, the Excel document can be accessed at this [link](#) and it is synthesized in the figure as follows:

**Figure 1: Visual representation of objective 1**



**Note:** Figure N. 1. Visual representation of objective 1, illustrates the essential components of a learning environment for the development of bilingualism and the culture of thinking in early education and their interrelation.

The proposed Venn diagram is based on the analysis of the categories recorded in the Excel document, through which the essential components of a learning environment that promotes bilingualism and a culture of thinking in early education are synthesized and illustrated.

Based on the findings obtained through the instruments applied, it was concluded that the learning environment is a category that becomes the central axis of the research project. For this reason, it is plotted as the universe (U) in the Venn diagram. From there, the interviewees put into consideration the demands and challenges that early education is currently presenting, synthesized in challenges of the 21st century, empowerment, essential and critical skills, physiological development, emotional connection, and values applied in contexts. When contrasting the impressions of the interviewees, we found agreement with the idea of Rodríguez (2022) who alludes to the importance of analyzing the contexts, and the sociolinguistic and local educational demands of the students.

Following this idea, each of the sets reflected in the Venn diagram (A, B, C) condense the elements that respond to the specific categories that make up a learning environment:

From the development of bilingualism (set A), we adopted the definition proposed by Buttler and Hakuta (2004) who extended the term bilingualism and took it beyond the purely linguistic component to include cultural, social and psychological factors of bilingual speakers (Rodríguez, 2021). After clarifying the meaning of bilingualism, the essential components of the learning environment were determined. Thus, the roles of the teacher, student, and community that are part of the environment were identified. The teacher then carries out his/her role as a manager of significant learning opportunities so the student can be the center of learning, participating actively in this process. Additionally, it was analyzed how the participation of all

the other educational agents around the student also matters, since we must remember that a learning environment can take place at any time or place.

Furthermore, it was evidenced how the linguistic demand is conceived from the coexistence of two languages. This allows the students to strengthen their confidence and performance in the educational process that they are just starting. Then, the concept of Translanguaging, which according to Ofelia García (2009) is an approach of bilingualism that is not only focused on the development of languages but also, it is centered on bilingual practices helping them to recognize and understand their contexts (Rodríguez, 2021). As a consequence, children can strengthen their self-confidence by participating actively in their learning processes remarking that their level of language should not be an obstacle to communication. Finally, for the development of bilingualism, it is important to have an infrastructure and classroom architecture that favors permanently the interaction between students and teachers. The dynamics of organization and the classroom arrangements should respond to an attractive and functional infrastructure that facilitates the communicative purpose of the learning environments.

From the culture of thinking (set B), the thinking skills, metacognition, thinking routines, and questions were defined as components for the development of this category. Ron Ritchhart, promoter since 1998 of the culture of thinking, wrote the book "Creating cultures of thinking. The 8 Forces we must Master to Truly Transform our schools" (Ritchhart, 2015). Through this publication, he seeks to provide strategies and motivation to educators to generate positive feelings in their students that drive learning in a fun and meaningful way. With this culture, students are aware that both individual and group thinking have value. This type of culture is motivated in the different environments where learning plays a fundamental role since the purpose of this culture is to provide a good understanding of learning, which does not occur only

with the transmission of information. The teacher has the challenge of proposing what he/she wants the students to achieve with this content.

Pablo Romero states that:

"Por la misma naturaleza compleja del ser humano, no existe una sola forma de saber. Las personas acceden al saber de infinitas formas, esto hace muy rico y misterioso el arte del entendimiento que exige de un proceso de asimilación y creación mental que permite darle un significado a los diversos datos o eventos que recibimos." (Romero, 2019, p. 17).

Thus, it should be noted that the aforementioned elements of this important axis called a culture of thinking, such as thinking skills, metacognition, thinking routines, and questions, allow the students to access and go beyond the construction of knowledge from different perspectives.

Regarding the process assessment (set C), the components included were the feedback and the rubrics. From the contributions given by the author Pablo Romero Ibáñez (2019) in response to the question How to make a formative assessment process a reality? Five components respond to an adequate assessment for a student and these are cyclical, which means that once the last component is finished, it returns to number one. The phases are the following: diagnosis, foundation, planning, implementation, and meta-evaluation.

A process assessment is an invitation to follow a continuous and calm procedure for both the teacher and the student. This process bears in mind students' particularities. Likewise, to evidence a value process in formative terms, the constant observation, control, and permanent verification of the progress obtained by the student allow the identification of strengths and aspects to be improved, resulting in recognition of the needs. In this way, decisions are made to

support students in their understanding, in the integration of skills and competencies required today, and in the skills that allow them to solve situations autonomously in their daily lives.

