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## Facultad de la Educación, el Arte y la Comunicación

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Cooperative learning and reading comprehension among bachillerato students at a public institution in Loja. School year 2023-2024

Aprendizaje cooperativo y lectura comprensiva en estudiantes de primer año en un colegio público en Loja. Año lectivo 2023-2024

Trabajo de Integración Curricular, previo a la obtención del título de Licenciado en Pedagogía del Idioma Inglés.

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## Certification

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## Dedication

With gratitude, I dedicate this achievement to God, for guiding me through this stage of my life and for the strength to persevere in the difficulties.

To my brave mother, whose love, teachings, and support have shaped me into the person I am today. Her strength and resilience inspire me daily, and thanks to her constant struggle to give me this opportunity for my academic training. To my little brother for his unique help and for being my ally in each step.

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## 1. Title

Cooperative learning and reading comprehension among bachillerato students at a public institution in Loja. School year 2023-2024

## 2. Resumen

Dominar la lectura es fundamental para aprender un nuevo idioma, ya que facilita la exposición a la lengua a través del contenido textual. La eficacia de este proceso de aprendizaje depende de la capacidad de comprender eficazmente el material de lectura. A pesar de la importancia de la comprensión lectora, los estudiantes a menudo se enfrentan a dificultades en este ámbito, un hecho subrayado tanto por observaciones personales como por estudios anteriores. Por ello, el presente estudio pretende explorar el impacto de diversas estrategias de aprendizaje cooperativo en la mejora de la comprensión lectora de los estudiantes de bachillerato de una institución pública de Loja durante el curso 2023-2024. Empleando un enfoque de investigación-acción, el estudio siguió el modelo de cinco pasos de Susman (1983), que abarca el diagnóstico, la planificación de la acción, la toma de acción, la evaluación y la especificación del aprendizaje. Se utilizó un diseño de investigación de métodos mixtos, incorporando pruebas previas y posteriores, un cuestionario mixto y notas de campo como instrumentos de recogida de datos. Los datos cuantitativos se obtuvieron a partir de las puntuaciones obtenidas en las pruebas previas y posteriores, junto con las preguntas cerradas del cuestionario. En cambio, los datos cualitativos se obtuvieron a partir de las respuestas abiertas del cuestionario y las notas de campo. Los resultados indican que la aplicación de estrategias de aprendizaje cooperativo mejoró significativamente la comprensión lectora, como demuestra el aumento medio de 3,18 puntos en la puntuación entre la prueba previa y la posterior. En consecuencia, puede concluirse que los enfoques de aprendizaje cooperativo no sólo tienen un efecto positivo en la comprensión lectora, sino que también son percibidos favorablemente por los alumnos. Este estudio subraya el valor de las estrategias de aprendizaje cooperativo para superar los retos de la comprensión lectora, proporcionando una vía viable para que los educadores fomenten la adquisición y el dominio de la lengua.

Palabras claves: Estrategias del aprendizaje, principios cooperativos, comprensión de la lectura, sub-destrezas de la comprensión lectora.


#### Abstract

Achieving proficiency in reading is fundamental to learning a new language, as it facilitates exposure to the language through textual content. The effectiveness of this learning process depends on the ability to comprehend reading material effectively. Despite the importance of reading comprehension, students often face difficulties in this area, a fact underscored by both personal observations and previous studies. Therefore, the present study aims to explore the impact of various cooperative learning strategies on the improvement of reading comprehension of high school students in a public institution in Loja during the 20232024 academic year. Employing an action research approach, the study followed Susman's (1983) five-step model, which encompasses diagnosing, action planning, taking action, evaluating and specifying learning. A mixed methods research design was used, incorporating pre- and post-tests, a mixed questionnaire and field notes as data collection instruments. Quantitative data were obtained from the scores obtained in the pre- and post-tests, together with the closed-ended questions of the questionnaire. In contrast, qualitative data were obtained from the open-ended responses of the questionnaire and the field notes. The findings indicate that the implementation of cooperative learning strategies significantly enhanced reading comprehension, as evidenced by an average score increase of 3.18 points between the pre-test and post-test. Consequently, it can be concluded that cooperative learning approaches not only have a positive effect on reading comprehension but also are perceived favorably by students. This study underscores the value of cooperative learning strategies in overcoming challenges in reading comprehension, providing a viable pathway for educators to foster language acquisition and proficiency.


Keywords: Learning strategies, cooperative principles, understanding reading, reading comprehension sub-skills.

## 3. Introduction

Nowadays, English has become a globally recognized language, which serves as an essential tool for communication between people from different nations whose first language is not English. As a result, many countries include English language instruction in their curriculums to start from an early age and ensure that students speak English as a foreign language and Ecuador is no exception. Therefore, The Ministry of Education of Ecuador has created the National Curriculum for English as a Second Language, corresponding to the proficiency levels described in the Common European Framework of Reference (Ministerio de Educación, 2016). This adaptation allows the development of the four essential English skills, especially the development of reading, which is the main interest of this research, since it allows obtaining information or knowledge from a text in an easy way if a good reading is done.

However, based on the background and observations made during the preservice teacher practicum, it became evident that some EFL students have a low level of proficiency. Moreover, they are also not sufficiently motivated or given enough importance to develop this skill. For instance, some students had problems obtaining the general idea of the text through skimming, as well as difficulty in scanning to find specific information from a reading. Another factor that worsens the level of reading comprehension is the limited vocabulary and the lack of the skill to make predictions. For these reasons, this research focuses on reading comprehension, which is fundamental in English as it plays an important role in the process of learning a foreign language. According to Mutiara and Bugis (2018), facilitating individuals’ cognitive processes through interaction with text is an important skill. Moreover, through this skill, students have numerous benefits, such as gaining information and acquiring new knowledge through reading. As well, by developing this skill, students not only practice reading, but also improve their ability to comprehend texts or written materials. And finally reading helps to expand vocabulary, so it will make it easier for students to understand the content of the reading text (Nurwanti et al., 2019).

Despite all the benefits of this skill, various factors and obstacles restrict the development of reading comprehension. As highlighted by Nelli and Hartati (2018), among the influences contributing to this issue are the teaching strategies employed by educators, this lack of good strategies or techniques are barriers that limit students to enhance the skill. In relation to these precedents, this research is relevant to understand the need to create opportunities for students to practice reading comprehension and enhance their sub-skills. Therefore, this study proposes collaborative learning (CL) as an educational approach to help address students' lack of reading comprehension development.

This research demonstrates the effects of using cooperative learning (CL) in reading comprehension, and how the implementation of some CL strategies, such as jigsaw, fan-n-pick, number heads together, and think-pair-share, is related to the development of reading comprehension subskills that include making predictions, vocabulary in context, skimming and scanning. By investigating the effects of the application of this method, teachers can implement certain strategies to develop these reading comprehension subskills and, consequently, develop cooperative principles such as positive interdependence, equal participation, simultaneous interaction, and individual accountability in the EFL classroom. In addition, this research is important for the fact that there are not enough studies in Ecuador on the use of cooperative strategies to improve reading comprehension skills. And finally, because first year high school students from a public institution in Loja were beneficiaries of this intervention to develop their reading comprehension skills.

Additional to this, this study was based on previous studies which reported positive effects of the implementation of CL in reading comprehension. Pilco (2018), Aslan and Deneme (2021), and Nelli and Hartayi (2018) concluded in their investigations that students improved their reading comprehension through collaboration, both in pairs and in groups. In the same way Herlina (2022) revealed that cooperative learning had a positive impact on students' reading skills and students were motivated using CL strategies. Furthermore, according to Aref and Soltani (2020), CL not only significantly develops reading comprehension but also the acquisition of new vocabulary. Lastly, Asrifan et al. (2019) mentioned that the cooperative learning jigsaw strategy contributed to improve the literal, inferential and critical comprehension of the expository texts.

Considering the exposed antecedents, this research established a general objective and two specific ones that were the guide to conduct this research. The main purpose of this study focused on "to analyze the different strategies of cooperative learning on the development of reading comprehension in high school students of a public institution of Loja, school year 20232024". While the sub-objectives were "to identify the effectiveness of cooperative learning on reading comprehension in high school students of a public institution of Loja, school year 20232024 " and "to describe the perceptions of students towards the use of cooperative learning on the development of reading comprehension in high school students of a public institution of Loja, school year 2023-2024"

To conclude, it is important to point out that during the intervention several limitations were encountered that impacted the progress of this study. For example, the institution in which the research was conducted had missed classes due to vacations because of the coincidence of
institutional events. In addition, the transition to virtual classes in the middle of the intervention further complicated the research process since it was impossible to carry out group work in the virtual sections at the instruction of the institution's teacher.

## 4. Theoretical Framework

In the following section, the theoretical foundations of the two variables on which this research is based are described. First, the independent variable "cooperative learning" is introduced, as well as related subtopics such as the definition, theories, implementation in the EFL classroom, the role of the teacher, types of groups, principles and strategies of cooperative learning. Then, it presents the second variable related to "reading comprehension" which begins first with a general definition of reading skills, then the concept of reading comprehension, factors that influence it, comprehension levels, strategies, and the components that readers should develop in reading comprehension. Finally, the previous studies that were the background for the development of this research will be presented.

### 4.1. Cooperative learning

Cooperative learning (CL) is one of the most effective educational approaches in the learning process. It involves the collaboration of small student groups to improve both individual and collective learning outcomes (Johnson et al., 1998). When CL is applied all members have a specific task to accomplish the principal task or project that was assigned by the teacher (Felder \& Brent, 2007). In other words, with CL's application, individual and group knowledge is generated while performing a specific task. This approach can be applied to accomplish any task for learners of different ages. For example, tasks that can be accomplished are: solving problems, reading complex text material, writing an essay or a report, conducting a survey or an investigation, acquiring vocabulary, or responding to questions at the conclusion of a reading (Singh \& Agrawa, 2011). However, the author Gudinge (2018) mentions that the participation of all members to achieve the assigned task is fundamental in cooperative learning, which is why the commitment of all students is necessary.