The use of rubrics is a tool that can support this type of assessment. Rubrics are seen as a scale or checklist-type model that includes a series of criteria to be evaluated. They are set according to the expected goals and the chosen dimensions to be developed with the students.

It is worth mentioning that the five components described and the rubrics can respond effectively when teachers seek to promote a formative assessment in the educational environment. The category of Learning Opportunities emerges as a result of the triangulation of the subsequent findings of the analysis. It is transversal to sets A, B, and C. This category is called Learning Opportunities. The transversal meaning of this category comes from the fact that it permeates the main components identified in the research and provides the teacher with strategies and suggestions that positively challenge and enhance their students' skills. Here, it is necessary to take into account students' multiple intelligences, meaningful learning, pedagogical resources, and active methodologies.

Contrasting the findings obtained from the instruments applied in the research, some similarity was found with the four principles of opportunities proposed by the author Richthart referenced in the literature review: the innovative application in which knowledge and skills are put into practice in real situations, the meaningful inquiry that contributes to the collective construction of the culture of thinking, the perceived value that responds to the willingness and connection that the student has with the class and assertive communication (Ritchhart, 2015). Thus, from Learning Opportunities, skills development starts with recognizing the diversity in early education, since all children are starting their learning and development processes based on different skills and interests (multiple intelligences).

"Multiple Intelligences are the set of abilities, talents or mental capacities that all individuals have, we just differ in the degree of capacity and the nature of the combination of capacities." (Gardner (1999) cited by Huertas (2015), p. 129). Considering this definition, it is evident that implementing these skills is functional for all knowledge, including a new language learning process. For this objective specifically, it is elementary to use all possible channels of attention with the children during the sessions to ensure that the whole group actively participates in the class.

Once the interest and attention of students are captured, educators face a new challenge that researchers see as an opportunity: to develop meaningful learning in students. This type of learning challenges students, enhance their abilities, and allows them to experiment and practice their knowledge and skills. Besides, the research found that active methodologies play an essential role in this category since they place students at the center of learning and allow them to integrate their knowledge through a variety of strategies.

As it was mentioned above, all the components indicated are transversally related to the learning environments. Hence, they are reflected in the booklet as a product of the research, providing tools, ideas, and strategies that enrich the pedagogical work with the students of the initial cycle.

The fact of recognizing the student as the center of the educational process and validating his/her education considering all his/her dimensions and environment, allows the recognition of the components to be improved to promote an effective learning environment.

The research proposal developed has an innovative approach; it is essential to highlight the importance of adopting the bilingualism process naturally, respecting each student's particularities. Here, the teacher's and students' roles are magnified since both play an active role

in the educational process. However, it is also fundamental to include the institutional administrative team who is in charge of setting the internal policies and generating pedagogical guidelines that respond to this need in a world in permanent transformation.

### 3.3 Experts' Consultancy Analysis for Validating the Booklet

As part of the research process, the third objective: to validate the proposal of a learning environment for the development of bilingualism and the culture of thinking in early education, it was decided to contact a group of experts on the macro concepts of the project: culture of thinking, bilingualism, and initial education. In this consultancy, experts carried out the validation of the booklet by means of the Likert scale. This instrument is defined as: “instrumento psicométrico donde el encuestado debe indicar su acuerdo o desacuerdo sobre una afirmación, ítem o reactivo, lo que se realiza a través de una escala ordenada y unidimensional” (Bertram (2008), cited by Matas (2016), p. 39).

The Likert scale that was applied to the experts through the Google forms platform. It included the basic data of the project contextualizing the experts with the objectives of the booklet, including the following information: names of the researchers, the title of the project, presentation, and indications of the instrument, a table with categories and the criteria that were evaluated by means of the scale.

During the analysis of the scale's results, it was found that the assessment given in regard to the form and design of the booklet was highlighted by the experts. They uttered that the booklet has an appealing cover, the content of each unit is structured and organized, which favors its reading, and also, experts agreed on how the thinking routines involved are clearly visible throughout the document. In general terms, the validation obtained from the form of the booklet

was positive, demonstrating that this is an enjoyable resource for educators supported with striking images that capture the reader's attention.

In addition, in regard to the validation of the learning environment, the development of bilingualism, and the culture of thinking units, it was evident that there is a connection between the title of each unit and the interactive learning proposed in the booklet. Moreover, based on the solid foundation of concepts, it was found that there is greater validation in the units of development of bilingualism and culture of thinking. However, the option "totally agree" did not obtain total acceptance in the learning environment unit; therefore, the researchers agreed that some adjustments should be made for improving the results. Also, during the analysis, there was a coincidence of acceptance regarding the existence of innovative information in each of the three units of the booklet. In the culture of thinking and development of bilingualism, there is agreement that the shared tools respond to the dynamics of the initial cycle.

In relation to the clarity, coherence, and ease of understanding of the units, the Culture of Thinking unit had a greater validation. In the units of Development of Bilingualism and Learning Environments, the highest percentage of validation was in the "agree" range. It was also noted that the Keep in Mind section of each unit obtained the highest percentage of validation in the "agree" option, which means that there is an opportunity for improvement for this item. Following this idea, in the Learning Environments unit, the items related to the response to the training needs of the 21st century obtained a 100% of the highest validation. Likewise, the design of learning environments proposed in the booklet evidences the importance of making students the center of the educational processes. In the Culture of Thinking unit, it is highlighted that 100% of the highest validation is in the item related to the information proposed, promoting thinking skills.

Additionally, as part of the validation process, in the checklist, experts were asked to socialize the aspects that they considered should be adjusted in the booklet for its fine-tuning. Among the results obtained, it was recommended to revise some design aspects in the section on Learning Opportunities, since the text with the proposed illustration was transposed on two pages of the booklet. Similarly, it was suggested to delve deeper into strategies and concepts that were only mentioned but not explained: active pauses, games, concrete material, and experiential learning. In line with this proposal, the same suggestion was found in the Process Assessment section to reinforce in the Keep in Mind the value of systematic observation, exemplification of class performances, and resources that the teacher can use to evaluate learning at the individual and group level. Finally, the experts found some typing errors that they recommend revising, as well as the QR code proposed for the unit of Development of Bilingualism.

At the end of the validation, a new data analysis process was carried out, reviewing in detail the evaluation and suggestions of the experts, and based on the results obtained, the booklet was refined, seeking to ensure that it clearly and completely includes the basic components of a learning environment for the development of bilingualism and the culture of thinking in early education.

#### 4. Conclusions

The application and analysis of the preliminary questionnaire, as well as the semi-structured interview allowed the triangulation of information. This was developed taking into account the documentary review, the analysis from the pedagogical experts' consultancy, and the contribution of the researchers to respond to the first objective proposed for this research: To determine the essential components of a learning environment for the development of bilingualism and the culture of thinking in early education.

The essential components determined to fulfill the first objective are regarding bilingualism: the role of the teacher, the student, and the community, linguistic demand, translanguaging, and infrastructure and classroom architecture. Regarding culture of thinking: thinking skills, metacognition, thinking routines, and questioning. Regarding learning opportunities: multiple intelligences, meaningful learning, pedagogical resources, and active methodologies. Regarding process assessment: feedforward and use of rubrics.

All of these components are transversal and connected to the learning environments where it is also necessary to include the development of essential skills and the challenges of the 21st century.

Based on the components mentioned above, the research project addressed the implementation of the second objective: To design a booklet proposing a learning environment for the development of bilingualism and the culture of thinking in early education. This proposal to educational agents, provides tools, ideas and strategies that enrich the pedagogical work and that respond in a novel way to the educational needs of the 21st century.

To fulfill the third objective: To validate the proposal for the design of a learning environment for the development of bilingualism and the culture of thinking in early education, a group of pedagogical experts was consulted, which allowed the research team to gather

perceptions in terms of form and content, giving a holistic vision that reflects a series of adjustments to the designed booklet and that finally achieved to clearly and completely include the essential components for the design of a learning environment that fosters bilingualism and the culture of thinking in early education.

As candidates for a magister degree, it was very pleasant to be able to deliver a booklet as a product of the entire educational process. This product evidences the learning obtained throughout the magister program and the reflections concluded about the educational proposals that respond to the needs of today's society. The whole process invited us to flourish as educators and researchers by opening different scenarios to promote learning, breaking the barriers of the classroom and understanding that learning occurs in different spaces of interaction along with different people and at any time. This is, at any time, place and with different agents, there is an opportunity to strengthen and build knowledge.

#### 4.1 Barriers and Recommendations

The learning environment proposal for the development of bilingualism and the culture of thinking in early education had a local scope due to the limited time for the completion of the research. Hence, a pilot test was not conducted to measure its impact and reach. For this reason, the research document and the booklet are shared with Tomasina community and the schools that were protagonists of the process to be reviewed and consulted.

The researchers will follow the ISBN procedures to register the "Bilingual Learning is now" booklet and identify the researchers' team as authors of this product.

Previewing the continuity of this research, it is expected to initiate a pilot test and implementation of the project in 2023 with the Colegio Bilingüe Hispanoamericano Cónde Ansúrez and the Colegio Bilingüe la Enseñanza, applying the findings to students in the initial

cycle. From this pilot test, an instrument will be applied to the educational agents that are directly involved with the proposal. It is important to set as a goal the measurement of the booklet's impact and its effectiveness in these communities.

To continue with the vision of the project, and according to the analysis of the data collected after the pilot test, the pertinent revisions and adjustments will be made to the booklet, in order to disseminate it nationally and internationally as a tool that breaks down barriers and responds globally to the needs and challenges of today's education.