According to some authors, who made studies about the implementation of cooperative learning, have deduced it stands out as a highly successful approach because of its ability to foster an interactive environment and stimulate motivation among learners. This method encourages the development of individual skills while fostering peer learning through interaction. The foundations of cooperative learning align with Vygotsky's theory, which posits that learning is a social process that emerges through engagement with others (Vygotsky, 1978). Furthermore, cooperative learning emphasizes a learner-centered rather than teacher-centered approach, as highlighted by Yassin et al. (2018).

### 5.1.1. Theories of cooperative learning

5.1.1.1. Social interdependence theory. This perspective asserts that students contribute to each other's learning by concentrating on learning from every group member, and gaining self-identity benefits from their group affiliation (Slavin, 2011). According to Johnson and Johnson (2005) there exists a strong connection between cooperative learning and the theory of social interdependence. Additionally, Deutsch (1949) notes that social interdependence can manifest in both positive and negative forms. Positively, it occurs when all members collaborate responsibly to achieve shared goals. Conversely, it turns negative when there is competition among individual group members.

This theory underpins the application of cooperative learning, as it aligns with the essence of cooperative learning itself. It asserts that knowledge and skills are cultivated through reciprocal interaction among participants (Tran, 2013). As a result, incorporating cooperative learning becomes a highly effective tool in the English learning and teaching process. Through the use of cooperative tasks, students can enhance their learning collaboratively.
5.1.1.2. Cognitive development theory. This theory explores the cognitive processes involved in thinking and learning within the human mind. Slavin (1996) asserts that researchers argue that the collaborative interaction among learners, coupled with mental information processing, enhances academic performance. Piaget (1926) and Vygotsky (1978) both emphasize the importance of reciprocal interaction in advancing critical concepts and skills during academic task development. Vygotsky's concept of the Zone of Proximal Development (ZPD) holds particular significance in learning, where interactions with others within the ZPD contribute to the learning process.

In addition, Vygotsky indicates that children's development is fostered by cooperative activities. This is because functions are first formed collectively and then these become mental functions for the individual (Vygotsky, 1978). For this reason, it is important to generate opportunities in the classroom for students to interact during the learning process. In this way, reciprocal learning is generated in which students learn through social interaction.

On the other hand, Piaget's theory postulates that cognitive development evolves through social interaction, which requires the active participation of all members in the learning process. Creating an environment conducive to active learning through discovery provides learners with opportunities for assimilation and accommodation (Piaget, 1926). This leads to the incorporation of new knowledge into existing cognitive structures. Damon (1984) agrees with both Piaget's and Vygotsky's perspectives on cognitive development. He further suggests a theoretical paradigm that integrates both views to explain why cooperative learning enhances
student learning and achievement. This paradigm introduces "an educational program based on peer work", applicable in cooperative learning activities, which produces the following results:

- Through reciprocal feedback and discussion, peers inspire each other to discard misconceptions and explore improved solutions.
- Engaging in peer communication allows students to grasp social processes like participation and argumentation, as well as cognitive processes such as verification and criticism.
- Collaborative efforts among peers offer an arena for exploratory learning and can stimulate innovative thinking.
- Peer interaction serves as an introduction for students to the idea generation process. (p.335)
5.1.1.3. Social learning theory. This theory establishes a relationship with cognitive and behavioral learning theories, as they are based on social learning. Bandura (1977), an advocate of social learning theory, summarized briefly that an important part of learning occurs through observing, modeling and imitating others. The basic principle of this theory states that learners can increase their understanding and memory by observing and imitating the desired behaviors, attitudes and reactions displayed by others. Furthermore, it postulates that "behavior is learned symbolically through central processing of response information before it is performed" (p.30). According to this theory, learning predominantly originates in the social environment, as knowledge, rules, skills, strategies, beliefs and attitudes are acquired through the act of observing others. Consequently, this theory proposes a framework comprising three interrelated interactions, which are person, behavior and environment, that collectively shape human behavior (Schunk, 2007).

In addition, Bandura (1977) contends that the development of one's personality arises from an ongoing, mutually influential interplay involving three elements: the environment, behavior, and an individual's psychological processes. These interactions play a crucial role in shaping the learner's self-efficacy, influencing their goals and perseverance in the face of failures and setbacks. Additionally, the social learning theory places emphasis on four key components that impact observational learning: attention, retention, reproduction, and motivation. This is because learners must actively pay attention, possess the capacity to retain what they observe, be capable of translating the observation into action, and feel motivated to reproduce the observed behavior.
5.1.1.4. Constructivist learning theory. This theory focuses on student-centered learning, establishing a strong connection with cooperative learning, a method that similarly places the student at the center of the educational process (Almala, 2005). For this reason, the theory has had a huge impact until now. Moreover, it incorporates notions from the works of Piaget (1926), Vygotsky (1978), and Bandura (1977). Author Yager (1991) states that learners cannot receive information passively. Likewise, Dewey (1991) sees education as a process of restructuring knowledge. According to him, students construct knowledge through engaging with the surroundings to construct personalized and meaningful knowledge Therefore, active student participation is important for students to learn through interaction.

Simultaneously, by implementing a constructivist learning environment, learners take on a more active, social, and creative role, as they are regarded as builders of knowledge rather than passive recipients (Glasersfeld, 1989). For this reason, in this theory, the main protagonist is the student, but the teacher continues to play a role as a facilitator of knowledge construction. Through the application of constructivist theory, the model of traditional education is replaced, in which students have a passive role and only receive information from their teachers; however, this learning may be short-term, since the rapid speed of distribution does not guarantee in-depth understanding by the recipients (Marlow \& Page, 2005). However, the focus of the constructivist model is on deep understanding and not on memorization or repetition. Students engage in a process of inquiry, testing, discovery, and analysis of information to construct their own knowledge (Huang, 2006).

### 5.1.2. Cooperative learning in EFL classroom

First of all, cooperative learning was not specifically designed for teaching foreign languages; nevertheless, due to its advantages, it has been introduced in English as a Foreign Language (EFL) classroom. According to authors Olsen and Kagan (1992), cooperative learning in a language is fundamental because it allows interaction while learning a language. In fact, there are some studies that reveal the benefits of this method in the learning process and the development of language skills.

A reason why cooperation enhances learning is that students support each other's learning and achievement of objectives. Whereas when working individually, students who have more difficulty tend to get frustrated and in turn give up when they don't understand; but if they work cooperatively, they become motivated and keep going. Furthermore, author Zhang (2010) affirms that cooperative language learning provides learners with increased opportunities for both input and output, fostering the production of language and, consequently, the development of communicative competence that is an essential aspect of language
acquisition. In addition, cooperative learning creates opportunities to communicate in a functional way, since it creates real social environments, as described by Zhang (2010) and AlYaseen (2014). In these spaces, students must request information, ask for clarification, agree, disagree, and exchange opinions, among others to meet an objective. Consequently, students have the opportunity to use the language in a real context and build their knowledge through interaction.

Furthermore, cooperative learning provides a more laid-back and dynamic atmosphere within the EFL classroom, contributing significantly to students' motivation to engage actively in the learning process. It contributes to the reduction of students' fear and anxiety when learning a foreign language (Al-Yassen, 2014). In summary, incorporating cooperative learning into the instruction of a foreign or second language plays a significant role by fostering a more participative and fun environment. This approach provides students with opportunities to practice language skills within a genuine context. Finally, students can learn from each other and reduce their fear of practicing the language.

### 5.1.3. The teacher's role in cooperative learning

Despite the multiple benefits of cooperative learning, its implementation in classroom pedagogical practice can be a challenge that many teachers find difficult to carry out (Cohen, 1994). Problems may arise because teachers do not have a clear notion of how to implement this approach and achieve its effectiveness in teaching a foreign or second language. Due to, it is crucial to have a clear understanding of the teacher's role when implementing cooperative learning in the classroom. The inclusion of cooperative learning implies a commitment on the part of the teacher to integrate the procedures of this method into the curriculum and to implement, supervise and evaluate them in order to achieve the benefits of this implementation. In cooperative learning, the teacher has the role of facilitator in the learning process and must ensure that a highly structured and well-organized learning environment is created. The teacher is also responsible for the selection of the activities, and the adequate material and also has control of the time that will be used for the realization of the activity (Johnson et al., 1994).

On the other hand, it is important to organize the students to form groups and to assign the role of each member to ensure the participation and interaction of everyone. However, as Edge (1993) points out, the implementation of pair and group work does not detract from the teacher's role of controlling the learning process. On the contrary, he/she becomes a guide who reduces his/her participation in order to increase the opportunities for student participation, giving rise to student-centered learning.

### 5.1.4. Types of cooperative learning groups

There is no single way of grouping. The teacher can assign groups based on similarities or differences in their characteristics, making them either homogeneous or heterogeneous. Or students can self-select the formation of their groups (Pilco, 2018). There are three types of groups: formal, informal, and base group cooperative learning groups. These are detailed in the following sections.
5.1.4.1. Formal cooperative learning groups. Formal groups consist of grouping students to work together over a long period of time for the purpose of achieving common goals or doing specific work or tasks together over the long term (Johnson et al., 1998). According to Garfield (1993), formal groups are good for reviewing material, completing assignments, teaching and even supporting each other.
5.1.4.2. Informal cooperative learning groups. These groups involve students collaborating temporarily in groups to achieve a shared learning objective, with the duration ranging from a few minutes to an entire class period (Johnson et al., 1998). According to Maxwell (2008) informal group work can be implemented flexibly at any time. Within this collaborative framework, students can assist each other through cooperative note-sharing. This approach includes two methods: focused discussions and turn-based discussions. To implement these, the teacher can pose questions throughout the class, encouraging students to exchange ideas and actively listen to each other's responses, or allocate time for free expression to draw conclusions or address uncertainties (Pilco, 2018). Additionally, two key aspects of utilizing informal cooperative learning groups involve clearly outlining the task and instructions and having

Finally, these types of groups guarantee active student engagement in comprehending the subject matter, while also affording teachers the opportunity to oversee all groups and attentively listen to the discussions surrounding the assigned task (Gillies et al., 2008). This type of grouping is very useful to apply during class time to encourage interaction among students as they support each other's learning.
5.1.4.3. Base group cooperative learning. These heterogeneous groups are characterized by a persistent, stable membership and are designed to offer continuous support and motivation to members in their pursuit of a common goal (Ning, 2010). Gillies et al. (2008) outline the primary responsibilities of group members as (a) ensuring that all members progress collectively (positive goal interdependence), (b) holding each other responsible for learning efforts (individual accountability), and (c) providing support, encouragement, and assistance to one another in completing tasks (promotive interaction).

Meanwhile, when employing cooperative core groups, the teacher is tasked with: (a) assembling diverse groups; (b) establishing a consistent meeting schedule; (c) devising explicit agendas outlining specific tasks for students to complete, which serves as a guiding framework for core group meetings; and (d) ensuring the implementation of the five fundamental elements for effective cooperative groups (Gillies et al., 2008).

### 5.1.5. Principles of cooperative learning

The following is a description of the basic principles put forward by the author Kagan which form the acrostic known as "PIES":

Positive interdependence
Individual accountability
Equal participation
Simultaneous interaction
5.1.5.1. Positive interdependence. This principle is the foundation of CL. Because focusing on the Kagans' (2017) model interdependence is the condition of a group of people depending on each other and the success of one student is linked to the success of the others. Johnson and Johnson (1994) also have a similar concept, as they in their theory state that students "sink or swim together". Positive interdependence within a group arises when members recognize that aiding one individual benefits the entire group, and conversely, any setback to one member affects the collective. This realization fosters a shared commitment to assisting one another in achieving a common objective.

In addition, this allows the students to value the effort of each member and be aware that cooperation is fundamental to obtain a collective benefit (Roberts, 2005). In the cooperative learning method, students bear two responsibilities: 1) mastering the designated material individually, and 2) ensuring that every group member comprehends the assigned material. The technical term for this dual responsibility is positive interdependence (Sharan, 1980).
5.1.5.2. Individual accountability. Refers to all students having an active role and being responsible for their learning. That means that everyone must contribute a part of the work. In CL, each member must have a role in the completion of an assigned task. This assignment allows each student to feel that he or she is an important part of the group. Hence, every team member takes accountability for both their learning and that of their peers, actively contributing to the group (Kagan, 1990). Individual responsibility is assessed by the teacher when he/she asks any member of the group to give an answer. Thus, it is possible to monitor the responsibility that each student had in the completion of the assigned task. Therefore, the
teacher has the capability to offer feedback to both the entire group and each of its individual members (Maxwell, 2008).
5.1.5.3. Equal participation. A prevalent issue during group formation is the unequal participation, where one or two members dominate, hindering equitable involvement from others. Kagan's model addresses this by emphasizing equal participation, employing structures that ensure all group members have an equal chance to contribute (Kagan, 1994). When this happens, the cooperative learning approach is not fulfilled, since this method promotes the participation of all. Therefore, equal participation allows the integration and collaboration of all members of the group. In this way each member has an active role and the same opportunities to collaborate in the completion of the task.

If this principle is not promoted, one or more group members will try to dominate the group, denying the others the opportunity to interact with the task and with their group mates. However, if the teacher promotes this principle during cooperative work, all members will have equal opportunities to participate. In addition, the exclusion of some students will be avoided and, as a consequence, they will learn less and enjoy the group work less (Jacobs \& Seow, 2015).
5.1.5.4. Simultaneous interaction. In Johnson and Johnson's model they call it "Face-to-Face" interaction while Kagan emphasizes "Simultaneous Interaction". This seemingly insignificant distinction carries significant implications. According to Kagan (2001), simultaneous interaction is defined as the percentage of learners actively participating at any given moment. This definition is crucial as it highlights the importance of group size. For example, a group of four facilitates more interaction than a group of five, and pair work results in twice the active participation compared to square work.

Simultaneous interaction guarantees that all learners are actively engaged in learning. According to Kagan (2009), simultaneous interaction is an excellent way to ensure that learners stay focused on their tasks and this in turn helps learners to be motivated and engaged in learning, and to be prepared for enriching learning experiences. Group activities radically alter the traditional scenario where only one student speaks in class while everyone is quiet. With this principle, one person per group now speaks simultaneously. Thus, if a class of forty students work in groups of four, ten students (one in each group of four) speak at the same time. If the class works in pairs, twenty are speaking simultaneously.
5.1.5.5. Social skills. Even though this principle is not included in the PIES principles of the Kagan model, it is essential in CL. Interpersonal skills and group interaction skills are needed, this is due to the effectiveness of this approach (Johnson \& Johnson, 2013). However,
some problems can occur in the classroom during group work for example, students adopt an individualistic attitude, have a lack of responsibility, do not have the desire to communicate and interact and do not practice the ability to listen to their peers. In addition, some students are not able to express their ideas or disagreements to others, or to solve problems through communication. Despite this, CL can help develop these social skills that are necessary to achieve common goals and are also important for interaction with the social environment.

### 5.1.6. Cooperative learning strategies to teach reading comprehension

5.1.6.1 Jigsaw. It is a cooperative learning approach that creates chances for proactive interaction (Aroson, 2008). This strategy is applicable with success in language teaching and was initially developed by Aronson and colleagues in the 1970s, later refined by Slavin. Slish (2005) explains that jigsaw contributes to the development of more active learning. That is, each member of the group cooperates to achieve the same goal. In addition, using this technique, students become involved with the assigned material, since each member has a responsibility to read, understand and learn the material provided.

To implement jigsaw in the classroom, the day's lesson is divided into several segments, and each student, who is part of one of the jigsaw groups (three to five students each), must learn about a segment of the written material. Before reporting on their topic to their groups, the students meet with other students who have been assigned the same segment (one from each group). This is a temporary group which is referred to as "experts". Together, the experts research the segment, discuss and clarify doubts among themselves. Finally, the groups meet again and each student from each group acts as a tutor for the group on his or her topic of expertise. Group members must work as a team to achieve a common goal, in this case understanding the reading material; each member depends on everyone else in the group. The group objectives and individual objectives complement and support each other in the complement and support each other (Ning, 2010). Besides, jigsaw is suitable for reading comprehension because it develops students' metacognitive awareness and enables them to learn the content when they are teaching their peers in their groups (Pilco, 2018). Even this strategy is related to the principle of accountability individually. Since each group needs its members to do well for the whole group to do well.

According to Mohamad (2005) Jigsaw this strategy is designed to enhance the learner's responsibility for his or her learning and that of the other group members. Students not only study the material given to them by the teacher, but must be prepared to explain what they have learned to others so that everyone in the group achieves the goal. Hence, the jigsaw strategy is in accordance with the positive interdependence principle in cooperative learning, rooted in the
concept that group members rely on each other to attain a shared objective. Because each group member has unique information that is essential to the overall success of the group. Therefore, this success depends on the active participation and collaboration of all members of the group.
5.1.6.2. Fan-N-Pick. This method is also a strategy of cooperative learning proposed by Kagan. It involves members of the group participating in a card game to respond to questions. The teacher makes several groups of four members. The roles rotate with each new question (Kagan \& Kagan, 2009). This method is used to check comprehension of the text they have read. Fan-N-Pick is included in team building, social skills, knowledge building, and thinking skills.

Fan-N-Pick is a very structured, but fun, team process. Each group has its own set of question or problem cards. To promote team spirit, Fan-N-Pick is often used with open-ended questions for reflection and discussion, but it is also ideal for mastering and reviewing content. Before playing the game, students read the text and understand the content. Students then play a card game to answer the questions written on each card that was prepared by the teacher.

The process for implementing this strategy is as follows:

- Student \#1 presents the question cards in a fan and says, "Pick a card, any card."
- Student \#2 selects a card, reads the question aloud, and provides five seconds for contemplation.
- Student \#3 responds to the question.
- Student \#4 rephrases the answer provided by Student \#3, concluding the round.

Following each round, students rotate roles in a clockwise manner for the subsequent round (Kagan \& Kagan, 2009).
Based on the study conducted by Vera (2012), the Fan-n-pick strategy encourages equal participation in the group, since every learner has the opportunity to actively participate in the learning process. The application of this strategy ensures that all students in the group have the opportunity to contribute and assume different roles and have a responsibility and contribute to the work of the group. Roles may include "Fan", "Reader", "Responder" or "Reporter". Furthermore, the "Fan-N-Pick" strategy also supports other cooperative learning principles such as individual accountability, and simultaneous interaction. In summary this strategy is very beneficial for creating a supportive and inclusive learning environment in which all group members have equal participation and contribute to the success of the group.
5.1.6.3. Numbered-head-together. Kagan (1986) developed the numbered head together (NHT) cooperative learning technique to help teachers improve students' proficiency
in reading comprehension. In this strategy, the teacher assigns numerical designations to students, organizing them into groups of four. Consequently, every group member is assigned a specific number. The teacher then allocates the identical reading text to the entire class. And asks some questions, which may be related to vocabulary, comprehension of the text, details or others, for each group to answer after having discussed and agreed on the answer in the group as a whole. Following this, the teacher announces a number, prompting the students assigned that number to stand up and respond to their question. The teacher proceeds to pose additional questions, calling out different numbers. Eventually, each group synthesizes information and prepares a collective presentation.