This project can be consulted by people who are involved in education, bilingualism, the culture of thinking, and the initial cycle. Both the report and the booklet can be resources for reference or extension of future research.

## References

- Araque, D. M. (2021). Modulo 1. Concepts and considerations. *Informally published work*.  
 Fliphtml5.Com. Retrieved from: <https://fliphtml5.com/hpdre/l1sx>
- Araque, D. M. (2021). Modulo 3. Learning environment for educational change: Moving forward into the future. *Informally published work*. Retrieved from: <https://fliphtml5.com/hpdre/xymc>
- Ardila, A. (2012). Ventajas y desventajas del bilingüismo. *Forma y Función*, 25(2),99-114.. ISSN: 0120-338X. Retrieved from: <https://www.redalyc.org/articulo.oa?id=21928398005>
- Baker, C. (2001). Foundations of bilingual education and bilingualism (3rd ed.). Clevedon: Multilingual Matters
- Bonilla, E., y Rodríguez, P. (2005). Más allá del dilema de los métodos La investigación en Ciencias Sociales. Universidad de los Andes. Grupo editorial Norma.
- Cañal de León, Pedro, y otros (2002). La innovación Educativa, Madrid
- Carranza, P., Sgreccia, N., Quijano, T., Goin, M., & Chrestia, M. (2017). Ambientes de aprendizaje y proyectos escolares con la comunidad. *Revista Latinoamericana de Etnomatemática*, 10(1).  
<https://www.redalyc.org/articulo.oa?id=274048277001>
- Carrera, Beatriz, & Mazzarella, Clemen (2001). Vygotsky:enfoque sociocultural . *Educere*, 5(13),41-44.[fecha de Consulta 5 de Junio de 2022]. ISSN: 1316-4910. Disponible en:  
<https://www.redalyc.org/articulo.oa?id=35601309>
- Cohan, A., Honigsfeld, A., & Dove, M. G. (2019). *Team up, speak up, fire up! : Educators, students, and the community working together to support english learners*. ProQuest Ebook Central  
<https://ebookcentral.proquest.com/lib/bibliotecausta-ebooks/reader.action?docID=6001518&ppg=17>

Escobar, Faviola Importancia de la educación inicial a partir de la mediación de los procesos cognitivos para el desarrollo humano integral. *Laurus* [en línea]. 2006, 12(21), 169-194 [fecha de Consulta 5 de Diciembre de 2021]. ISSN: 1315-883X. Disponible en:

<https://www.redalyc.org/articulo.oa?id=76102112>

Espinoza Núñez, L. A., & Rodríguez Zamora, R. (2017b). La generación de ambientes de aprendizaje: un análisis de la percepción juvenil. *RIDE revista iberoamericana para la investigación y el desarrollo educativo*, 7(14), 110. <http://www.ride.org.mx/index.php/RIDE/article/view/276/1301>

Ferreira, J. (2012). *NEUROCIENCIA + PEDAGOGÍA = NEUROPEDAGOGÍA: REPERCUSIONES E IMPLICACIONES DE LOS AVANCES DE LA NEUROCIENCIA PARA LA PRÁCTICA EDUCATIVA AUTOR.*

[https://dspace.unia.es/bitstream/handle/10334/2075/0341\\_Ferreira.pdf?sequence=1](https://dspace.unia.es/bitstream/handle/10334/2075/0341_Ferreira.pdf?sequence=1)

Gil, C., Manso, A. (2021). Visibilizar el pensamiento a través de la enseñanza de las ciencias experimentales en Educación Infantil. Disponible en:

<https://www.redalyc.org/journal/920/92068491001/html/>

Hatch, J. A. (2002). *Doing qualitative research in education settings*. State University of New York Press. Retrieved from

<https://ebookcentral.proquest.com/lib/bibliotecaustaebooks/detail.action?docID=3408084>

Hernández Posada, Ángela El subsistema cognitivo en la etapa preescolar. Aquichan.

2006;6(1):68-77. [fecha de Consulta 5 de Diciembre de 2021]. ISSN: 1657-5997. Disponible en:

<https://www.redalyc.org/articulo.oa?id=74160108>

Matas, Antonio Diseño del formato de : un estado de la cuestión. *REDIE. Revista Electrónica de Investigación Educativa*. 2018;20(1):38-47. [fecha de Consulta 17 de Septiembre de 2022]. ISSN: . Disponible en: <https://www.redalyc.org/articulo.oa?id=15557149004>

MinCiencias (2021) Anexo 1: Convocatoria nacional para el reconocimiento y medición de grupos de investigación, desarrollo tecnológico o de innovación y para el reconocimiento de investigadores del sistema nacional de ciencia, tecnología e innovación. Retrieved from:

[https://minciencias.gov.co/sites/default/files/upload/convocatoria/anexo\\_1\\_-\\_documento\\_conceptual\\_2021.pdf](https://minciencias.gov.co/sites/default/files/upload/convocatoria/anexo_1_-_documento_conceptual_2021.pdf)

Mota de Cabrera, Carmen, & Villalobos, José (2007). El aspecto socio-cultural del pensamiento y del Lenguaje: visión Vygotskyana. *Educere*, 11(38),411-418.. ISSN: 1316-4910. Disponible en:

<https://www.redalyc.org/articulo.oa?id=35603805>

Paolini, C. I., Oiberman , A., & Mansilla, M. (2017). Desarrollo Cognitivo En La Primera Infancia: Influencia De Los Factores De Riesgo Biológicos Y Ambientales. *Universidad de Ciencias Empresariales y Sociales*, 162-183. Recuperado el 4 de diciembre de 2021, de

<https://www.redalyc.org/journal/3396/339655686008/html/>

Polanco Hernández, Ana La pregunta pedagógica en el nivel inicial . Revista Electrónica "Actualidades Investigativas en Educación". 2004;4(2):0.[fecha de Consulta 5 de Diciembre de 2021]. ISSN: .

Disponible en: <https://www.redalyc.org/articulo.oa?id=44740213>

Ritchhart, R. (2015). Creating Culture of Thinking: The 8 Forces We Must Master to truly Transform our Schools.

Ritchhart, R. (2019, January 18th) Hablamos con Ron Ritchhart: Sobre la cultura de pensamiento y cómo fomentarla en las aulas. Retrieved from:

<https://www.youtube.com/watch?v=8b74-PuZm2o>

Rivasplata Chuquipiondo , N. A. (2020). *Plasticidad cerebral en infantes de cinco años*. Jaén, Perú: Universidad Nacional de Tumbes. Recuperado el 4 de diciembre de 2021, de:

<http://repositorio.untumbes.edu.pe/bitstream/handle/20.500.12874/1987/RIVASPLATA%20CHUQUIPIONDO%2c%20NANCY%20ALADIT.pdf?sequence=1&isAllowed=y>

Rodríguez, S. M., & Araque Torres, D. M. (2019). Maestría en Ambientes Bilingües de Aprendizaje, estudio de pertinencia. DOI <https://doi.org/10.15332/dt.inv.2021.01748>

Rodríguez, S. (2021). Understanding Bilingualism: Definitions and Cognitive Development. *Informally published work*.

[http://soda.ustadistancia.edu.co/enlinea/eduvirtual/maestrias/Bilig/tensions/1/story\\_html5.html](http://soda.ustadistancia.edu.co/enlinea/eduvirtual/maestrias/Bilig/tensions/1/story_html5.html).

Rodríguez, S. (2022). Características y condiciones particulares en los ambientes bilingües de aprendizaje: La interrelación de la educación bilingüe con factores educativos, sociales, políticos y económicos. *Informally published work*. Retrieved from: <https://fliphtml5.com/hpdre/ocsw>

Rodríguez Zamora, René, Espinoza Núñez, Leonor Antonia La generación de ambientes de aprendizaje: un análisis de la percepción juvenil. RIDE Revista Iberoamericana para la Investigación y el Desarrollo Educativo [en línea]. 2017, 7(14), [fecha de Consulta 30 de Julio de 2022]. ISSN: . Disponible en: <https://www.redalyc.org/articulo.oa?id=498153999007>

Romero, P. (2020, May 11th) Cómo hacer realidad un proceso de evaluación Formativo. Retrieved from: <https://www.youtube.com/watch?v=IJEv3NEdwnI&t=1s>

Romero, P. (2019). Cómo Liberarse de una educación equivocada, Bogotá D.C. Magisterio.

Rugiero, Juan Pablo, Guevara, Yolanda Alfabetización inicial y su desarrollo desde la educación infantil. Revisión del concepto e investigaciones aplicadas. Ocnos: Revista de Estudios sobre Lectura [en línea]. 2015, (13), 25-42[fecha de Consulta 5 de Diciembre de 2021]. ISSN: 1885-446X. Disponible en: <https://www.redalyc.org/articulo.oa?id=259138240002>