In addition, the process leads to cooperative interactions among the participants. During the discussion process in the group, the learners usually agree and each is responsible for learning the answers. So, when the time comes for the teacher to call a random number to be the spokesperson for the group and state the answers or the arguments for the answers each student is prepared to answer. In addition, this technique encourages students to reflect on each question asked and to help their team to find and understand the answers, and for each member of their team to know the answers and arguments, thus also promoting the principle of positive interdependence (Sahardin et al., 2015).

According to Kagan (2009), NHT is a strategy of cooperative learning since it involves teams and individual accountability. This strategy encourages individual responsibility because each student is responsible for actively participating in the group discussion and being prepared to represent the team and help others be prepared to share the group's response when requested by the teacher. This ensures that all learners are involved and responsible for their learning within the group. It also helps to actively engage with the material to understand it and thereby contribute to the collective knowledge and success of the group.
5.1.6.4. Think-pair-share. Think-Pair-Share (TPS), which is a strategy developed by Lyman and his collaborators (1981), allows students to develop their own ideas and exchange them with their partner. This technique is a component of the cooperative learning approach. It is a simple technique that can be implemented for any age, but very useful for the teaching and learning process. Himmele \& Himmele (2011) asserted that the think-pair-share technique is a straightforward method for achieving complete student participation and should be implemented and rehearsed in the classroom given its advantages. To apply this strategy the teacher should give directions and ask questions that force the students to analyze the different points of view or components that are important to solve the activity.

Arends (2009) suggests following a few steps to implement this strategy:

Step 1: Thinking, the teacher formulates a question or a problem associated with the lesson and asks the students to spend a minute thinking alone about the answer or solution to the problem.

Step 2: Pair up: Next, the teacher asks students to pair up with their friends. They then discuss what they have been thinking about. Interaction during this period can be sharing answers if a question has been posed or sharing ideas if a specific topic has been identified. Typically, the teacher allows no more than four to five minutes for pairing.

Step 3: Sharing, in the last step, the teacher asks the pairs to share what they have discussed with the whole class.

As Hudri and Irwandi (2018) point out in their research this strategy helps the teacher to teach a large number of students as it makes it easier to supervise the discussion and provide assistance in whatever the students need. For that reason, TPS is related to the principle of simultaneous interaction because it encourages students to engage in active discussions with their peers simultaneously. As students work in pairs, multiple conversations occur at the same time, allowing for greater interaction and engagement among students. In this way, interaction among students is maximized to enhance learning and have the opportunity to share ideas, listen to the viewpoints of all peers, and learn from each other.

### 4.2. Reading comprehension

### 5.2.1. Reading skill

Reading is one of the main linguistic competencies of the English language. It is defined as a mental, or cognitive, process that involves a reader attempting to understand and comprehend a writer's message (Tarihoran \& Rahmat, 2019). Reading is a process that can be used to communicate through written words, thoughts, or ideas. Students can obtain information that may be useful to them, however, it is not an easy task to be a good reader, especially if the English text is complicated (Ranabhat, 2019). The development of reading competence contributes to the ability to understand, interpret, decipher and comprehend both language and written materials. Furthermore, possessing high reading skills can be very beneficial in assimilating and responding to written communications such as emails, messages, letters, and other written messages. In addition, reading skills can contribute to effective written communication (Herrity, 2023).

According to Brown (2004) reading is a process of interpreting the meaning of texts for comprehension. He explains that reading involves two distinct processes: word identification and comprehension. Word identification involves recognizing how written symbols correspond
to spoken language, while comprehension involves grasping the meaning of words, phrases and coherent passages of text.

### 5.2.2. Definition of reading comprehension

It is common to confuse the terms "reading" and "reading comprehension" and to think that they are the same process, although they are totally different. The term "reading" refers simply to vocalizing the printed symbols, i.e., reading aloud. Being involved in reading may or may not include comprehension of the information conveyed. However, Ranabhat (2019) refers that reading comprehension is a process of extracting information from the text. Moreover, he mentions, it is an essential skill in order to get by in the textual world, since it consists of understanding what a text is about. In other words, it is more than just reading, it is interpreting words and understanding the whole text by putting them together. Besides, through proficient comprehension, the reader can actively interact with the text, raise questions, provide answers about the narrative, and summarize briefly the content he or she has read.

Klinger et al. (2007) affirm that reading comprehension is a multifaceted procedure involving numerous interactions between readers and their prior knowledge, strategic approaches, along with factors inherent to the text such as the reader's interest and understanding of text structures. In addition, Rosenshine (1980) states reading comprehension includes seven subsidiary abilities: distinguishing sequences, understanding the meaning of words in context, determining main ideas, detecting specific details, making inferences, drawing causal relationships, and analyzing similarities and differences. Some sub-skills can be applied before reading, others can be done during reading, and still, others are designed to be done after reading. Furthermore, developing these sub-skills allows the student or reader to better understand the text.

### 5.2.3. Factors that influence reading comprehension

Three components are considered in reading comprehension: the individual reader who comprehends, the text being comprehended, and the context within which comprehension occurs (Butterfuss et al., 2020). These elements will contribute to create a good comprehension for the students or readers.
5.2.3.1. The reader's characteristics. Readers should have a wide range of abilities and skills. For instance, they must have cognitive abilities such as attention, memory; motivation to have a reason to read; and various types of knowledge such as vocabulary. The knowledge of vocabulary is important because it permits the comprehension of the text. The motivation of the students is also very important because readers who read the text without any specific purpose will obtain a different comprehension than readers who from the beginning
want to scan the content of the text (Handayani, 2020). Besides this author mentions that a text can be interpreted in different ways due to the different factors or characteristics of the reader.

Moreover, prior knowledge the student possesses has an important role in the comprehension. In the view of Fisher and Frey (2010), the two strongest predictors of success in reading comprehension are prior knowledge and vocabulary for acquiring new knowledge. A reader applies his or her initial knowledge including experiences, backgrounds, perceptions, and imagination to understand a text. This factor is influenced by the age and background of the reader. For example, if a person has a lot of knowledge or experiences in his life, his experience in reading comprehension may be different from a person who does not have the same aspects and obviously the success of the comprehension of the text will not be the same.
5.2.3.2. The text characteristics. This aspect has a great influence on comprehension (RAND Reading Group, 2002). Several studies have shown that text features affect comprehension outcomes. Considering specific aspects of the reading material is crucial for teachers to adapt their approach to the individual characteristics of the reader and facilitate comprehension of the text. For example, readings should contain concepts, vocabulary, grammar, technical terms and special understandings that are familiar to the reader and correspond to his or her age and level of English. Consequently, the text can be classified as difficult or easy, depending on its characteristics and the reader's knowledge or abilities, and the activities in which the reader participates.

Furthermore, the subject matter of what is being read influences comprehension, particularly for the reader. Reading materials that align with the reader's familiarity aid in understanding the content being read. If the topic is unfamiliar to the reader or is a very complex topic, it will hinder reading comprehension (Handayani, 2020). In summary, the characteristics of the text should be adjusted to the characteristics of the reader since both aspects are related. Otherwise, when many of these factors are not adjusted to the reader's knowledge and experience, the text may not be very comprehensible and may make the task of understanding the text very difficult.
5.2.3.3. Activity characteristics. The reading comprehension activity is a process to be used for text comprehension (RAND, 2000:11). The reading activity may include one or more purposes or tasks to be accomplished in reading and comprehending the text. The initial purpose of the activity may change as the reader reads. Each activity to be performed may involve different levels of complexity. Moreover, the task correlates with the reader's intention for reading. As an example, when skimming through a reading, the purpose is to capture only the gist of the text such as ideas or exact information that is needed. Another goal could be to read
in order to retain information for future learning. In addition, reading goals are an integral aspect of the activity, which can lead to a variety of outcomes, such as increased knowledge, problemsolving skills, or interaction with the text. However, these outcomes do not always coincide directly with the initial purpose of reading. Long-term outcomes of reading include improved comprehension skills, expanded knowledge, and deeper engagement with the material (Handayani, 2020).

### 5.2.4. Models of reading

5.2.4.1. Bottom-up model. This model consists of lower-level reading processes, beginning with letter and sound recognition. The reader constructs the text from the smallest unit for example, letters, groups of letters, words, phrases, sentences, longer text and finally the meaning to comprehend the text (Nuryani, 2016). The role of the reader in this model is to restructure the meaning expressed in the smaller units of the text. He or she must also decode separately, and thus move through the text by concentrating entirely on grouping letters and words in a simply linear fashion and, as he or she looks at them, anticipates the words they spell. In this process, reading comprehension is considered to be an automatic outcome of accurate word recognition (Handayani, 2020).