- Sánchez Huete, J. C. (2015). Métodos de investigación en el área de Educación. Educación y Futuro: Revista de investigación aplicada y experiencias educativas, 33, 163-194. Disponible en: [https://redined.mecd.gob.es/xmlui/bitstream/handle/11162/155252/EyF\\_2015\\_33p163.pdf?sequence=1&isAllowed=y](https://redined.mecd.gob.es/xmlui/bitstream/handle/11162/155252/EyF_2015_33p163.pdf?sequence=1&isAllowed=y)
- Signoret Dorcasberro, Aline Bilingüismo y cognición: ¿cuándo iniciar el bilingüismo en el aula?. Perfiles Educativos [en línea]. 2003, XXV(102), 6-21 [fecha de Consulta 14 de Noviembre de 2021]. ISSN: 0185-2698. Disponible en: <https://www.redalyc.org/articulo.oa?id=13210202>
- Tamayo A., Oscar Eugenio, & Zona, Rodolfo, & Loaiza Z., Yasaldez Eder (2015). El Pensamiento Crítico En La Educación. Algunas Categorías Centrales En Su Estudio. Revista Latinoamericana de Estudios Educativos (Colombia), 11(2), 111-133. [fecha de Consulta 5 de Diciembre de 2021]. ISSN: 1900-9895. Disponible en: <https://www.redalyc.org/articulo.oa?id=134146842006>
- Villamil, Olga Lucia Investigación cualitativa, como propuesta metodológica para elabordaje de investigaciones de terapia ocupacional en comunidad. Umbral Científico. 2003; (2):0. [fecha de Consulta 5 de Junio de 2022]. ISSN: 1692-3375. Disponible en: <https://www.redalyc.org/articulo.oa?id=30400207>
- Zubiría J. (2019). Los retos a la educación en el siglo XXI. Disponible aquí: <http://biblioteca.udgvirtual.udg.mx/jspui/bitstream/123456789/2603/1/Los%20retos%20a%20la%20educaci%20c3%b3n%20en%20el%20siglo%20XXI.pdf>
- Zubiría, J. [VIDEOblog Julián De Zubiría]. (2017, August 2nd). Desafíos a la Educación Colombiana. [Video]. Retrieved from: <https://youtu.be/CQ8sCuKbHNw>
- Zubiría, J. [VIDEO Julián De Zubiría]. (2021, October 5th). Podcast IDEP #1 - Retos para la educación del Siglo XXI con Julián de Zubiría [Video]. Retrieved from: <https://www.youtube.com/watch?v=GnDRYpK8wIU>

## Appendixes

### A. Consentimientos Informados



Maestría en Ambientes Bilingües de Aprendizaje - MABA

1

#### Consentimiento Informado para el desarrollo de proyecto de grado

Respetada Rectora María Helena Matamala en el marco del proyecto de grado titulado, **Diseño de un Ambiente de Aprendizaje para el Desarrollo del Bilingüismo Fomentando la Cultura de Pensamiento en Educación Inicial**, presentado por el grupo de maestrantes conformado por **María Fernanda Benítez Medina, Johana Lucía Gallego Villamil y Melissa Padilla Arias**, solicitamos por medio de este consentimiento informado, su aval para llevar a cabo el proyecto en este ámbito educativo. Asimismo, expresamos nuestra intencionalidad de invitar a miembros de la comunidad para que a través de los instrumentos a implementar, se realice el proceso de recolección de la información pertinente para los objetivos propuestos y durante los próximos meses del año en curso, por supuesto, en consideración de los principios éticos y el desarrollo integral del proyecto.

A continuación, se presentan los componentes que contextualizan el proyecto:

#### 1. Objetivo principal

Diseñar una propuesta de ambiente de aprendizaje para el desarrollo del bilingüismo que fomente la cultura de pensamiento en educación inicial.

#### 2. Participantes a convocar en el proyecto:

Acceso a documentos institucionales pertinentes y participación de la comunidad Educativa del Colegio Bilingüe Hispanoamericano Conde Ansúrez

#### 3. Beneficios al participar en el proyecto:

En tanto que el proyecto responde a un proceso formativo de indagación, los miembros de la comunidad contribuirán significativamente mediante su participación voluntaria y su disposición para responder las preguntas, formatos e instrumentos que se han diseñado para cumplir el objetivo de lo propuesto. La recolección de la información se llevará a cabo durante los próximos meses del año en curso y el beneficio se verá reflejado igualmente, en términos de los objetivos del proyecto.

#### 4. Principios éticos para el manejo de la Información:

El desarrollo del proyecto garantiza por parte del grupo de maestrantes un manejo ético e integral de la información mediante: (a) el uso anonimato de los nombres de los participantes, a través de seudónimos y/o una codificación para identificar el número de participantes y su rol en la comunidad educativa; (b) la recolección e interpretación de la información en el marco de la maestría con fines académicos e investigativos; (c) manejo ético de información audiovisual enfocado en los datos y no en las imágenes de los participantes; (d) recolección de la información a través de entrevistas con recolección de audio o video autorizada por el participante, cuestionarios o encuesta, listas de chequeo etc.





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5. **Divulgación de resultados:** Los resultados del proyecto serán divulgados en la comunidad académica de la Facultad de educación de la USTA, la maestría, y el Centro de Recursos para el Aprendizaje y la Investigación CRAI de acceso institucional y global. Considerando que el fin del proyecto es académico e investigativo para el avance y la transferencia del conocimiento, el reporte final y sus resultados son susceptibles de ser socializados en eventos académicos y científicos mediante ponencias y/o publicaciones del ámbito global, así como organizaciones con fines educativos.

6. **Aclaraciones acerca del proyecto:** Preguntas, solicitudes o inquietudes pueden ser referidas a las maestrantes involucradas en el propuesta de investigación por medio de los siguientes contactos:

Maestrante	Celular de Contacto	Correo Institucional
Johana Lucía Gallego Villamil	3213748890	johanagallego@ustadistancia.edu.co
Melissa Padilla Arias	3184174834	melissapadilla@ustadistancia.edu.co
María Fernanda Benítez Medina	3115082370	mariabenitez@ustadistancia.edu.co

Agradecemos de antemano su atención y colaboración para el desarrollo del proyecto mencionado. Para tal fin, solicitamos su firma y aprobación en el siguiente apartado.

**Firma y aprobación del consentimiento Informado**

- ✓ He leído el formato, conozco el objetivo, las fuentes y el tipo de información requerida según los instrumentos presentados, para lo cual decido participar voluntariamente, habiendo aclarado dudas e inquietudes.
- ✓ Conozco los criterios éticos para el manejo de confidencialidad de nombres e imágenes audiovisuales.
- ✓ Conozco los términos de divulgación de los resultados del proyecto en la comunidad educativa y escenarios académicos para la socialización y publicación en los ámbitos institucionales de la Universidad Santo Tomás, la maestría y otros contextos o eventos con fines académicos e investigativos.
- ✓ Valido mi aval mediante mi firma y datos de contacto.

• **Nombre del participante:** María Helena Matamala

• **Rol:** Rector

• **Firma:**

• **Contacto (email/celular) opcional:** \_\_\_\_\_

• **Institución:** Colegio Bilingüe Hispanoamericano Conde Ansúrez

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1

### Maestría en Ambientes Bilingües de Aprendizaje -MABA

#### Consentimiento informado para el desarrollo de proyecto de grado

Respetada Rectora **María Helena Peña Afanador** en el marco del proyecto de grado titulado, **Diseño de un Ambiente de Aprendizaje para el Desarrollo del Bilingüismo Fomentando la Cultura de Pensamiento en Educación Inicial**, presentado por el grupo de maestrantes conformado por **María Fernanda Benítez Medina, Johana Lucía Gallego Villamil y Melissa Padilla Arias**, solicitamos por medio de este consentimiento informado, su aval para llevar a cabo el proyecto en este ámbito educativo. Asimismo, expresamos nuestra intencionalidad de invitar a miembros de la comunidad para que a través de los instrumentos a implementar, se realice el proceso de recolección de la información pertinente para los objetivos propuestos y durante los próximos meses del año en curso, por supuesto, en consideración de los principios éticos y el desarrollo integral del proyecto.

A continuación, se presentan los componentes que contextualizan el proyecto:

#### 1. Objetivo principal

Diseñar una propuesta de ambiente de aprendizaje para el desarrollo del bilingüismo que fomente la cultura de pensamiento en educación inicial.

#### 2. Participantes a convocar en el proyecto:

Acceso a documentos institucionales pertinentes y participación de la comunidad Educativa del Colegio Bilingüe La Enseñanza.

#### 3. Beneficios al participar en el proyecto:

En tanto que el proyecto responde a un proceso formativo de indagación, los miembros de la comunidad contribuirán significativamente mediante su participación voluntaria y su disposición para responder las preguntas, formatos e instrumentos que se han diseñado para cumplir el objetivo de lo propuesto. La recolección de la información se llevará a cabo durante los próximos meses del año en curso y el beneficio se verá reflejado igualmente, en términos de los objetivos del proyecto.

#### 4. Principios éticos para el manejo de la información:

El desarrollo del proyecto garantiza por parte del grupo de maestrantes un manejo ético e integral de la información mediante: (a) el uso anonimato de los nombres de los participantes, a través de seudónimos y/o una codificación para identificar el número de participantes y su rol en la comunidad educativa; (b) la recolección e interpretación de la información en el marco de la maestría con fines académicos e investigativos; (c) manejo ético de información audiovisual enfocado en los datos y no en las imágenes de los participantes; (d) recolección de la información a través de **entrevistas con recolección de audio o video autorizada por el participante, cuestionarios o encuesta, listas de chequeo etc.**

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Enlace a carpeta de Consentimientos Informados (diligenciados): [VERAQUÍ](#)

**B. Cuestionario para análisis preliminar [VER AQUÍ](#)**

**C. Entrevista semiestructurada**

Diseño de un Ambiente de Aprendizaje para el Desarrollo del Bilingüismo y la Cultura de Pensamiento en Educación Inicial Validado en el Colegio Bilingüe Hispanoamericano Conde Ansúrez.