Authors who have investigated this model have asserted that reading is the process of translating graphic symbols into an approximation of spoken language in a chronological manner. These models are influenced by behavioral psychology and, likewise, by structural linguistics, making it a more appropriate model for beginning readers (Ngabut, 2015). Whereas, Brown (2004) mentions that in this process the reader must recognize a variety of linguistic cues (letters, morphemes, syllables, words, phrases, grammatical cues, discourse markers) and use his or her linguistic data processing mechanism to apply some kind of order to these cues.
5.2.4.2 Top-down model. This processing focuses on the reader and his or her interest, knowledge of the world, and reading skills (Handayani, 2020). Brown (2004) states that topdown or abstraction-driven processing relies on one's intelligence and experience to comprehend. In other words, this model indicates that readers interpret the text based on their practical background and elaborate on the text based on their prior knowledge. Consequently, the reader's prior knowledge and the reader's cognitive and linguistic competence are essential for constructing the meaning of a text (Hartanto, 2020). Smith (1971) mentions that this model is based on psycholinguistic theory which reflects that there is an interaction between thought and language. On the other hand, top-down models go directly to meaning without reading speech first. Moreover, this is appropriate for expert readers at the advanced level or higher (Harris \& Sipay, 1984).
5.2.4.3. Interactive model. According to theorists who focus on interactive models like Rumelhart (1980), it appears that, especially among skilled or advanced readers, both top-down and bottom-up processing occur simultaneously during reading. Rumelhart suggests that understanding text relies on both the visual information on the page and the reader's mental knowledge. Therefore, if a crucial skill or piece of information is missing, comprehension can be hindered. In such cases, proficient readers compensate by deciphering words, drawing on context, or using both word and context cues. In line with these concepts, reading is defined as the meaningful interpretation of written symbols, while comprehension results from the interaction between perceiving written language symbols and the reader's language abilities and world knowledge (Harris \& Sipay, 1984).

As a result, the nature of reading tasks changes as learners progress from less mature to more advanced levels. Reading is not merely a single skill but a collection of interconnected skills that develop gradually over many years. Consequently, it becomes a complex process influenced by the reader's perceptual abilities, decoding skills, life experiences, language background, mindset, and reasoning capabilities. This particular model, which has garnered significant attention in recent theories, research, and teaching practices, will be further discussed within the framework of schema theory.

### 5.2.5. Levels of reading comprehension

Zuchdi (2008) divides reading comprehension into four levels: which are literal comprehension, interpretation, critical reading and creative reading.
5.2.5.1. Literal reading comprehension. Literal reading comprehension consists of understanding the explicit information and facts conveyed directly in the text (Budi \& Zuhr, 2023). In other words, it is understanding the literal meaning of the words, ideas or phrases written directly in the text. Additionally, these authors mention that this ability is considered the first and most basic level of text comprehension. Instead, it does not include critical thinking skills, it does not require extensive analysis to interpret the meaning of the text. Nonetheless, Nurjanah and Putri (2022) stated that despite being a basic level, it is considered important, so it is necessary for students to develop this skill in order to develop the following levels of comprehension. Through this type, one can find the keywords, skim and scan to find the information more efficiently. This is because it is easier to locate the data in the text and give an answer because the information is explicitly given in the text. On the other side, when this kind of comprehension is applied, the student's literal comprehension is evaluated in order to identify and understand information that is directly stated in a text.
5.2.5.2. Interpretation of reading comprehension. The interpretive level of comprehension, which is also called inferential, requires connecting what is read to the reader's prior knowledge (Mislang, 2021). In this type of comprehension, the reader has the ability to extract information that is not explicit in the text and relate it to the background knowledge that the person knows in order to obtain meaning and facilitate comprehension. Because of this, this level of comprehension demands more reflection on personal perception. This level is a bit more complex than literal comprehension, although it is a very useful thinking skill, which should be emphasized in reading. In addition, the reader is expected to integrate information and draw conclusions or inferences, and they need to know not only what the researchers write, but also what they mean (Hartanto, 2020).

As Tavarez and Herrera (2020) affirm that making inferences goes beyond simple literal comprehension. Consequently, students may have difficulty locating or interpreting information to answer questions based on inferences, since the answers are based on implicit but not explicitly stated content in the text. Therefore, at this stage students must combine their literal understanding of the text with their personal knowledge.
5.2.5.3. Critical reading comprehension. The author Pirozzi (2003) mentions that critical reading is characterized as an advanced level of understanding written content, demanding interpretation and assessment abilities enabling readers to discern significance from trivial information, differentiate between facts and opinions, and ascertain the author's intent and tone. For Wallace and Wray (2011), critical reading is about being rigorous in examining how the author can justify his or her argument or whether the reader knows more about a given topic. This explanation highlights the difference between critical reading and literal reading, where the latter focuses only on surface meaning to identify main concepts and supporting details. Consequently, critical reading is more complex and requires readers to meticulously analyze each line, employing various skills recurrently to grasp texts comprehensively (Huijie, 2010).
5.2.5.4. Creative reading comprehension. Kirmizi and Kasap (2017) argue that creative reading, which is a more advanced thinking skill, teaches people to freely express their feelings and thinking, for this level involves the reader's engagement with the information presented in order to develop or rethink his or her own ideas. In other words, it means that the reader adds and complements their own ideas to solve similar problems from the readable material. Either add a comment, complete a text, or construct a creative opinion. Based on Incik (2017), creative reading empowers readers with a variety of tools for comprehension, allowing them to generate ideas and products associated with the theme of a text. Furthermore, this level
of reading supports the building of creativity as an approach that guides readers in the use of their imagination.

At this level, readers are encouraged to go beyond text comprehension and expose original ideas that are not explicitly stated in a text. Moreover, creative reading accompanies literal comprehension, interpretation, or critical reading, but it is totally different. Creative reading in its highest form begins with a question or inquiry that arises in the reader's mind, personally and is usually undertaken with great motivation, often with a sense of urgency (Smith V., 2023).

### 5.2.6. Sub-skills for reading comprehension

5.2.6.1. Skimming. Often referred to as "skim reading" which is a type of rapid reading to quickly find the main idea or gist of the text (Beatrice et al., 2007). In other words, readers do not read word for word, but only skim the text superficially. Brown and Abeywickrama (2018) in their book mention that skimming is a very good strategy because it allows the reader to get an idea of the topic and purpose of a text, its organization, the reader's perspective or point of view, its ease or difficulty, and/or its usefulness to the reader. However, comprehension is very low and understanding of the overall content very superficial. Skim reading can allow you to "read" up to 1,000 words per minute. And it can be very good for skimming and identifying whether you should read further or not, what to read carefully and where is the best place to start. Also skimming an academic text before reading it closely can help to consider what the reader already knows or to develop a purpose for reading (RIPHAH International College, 2021). Reader can browse by reading:

- Titles
- Subtitles
- Words in bold, italic or underlined text
- Diagrams
- The summary, introduction or conclusion of a report
- The first sentence of each paragraph
- Chapter questions
- Chapter objectives
- Chapter summaries
(p.7)
5.2.6.2. Scanning. This reader activity is defined by Brown (2018) as seeking specific information from the text without the need to read the entire text. This strategy can enable
readers to understand a particular point without spending a lot of time to finish reading the text. Scanning is important for improving reading skills because it helps to find information as quickly as possible. By practicing this technique, learners can learn to read texts faster and find specific information quickly and accurately. In scanning, the eye moves quickly through a particular section of the page to look for specific words and phrases. Among the variety of exploration objectives, the reader may be tasked with locating the following details in the text:
- date, name, or place in an article
- setting for a narrative or story
- principal divisions of a chapter
- principal research finding in a technical report
- result reported in a specified cell in a table
- cost of an item on a menu
- specified data needed to fill out an application
(p. 218)
5.2.6.3. Making predictions. Prediction is the initial phase of effective comprehension. During this phase, students are able to anticipate or speculate about events that will occur in the narrative or predict characters' actions or dialogue. Based on the reader's prior knowledge, the reader will discover and generate an idea of the central theme of the text. This means that, before reading the text, readers must guess the content of the text from clues in the reading material and from their own knowledge background (Bailey, 2020). In addition, making predictions will help readers activate their prior knowledge and then combine it with the new information they are going to get from the text. To make these predictions, it is necessary to take into account certain clues such as illustrations, photographs, the title, the layout of the text, subtitles, or keywords (Pardo, 2004).
5.2.6.4. Vocabulary in context. Vocabulary knowledge in reading comprehension is fundamental in a second or foreign language. To understand a reading, the reader must be able to decipher the written message (Adams, 2004). A lack of skill in recognizing words in a text and a high number of unfamiliar words in a text can impair comprehension (Chall, 1987). He also emphasizes that vocabulary plays a significant role in understanding. Given that if there is difficulty in understanding words, the text comprehension task will be more difficult. Anderson and Freebody (1983) state that "people who do not know the meanings of very many words are most probably poor readers".


### 4.3. Previous Studies

For the development of this project, six previous studies had been considered and analyzed which were focused on the improvement of reading comprehension through cooperative learning strategies. These research papers were related to both the independent variable and the dependent variable of this investigation. Moreover, they demonstrated the positive results obtained by the investigators on this topic.

First, Pilco (2018) conducted an investigation called "The effects of cooperative learning on reading comprehension" with the objective of evaluating how cooperative learning influences the reading comprehension skills of first year high school students of the "Riobamba" Educative Unit during the 2017-2018 school year. In addition, the study sought to respond to the research inquiry regarding the most effective cooperative learning strategy to improve students' reading comprehension. This research included qualitative and quantitative methodologies. Pretest and posttest evaluations were used to measure the validity and effectiveness of the study interventions. The results of the study revealed that students improved their reading comprehension through collaboration, both in pairs and in groups. Consequently, it was recommended that educators incorporate cooperative learning practices into their teaching methodologies to improve students' reading comprehension and facilitate their progress in English language acquisition.

In the same context, Herlina (2022) developed a research study entitled "Implementation of cooperative learning methods in improving reading comprehension", which was classroom action research. The main objective of this study was to investigate the use of cooperative learning techniques to improve reading comprehension with a special focus on factual report texts. The research was conducted during the October 2017 semester and involved 31 students from SMK Negeri 1 Ciamis Catering Services (JB) Class X of SMK Negeri 1 Ciamis. Employing pre- and post-test assessments, along with questionnaires and interviews as research instruments, the study revealed that cooperative learning strategies had a positive impact on students' reading skills, particularly in the comprehension of factual information texts. In addition, students were enthusiastic about the cooperative learning method, found it enjoyable and beneficial for comprehension of informational texts, and expressed a desire to further explore cooperative learning techniques.