**FICHA TÉCNICA**

**Fecha:** \_\_\_\_\_ **Hora:** \_\_\_\_\_

**Lugar (Ciudad y sitio específico):**

**Nombre del entrevistador:**

**María Fernanda Benítez Medina**

**Johana Lucía Gallego Villamil**

**Melissa Padilla Arias**

**Nombre y perfil del entrevistado:**

\_\_\_\_\_

**Objetivo de la entrevista: Conocer las ideas y opiniones del entrevistado en torno a un espacio de aprendizaje para el desarrollo del bilingüismo y la cultura de pensamiento en el ciclo inicial como insumo para el diseño de la propuesta.**

**Duración de la entrevista: 30 min Apróx.**

### Presentación e Inicio de la entrevista:

Partiendo de que el proyecto en curso apunta a la innovación educativa y que el mismo responde a un proceso de indagación, se hace necesario contar con la perspectiva de la comunidad educativa para responder al objetivo principal del presente proyecto.

Todas las respuestas recibidas serán tenidas en cuenta como insumo para el diseño de un documento no especializado (cartilla) que propone un ambiente de aprendizaje para el desarrollo del bilingüismo y la cultura de pensamiento en educación inicial.

1. Para comenzar nos gustaría conocer acerca de tí, del rol que desempeñas en la institución ¿Cuánto tiempo llevas vinculado a la misma? ¿podrías describir un poco tu rol en la institución?

2. Como te lo compartimos en la invitación formal previa a esta entrevista, nuestro propósito general es diseñar una propuesta de ambiente de aprendizaje para el desarrollo del bilingüismo y la cultura de pensamiento en educación inicial, que comprende las edades de 0-6 años.

Por ello te pedimos nos compartas tu experiencia como (mencionar el rol) ¿Cómo ha sido tu experiencia con el desarrollo de bilingüismo en educación inicial?

3. Teniendo en cuenta que un ambiente de aprendizaje no se refiere únicamente a un espacio físico, ¿Con qué otros componentes y acciones se fortalecería el ambiente de aprendizaje bilingüe en educación inicial?

4. Dadas las exigencias de la educación en el mundo actual, y las características de las nuevas generaciones, ¿Cuáles serían las habilidades y competencias a desarrollar en los niños de 0 a 6 años (educación inicial) ?

4.1 Expertos afirman que la evolución integral de los niños se da a partir de su desarrollo cognitivo, afectivo y motor. Desde tu rol ¿Con qué se debe contar en el espacio de aprendizaje para que los niños logren desarrollar esas habilidades y competencias a nivel cognitivo, afectivo y motor?

5. La curiosidad es una habilidad que caracteriza a la educación inicial y la pregunta es la herramienta más inmediata ¿Cómo imaginas un ambiente de aprendizaje donde la pregunta sea la protagonista?

5.1 ¿Podrías compartirnos un ejemplo o una experiencia?

6. Una de las frases célebres de Santa Juana de Lestonac es “Cabezas bien hechas, mas que bien llenas”. A partir de esta frase y entendiendo que uno de los objetivos de la educación es formar seres desde todas sus dimensiones y que gran parte de la medición de sus resultados se da por pruebas académicas estandarizadas. ¿Qué tipos de evaluación considera necesarias a implementar en la educación inicial y por qué?

- Pruebas Cambridge
- Pruebas Saber
- Exámenes bimestrales
- Desempeños de clase y quices
- Otra ¿cuál?

7. Teniendo en cuenta toda nuestra conversación y que el propósito de la investigación en curso es contribuir al desarrollo del bilingüismo y la cultura de pensamiento, entendiendo esta última como aquella que busca hacer del pensamiento una rutina diaria a través de algunos procesos como la observación, el análisis, la

exploración, el cuestionamiento entre otros. ¿Cómo te imaginas un ambiente de aprendizaje que incentive esta cultura de pensamiento en educación inicial?

7.1 Partiendo de la realidad de esta comunidad. ¿Qué elementos no podemos omitir ?

**¡Muchas gracias!**

**D. Checklist de validación [VER AQUÍ](#)**

**E. Tabla de análisis del instrumento de validación: [VER AQUÍ](#)**

## Annex

Booklet: [Bilingual Learning is Now](#) - ([Digital flipbook version](#))

# BILINGUAL LEARNING IS NOW

DISEÑO DE UN AMBIENTE DE APRENDIZAJE PARA EL DESARROLLO DEL BILINGÜISMO FOMENTANDO  
LA CULTURA DE PENSAMIENTO EN EDUCACIÓN INICIAL