Likewise, an experimental study developed by Aslan and Deneme (2021) called "The Effect of cooperative learning on EFL learners' success of reading comprehension: An experimental study implementing Slavin's STAD method". The purpose of this study was to investigate the impact of cooperative learning on the reading comprehension skills of high
school students learning English as a foreign language. The study involved a total of 169 students. Employing a pretest-posttest group research design, the experimental groups (consisting of 85 students) were exposed to the STAD (Student-Teams-Achievement Divisions) cooperative learning method over a 4 -week period, while the control groups (consisting of 84 students) received traditional direct instruction. Statistical analysis revealed that the experimental groups demonstrated greater improvement compared to the control group, indicating that the cooperative learning method was more effective in improving the reading comprehension skills of Turkish students learning English as a foreign language compared to the traditional method.

Similar results were reported in the study of Aref and Soltani (2020) since they performed a study entitled "Improving Reading Comprehension and Vocabulary Knowledge Through Cooperative Learning Strategies". They emphasized the fundamental role of cooperative learning in English language teaching, especially in teaching English as a second or foreign language. The aim of the research was to evaluate the effects of cooperative learning strategies on reading comprehension and vocabulary acquisition among nursing students at Zanjan Medical University. Forty female students, selected on the basis of their scores within one standard deviation below and above the mean, were divided into two groups: twenty in the experimental group and twenty in the control group. Employing a quasi-experimental design, the study used pre-test and post-test assessments. The results demonstrated a significant positive impact of cooperative learning strategies on participants' reading comprehension and vocabulary acquisition.

Asrifan et al. (2019) in their research aimed to find out whether the use of Jigsaw II technique improves the reading comprehension of eleventh grade students of SMA Negeri 8 Takalar and whether the students are interested in the use of Jigsaw II technique in learning expository text reading. This Research covered students' literal comprehension, inferential comprehension and critical comprehension of expository text. The research method employed was the quasi-experiment. And the instruments used were the pre-test and post-test and the questionnaire. The results of the research indicated that the Jigsaw II technique contributed most to the students' reading comprehension of expository text. In addition, all three levels of comprehension improved after the intervention.

Finally, another study which was a model to this investigation was a research carried out by Nelli and Hartayi (2018). Their investigation focused on improving students' reading comprehension skills through the use of the Numbered Heads Together (NHT) method in MT Ma'arif 2 Muntilan schools. Using a classroom-based action research format comprising three
cycles, the study involved a population of 27 eighth grade students. The research covered four key stages: Planning, Acting, Observing, and Reflecting. A variety of instruments were employed, including observation, interviews, pre- and post-test assessments, field notes, questionnaires and documentation. The results of the research indicated a marked improvement in English reading comprehension among eighth grade students after the implementation of the NHT strategy. In addition, it was observed that the students showed high levels of engagement and interest throughout each cycle of the learning process.

In summary, this section presented the literature review of this research entitled "Cooperative learning and reading comprehension in high school students of a public institution in Loja. School year 2023-2024". Consequently, this theoretical framework contributed to have a solid foundation to carry out this study. Thus, fulfilling the first part of the inductive-deductive method. First, all information related to cooperative learning was analyzed, such as definitions, important aspects, opinions, theories, principles and cooperative learning strategies. Second, the dependent variable was studied, which in this case was reading comprehension, information including concepts, importance, processes and sub-skills is also detailed. Third, the research concluded with the exploration of previous studies similar to this study, which were a guided to develop and support this intervention. However, they have not specifically examined the use of CL strategies to develop the specific sub-skills of reading comprehension that to be covered in the present work. This underscores the relevance of this research paper, which aims to fill the gaps of previous studies.

## 5. Methodology

### 5.1. Setting and Participants

This research was conducted in a public educational institution in Loja city, located $3^{\circ} 59^{\prime} 21.7^{\prime \prime}$ South and $79^{\circ} 12^{\prime} 04.3^{\prime \prime}$ West of Ecuador. Additionally, this research lasted 8 weeks and the participants were 32 first-year high school students during the school year 2023-2024. This population was between 14 to 16 years old, and their English proficiency level was A2.2 according to MINEDUC (2016). Finally, non-probability sampling, also known as convenience sampling, was used to select the population. This means that the researcher freely chose the participants according to her convenience in terms of openness and authorization from the authorities of the educational institution.

### 5.2. Procedure

### 5.2.1. Research Method

The study method of this research was inductive-deductive because the researcher began with an inductive study on the research topic and obtained a solid theory. This was followed by a deductive investigation to confirm or invalidate the theory through data collection and analysis. In addition, for the correct selection of the research approach, both the purpose and the research questions were taken into account. As a result, the mixed method was the most appropriate in this case. Molina (2016) suggests that mixed methods research involves the integration of quantitative and qualitative approaches in the same study. In addition, this approach is considered appropriate because it enhances the overall understanding of the research by incorporating both types of data (Creswell \& Plano, 2006). Finally, the researcher decides as to which data will have higher priority. Both types of data may have the same priority or may focus more on qualitative or quantitative data (Molina, 2016). In this research, both data had equal relevance since the qualitative data corroborated and validated the quantitative data. In conclusion, this allowed for obtaining more congruent results about the research.

At the same time, the type of research was descriptive, since the researcher described the results obtained from the population through the process of data collection and analysis. As Manjunatha (2019), descriptive studies are defined by attempting to describe and characterize phenomena, situations or variables as they occur at a specific time or in a specific period.

### 5.2.2. Research Design

This investigation utilized an action research model which addresses a concrete and practical question and attempts to obtain solutions to a problem (Creswell, 2012). Thus, action research models are coherent procedures carried out by teachers (or others in an educational
setting) to investigate, and subsequently improve, the ways in which their particular educational environment, their teaching, and their students' learning function (Mills, 2011). In other words, action research is very useful when one wants to solve a particular educational problem. For this reason, this model was very useful for this research, because the researcher intended to intervene with a proposal to observe what changes occur during the intervention to solve the problem. Therefore, to develop this action research, the investigator followed a cycle model proposed by Susman (1983). This model was a guide for the researcher to carry out this study in a structured and clear way and meet the objectives set at the end. Susman's model consists of 5 stages: diagnosing, action planning, taking action, evaluating and specifying learning. According to Susman (1983) these five phases must be fulfilled in each research cycle.
5.2.2.1. Diagnosing. During this phase, the English language learning problem was identified or characterized through the researcher's observations in the previous preprofessional practices. The researcher prioritized the development of a sound theoretical framework. The approach was interpretive and focused on case studies, drawing on existing theories to propose possible solutions to the identified problem. To this end, theoretical knowledge drawn from previous experiments or studies related to the problem was integrated.
5.2.2.2. Action Planning. During this phase, specified actions were outlined to address the identified problem. The selection of the planned actions was influenced by a thoroughly researched theoretical framework, highlighting both the intended objectives and the changes expected as a result of the implementation of the chosen strategy. In addition, within this phase, the entire intervention plan was developed, including the design of the instruments to collect the research results, which were pre-test/post-test, mixed questionnaire and field notes. Finally, the researcher also decided to use the PPP model (See Annex 9) to design lesson plans for interventions with activities and cooperative learning strategies. This model was considered the most relevant, which stands for Presentation, Practice and Production, as an intervention proposal. According to Moonasar (2014), these three progressive stages are combined to engage and motivate language learners. It is considered a model, paradigm or approach to teaching linguistic components. The process consists of the teacher first presenting the lesson using either didactic or technological material. Then the students practice, first in activities controlled by the teacher and finally in the production stage the students apply what they have learned in freer activities. This process starts with the input and ends with the output (Rhalmi, 2016).
5.2.2.3. Taking Action. At this point, the plan was carried out for a total of 8 weeks where the CL strategies were applied, the reading comprehension activities were group activities. In this case, 4 cooperative strategies were used for the development of reading
comprehension, such as think-pair-share, number-head-together, jigsaw and fun-n-pick. In addition to this, during this stage the researcher acted as an observer while the plan was being executed, to actively observe the behavior and reactions that the students had with the implementation of these strategies. In this way, the researcher obtained observational data that helped to support the other data.
5.2.2.4. Evaluating. Once the intervention actions were completed, this stage began with the evaluation, classification and analysis of the data obtained through the different instruments to obtain the results. This included determining whether the effects are the same as those intended to be achieved at the beginning of the research according to the theories to solve the main problem. Furthermore, the changes that have been achieved after increasing the cooperative learning strategies and if that change was successful. The researcher analyzed and represented the quantitative data, which was collected by pre/post-test and the close-ended questions of the questionnaire, by descriptive statistics, graphs, and tables. On the other hand, the thematic analysis was used to interpret the qualitative data obtained by the open-ended questions of the questionnaire and field notes.
5.2.2.5. Specifying Learning. During the final phase, general conclusions are drawn by interpreting the data. Although formally this phase was carried out last, some preliminary work was also done on this during the evaluation phase. The success or failure of the action research is outlined and, in cases where the desired change did not occur, additional information is provided that could be beneficial for further diagnosis and implementation of another action research intervention. Thus, restarting the action-research cycle by Susman again.

### 5.2.3. Data Collection Sources and Techniques

To collect data in this research, techniques such as tests, surveys and observation were taken into account, and the most appropriate instrument was selected.
5.2.3.1. Testing technique. To assess the students' reading comprehension level, the test technique was employed. Djiwandono (2008) mentions that a test is a technique or process used to measure the students' language proficiency. It consists of the application of the same instrument before and after the intervention of the plan. In this case, the pre-test (See Annex 3) with its scoring guide (See Annex 4) and the post-test (See Annex 5) as well as with its scoring guide (See Annex 6) were applied to the same students who were part of this research to obtain data from two different moments. This helped to verify the effectiveness of cooperative learning strategies to improve reading comprehension. The instruments were developed by the researcher to evaluate the indicators to be improved in the reading comprehension section,
taking into account certain factors, such as the complexity according to the level of English of the students. Moreover, using this technique, quantitative data will be obtained.
5.2.3.2. Survey Technique. Check \& Schutt (2012) define this technique as "the collection of information from a sample of individuals through their responses to questions". The survey was conducted to first-year high school students to determine their perception of the implementation of cooperative learning strategies in the teaching and development of reading comprehension. For this technique, a mixed questionnaire (See Annex 10) was used as an instrument with close-ended questions which were designed with a Likert scale which helps to measure the level of agreement or disagreement that students have with the implementation of CL. Therefore, 4 items of agreement were considered, which are totally agree, agree, disagree, and totally disagree. Besides, there were 2 open-ended questions to know their opinions. For this reason, quantitative and qualitative data on the views of the students was obtained through this technique.
5.2.3.3. Observation Technique. This was a very useful direct observation method to collect data in real time, since the researcher observed and took notes on the behaviors or attitudes of students in the classroom (Hora \& Ferrare, 2013). This process was intentional and methodical, planned and focused. In addition, Hyman (1975). Mentions that the researcher must be clear that it is not just the action of seeing but must be objective and focused in order to adequately record what happened in the observation. The researcher used this technique to observe the students' reactions during the intervention and take notes using the field notes as an instrument (See Annex 7). In addition, through observation, it was possible to observe the progress made by the participants in developing the reading comprehension sub-skills through cooperative learning strategies. To conclude, the field notes had two parts which were descriptive and reflective notes. In the first part, 3 questions related to both variables were elaborated, and everything that was done and happened during the intervention was reported. In the second part, there are also 3 questions where the researcher reflects on the events that occurred.

### 5.2.4. Data Analysis

Descriptive statistics were used to interpret the quantitative data of this study. Therefore, measures of central tendency such as the mean and frequency measures such as bar graphs and tables were taken into account. Thus, to obtain pre-test and post-test scores, each component was given a value of 2.5 points, so that if all the questions were answered correctly, a score of 10 points was obtained, which was the total score of the test. In addition, to score each component, the researcher used the reading comprehension rubric (See Annex 8) designed at
the beginning of the research, which is divided into four performance levels: poorly achieved, achieved with difficulty, not achieved at all, and achieved. This rubric helped to classify, interpret and re-represent the pre/post-test data and then to compare the results produced in the 4 indicators of reading comprehension after the application of the cooperative learning strategies, for which frequency tables were used. Likewise, in the case of the closed questions of the questionnaire, bar graphs were used to learn about the students' preferences. All this data tabulation was presented in tables and graphs elaborated with the use of the Excel program as an ICT resource.

On the other hand, the thematic analysis allowed the researcher to interpret the qualitative information obtained through the identification of similar patterns in the students' responses to the open-ended questions in the questionnaire and the data from the field notes. Thus, this interpretation made it possible to determine the relationship between the two variables. Consequently, the analysis of these obtained data allowed the researcher to support the quantitative data and in turn to support more precisely the conclusions and results, since it allowed knowing the students' perceptions about this intervention. In this way, the nature of this study, the mixed method, was fully met.

## 6. Results

The subsequent section presents a meticulous analysis of the outcomes derived from the research on implementing cooperative learning strategies to improve reading comprehension. In order to ease the understanding of the data, tables and statistical graphs are presented and then the corresponding interpretation and analysis, which is carried out through a combination of quantitative data and qualitative insight using descriptive and thematic analysis.

### 6.1 Pre-test Results

Objective 1: To identify the effectiveness of cooperative learning on reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024.

Table 1. Pre-test Results

| Rubric to evaluate reading comprehension's indicators | Predictions | Skimming | Scanning | Vocabulary <br> in Context |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $\%$ | $\%$ | $\%$ |
| Has not achieve the required learning (0-0.5) | 0 | 56 | 3 | 69 |
| Approaching proficiency in the required learning (0.6-1) | 6 | 19 | 9 | 6 |
| Attained the required learning (1.1-2) | 56 | 25 | 66 | 19 |
| Proficient in the required learning (2.1-2.5) | 38 | 0 | 22 | 6 |
| Mean | $1.96 / 2.5$ | $0.73 / 2.5$ | $1.73 / 2.5$ | $0.62 / 2.5$ |

Note. \%=Percentage
This table shows the level of reading comprehension achievement reached by the students, for which an interval scale developed by the researcher was used, which was based on evaluating the 4 sub-skills of reading comprehension, which were prediction, skimming, scanning and vocabulary in context. Each component had a value of 2.5 points, so if all the questions were answered correctly, a score of 10 points was obtained, which was the total score of the test. In addition, the rubric was divided into four performance levels: proficient in the required learning; has achieved the required learning; approaching proficiency in the required learning; has not achieved the required learning.

The results show the percentage of what level of performance the students achieved in each sub-learning. In the first indicator "predictions", it was reported that no students scored at or below 0.5 , but $6 \%$ of the students achieved the level "Approaching proficiency in required learning". However, $56 \%$ of students attained the required learning because they almost completed the question, and $38 \%$ successfully mastered this subskill. In addition, the mean score was 1.96 out of 2.5 on this indicator. Regarding the skimming indicator, $56 \%$ of the students were not able to fulfill this skill and $19 \%$ also had many problems performing this question, which is why their grade was low. Therefore, in this case only $25 \%$ of students had a
score between 1.1 and 2, while there were no students who domain this component. As a consequence, the average obtained was 0.73 out of 2.5 points.

On the other hand, in scanning the students had better results, since only $12 \%$ of students reached the lowest levels. Whereas $66 \%$ of participants had a higher score but did not complete the activity completely and $22 \%$ reached the highest level of proficiency in this subskill. Therefore, the mean score obtained was 1.73 out of 2.5 . This was not the case for the indicator "vocabulary in context" because the majority of students $69 \%$ scored less than $0.5,6 \%$ answered part of the question but with difficulty. And only $19 \%$ attained the required learning while $6 \%$ mastered the required learning to identify the meaning of the vocabulary according to the reading. In effect, the mean was very low which was 0.62 over 2.5 .

### 6.2. Post-test Result

## Table 2.

Post-test Result

| Rubric to evaluate reading comprehension's indicators | Predictions | Skimming | Scanning | Vocabulary <br> in Context |
| :---: | :---: | :---: | :---: | :---: |
|  | $\%$ | $\%$ | $\%$ | $\%$ |
| Has not achieve the required learning (0 -0.5) | 0 | 3 | 0 | 6 |
| Approaching proficiency in the required learning $(0.6-1)$ | 6 | 3 | 9 | 6 |
| Attained the required learning (1.1-2) | 13 | 22 | 66 | 50 |
| Proficient in the required learning (2.1-2.5) | 81 | 72 | 25 | 38 |
| Mean | $2.3 / 2.5$ | $2.16 / 2.5$ | $2.0 / 2.5$ | $1.8 / 2.5$ |

Note. \%=Percentage
Table 2 shows the results of the post-test applied to the same participants at the end of the intervention to explore the effects on the development of the four reading comprehension subskills. In the same way, each component had a value of 2.5 points, resulting in a total score of 10 points. In general, this table shows that all the indicators improved to some extent after applying the cooperative learning strategies. For example, in the case of the indicators of skimming and vocabulary in context, it can be seen that they increased significantly. In skimming the mean was 2.16 out of 2.5 points. While in the case of vocabulary, the average obtained was 1.8 from 2.5.

### 6.3. Pre-test and Post-test Comparison

## Table 3.

Pre-test and Post-test Mean Scores

| Reading comprehension skills | Pre-test | Post-test | Mean Difference |
| :--- | :---: | :---: | :---: |
| Prediction | $1.96 / 2.5$ | $2.3 / 2.5$ | 0.34 |
| Skimming | $0.73 / 2.5$ | $2.16 / 2.5$ | 1.43 |
| Scanning | $1.73 / 2.5$ | $2.00 / 2.5$ | 0.27 |
| Vocabulary | $0.62 / 2.5$ | $1.8 / 2.5$ | 1.18 |



Figure 1. Pre-test and Post-test Scores
The table and Figure reveal the results that were obtained in each sub-stress of reading comprehension in both the pre-test and post-test of thirty-two first-year high school students, which were compared with each other to analyze the difference and therefore identify whether changes occurred with the application of the CL strategies. It is evident that in the pre-test, students exhibited a low level of skimming skills, with a mean score of 0.73 out of 2.5 , indicating they were below the required learning level. Conversely, a significant change is observed in the post-test, with a mean score of 2.16 out of 2.5 , indicating substantial improvement following the application of CL strategies, as evidenced by a difference of 1.43. Similarly, Vocabulary emerged as another subskill with a low level of proficiency, with a pretest mean of 0.62 , significantly below the mastery level for this subskill. However, post-test results revealed a remarkable improvement, with the mean rising to 1.8 out of 2.5 , indicating a difference of 1.18 , representing the achieved improvement.

In the case of the Prediction sub-skill, the results of the pre-test were higher, the mean was $1.96 / 2.5$, which means that almost most of the students reached the required learning, but this does not mean that they mastered it completely. On the other hand, in the post-test a slight improvement was obtained since the mean was $2.3 / 2.5$, this indicates that the improvement was 0.34 , which was the difference between the two tests. As for Scanning the pre-test mean was 1.73/2.5 which also indicated that the students somehow reached the required learning level in terms of this sub-skill. In contrast, in the post-test, the mean increased by 0.27 , which was the difference since the mean obtained in the post-test was $2 / 2.5$.

In conclusion, it can be evidenced that Cl's strategies were effective, as they resulted in a marked improvement in the reading comprehension subskills. In the pre-test, the overall mean
summed over the four sub-skills was 5.05 out of 10 , while in the post-test it rose to 8.2 out of 10. This reflects a significant difference of 3.18 points between the two tests, highlighting the tangible improvement achieved through the application of this approach.

### 6.4. Results and Findings from the Questionnaire and Field Notes

Objective 2: To describe the students' perceptions towards the use of cooperative learning on the development of reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024.

Statement 1. Forming groups allowed you to contribute and support each other in learning and completing the reading comprehension activities.


Figure 2. Reading comprehension through group support.
As shown in Figure 2, $44 \%$ and $56 \%$ of the participants agreed with the statement, indicating that students practiced reading comprehension and improved at the same time the subskills through collaborative learning (CL) strategies conducted in groups. Furthermore, they reported that this achievement is also attributed to the additional support received from their teammates during the completion of the assigned reading comprehension activities. No unfavorable responses occurred in this case.

In addition to the results obtained from students' responses, it is also important to mention that through the observation carried out by the researcher during the intervention, it was recorded in the field notes that the students helped each other and made sure that all members comprehended the text. For example, when applying the "numbered heads together strategy", all students supported each other and made sure that all members understood the reading and scanned to find specific information so that they were prepared to answer the questions in order to guarantee the success of the whole group; for this reason, it is evident that the formation of groups allowed the development of comprehensive reading. Likewise, the
principle of positive interdependence, which fosters a shared commitment to help each other achieve a common goal.

Statement 2. Working in groups helped you to take more responsibility for fulfilling the role assigned in the comprehensive reading tasks.


Figure 3. Reading comprehension and group accountability
According to Figure 3, 34\% of the participants responded "strongly agree", while 66\% "agree", which means that all students had an acceptance with the statement that they improved their subskills by fulfilling the assigned roles in the reading comprehension task. It should be noted that there were no respondents in disagreement. These results underscore the effectiveness of each member's efforts and collaboration in improving text comprehension skills.

In addition, it was observed that during the development of CL strategies such as "jigsaw" and "fun-n-pick", each student had the opportunity to practice his or her reading comprehension skills since he or she was responsible for accomplishing an assigned task that contributed to the group's progress in completing the text comprehension activity. For instance, each student skimmed the piece of reading assigned to identify the main idea then shared the findings and completed the reading task. In addition, it could be seen that all the students had an active participation because they played a role. As a result, the strategies applied in groups were effective in encouraging the students to take more responsibility for their learning in comprehension reading tasks.

Statement 3. Teamwork encouraged you to improve reading comprehension through social interaction between group mates.


Figure 4. Relation between reading comprehension and social interaction
Figure 4 shows that participants stated that they improved their reading comprehension skills during group work as they interacted with their peers to learn together. As the graph shows, more than $90 \%$ of the participants agreed with this statement. However, $3 \%$ of the participants disagreed that working in groups enabled this development of comprehension subskills. Besides this, the respondents were also asked which social skills improved and which in some way contributed to the improvement of reading comprehension during the application of the different strategies and the following results were obtained.


Figure 5. Influence of social skills on reading comprehension.
Figure 5 illustrates that the social skills that most influenced participants' reading comprehension development during the intervention were communication and sharing ideas, which made up $84 \%$. These skills facilitated collaborative engagement, leading to a deeper understanding of the text. For example, during the observation it was noticed that in the case of
the think-pair-share strategy, students first listened to their partner about her or his predictions then they combined ideas and made a final decision on their predictions of the reading. In addition, the acquisition of skills such as asking for help and active listening was evident, as students who encountered difficulties in understanding the text sought support from their peers or attentively absorbed input from others. In contrast, conflict resolution received minimal emphasis, with only $19 \%$ of participants selecting it. In summary, the observations show a positive correlation between reading comprehension and the social skills principle that was promoted during the group work, and these skills also experienced some level of improvement as well.

Statement 4: Having equal participation in group work contributed to develop and improve reading comprehension.


Figure 6. Reading comprehension and equal participation
A glance at Figure 6 reveals that $38 \%$ of the participants and $63 \%$ perceived that they improved reading comprehension and sub-skills because they had equal opportunities to participate in the group. This even prevented students from feeling excluded from reading comprehension activities. In addition, the responses that the students indicated in the openended questions were that they agreed with this statement, for example, one participant stated: "We all participated equally and this helped everyone to understand the text". Likewise, another respondent commented, "It helped us to socialize among all group members for a more meaningful understanding."

In the observations, it was seen that students felt engaged in understanding the reading as they had the opportunity to contribute to the group, for example in the fun-n-pick strategy, students tried to understand the context to decipher the meaning of new words and as each student had a specific role to complete the task, this allowed them to understand the content of the text as a whole. Furthermore, it was found that this promoted the principle of equal
participation and as a result ensured that all members participated equally, preventing some students from playing a passive role and not practicing reading comprehension during the activity.
Statement 5. The simultaneous work allowed all students to work at the same time and all of them to improve their reading comprehension sub-skills.


Figure 7. Reading comprehension through simultaneous interaction
Figure 7 reflects that most participants stated that the use of CA strategies facilitated the opportunity for everyone to participate and improve their reading comprehension skills. This was possible by allowing several groups or pairs to collaborate simultaneously on reading activities. However, $6 \%$ of the respondents expressed dissenting opinions in this regard.

Moreover, according to observations, when the CL strategies were implemented, it was observed that there was room for each group to work and practice their reading comprehension simultaneously, as all students were working in their respective groups at the same time. This helped to manage the large class well and ensure that all the students were doing the reading comprehension activity keeping them all active. This situation even allowed the teacher to save time, as everyone worked at the same time, which made it possible to use that time to give feedback at the end of the reading comprehension activity.

Statement 6. Which were the Cooperative Learning strategies that allowed you to develop the reading comprehension subskills? You can choose more than one option.


Figure 8. Cooperative Learning Strategies
Concerning Figure 8, it visualizes that the most favorite cooperative learning strategy was fun-n-pick since it had $66 \%$. The next was the numbered heads together strategy with $56 \%$. While $38 \%$ of the participants indicated that jigsaw and think-pair-share strategies were their favorites for developing reading comprehension skills. Likewise, opinions were obtained from the students. For example, a student stated, "They were a more fun and collaborative way to learn". Another mentioned, "Because these strategies allowed everyone to participate and we had the motivation to read and participate".

Moreover, it was recorded that the different strategies were positively received by the students and had a favorable impact on the development of reading comprehension skills. For instance, the numbered heads together strategy was interactive and motivated students to read with attention and compete in a positive and orderly manner to answer the questions. Likewise, the fun-n-pick strategy encouraged interaction and participation of all the students to discover the meaning of the words according to the context of the reading. However, it should be noted that some strategies were easier to apply because the students quickly understood the process. Others were a bit more difficult to apply because the students got confused, for example with the jigsaw strategy. Or the students did not follow the steps of the strategy, as was the case with the think-pair-share strategy.

Statement 7. The Jigsaw strategy (solving a puzzle) helped you to identify the main idea of the text.


Figure 9. Jigsaw Strategy
A look at Figure 9, it is evident that the most of students who participated in the survey found the jigsaw strategy was useful in developing of skimming sub-skill since more than $70 \%$ considered that the application of this CL strategy helped them to identify the main or key ideas of a text in order to solve the puzzle. However, $13 \%$ of respondents disagreed with this affirmation.

In accordance with the monitoring during the application of the jigsaw, it was observed that it helped to improve skimming. It is important to emphasize that this was possible thanks to the prior knowledge or background that the students had to order a reading. This made it easier to identify the main idea of each paragraph. For example, in one intervention, students had to order a professional biography. However, before doing the activity they knew the structure of the biography and what each paragraph contained. As a consequence, when they had to organize the biography, they quickly skimmed each section and identified the main idea of each one to put it in order.

Statement 8. Think-pair-share (analyzing and discussing in pairs) allowed you to make reading predictions through images.


Figure 10. Think-pair-share Strategy
Figure 10 illustrates that most students responded favorably to the use of the idea-pairing strategy to make predictions. In this case, students stated that they shared the idea that this strategy allowed them to perform the sub-competence of prediction from a reading. However, $6 \%$ of the participants indicated that they did not agree that this strategy was effective in prediction. This was corroborated by the evidence, where it was observed that each pair shared ideas and combined them to make predictions about the content of the reading. Moreover, couples supported each other to complete the activity, and this allowed them to make predictions about what the title of the reading might be through images. Lastly, students not only improved these sub-skills but also developed their collaborative and communication abilities.

Statement 9. Number-head-together (working collaboratively in groups to answer a question) enabled you to find specific information in a reading activity.


Figure 11. Numbered heads together Strategy
In response to this assertion, Figure 11 demonstrates that $53 \%$ of learners were in full agreement on the numbered head together strategy contributed with scanning sub-skill. Furthermore, 43\% also responded positively. While just 3\% indicated that they disagree about
this. Likewise, in the observations the researcher identified that this strategy was a good option to scan specific information in a reading and improve the comprehension. In addition, it was evident that students were motivated to read the text and pay attention to specific details to be prepared to answer the questions formulated by the preservice teacher. This situation created a competitive environment among the students and, as a consequence, it encouraged student participation.

## Fun-n-pick Strategy

Statement 10. The fun-n-pick strategy (playing with cards) permitted you to learn the meaning of new vocabulary.


Figure 12. Fun-n-pick Strategies
The perception that students had about the use of fun-n-pick strategy in order to decipher new vocabulary through content of reading was highly significant since $66 \%$ of participants reported that they totally agreed and $28 \%$ agreed. On the contrary, approximately $6 \%$ indicated that they did not support this position. In addition, it was noticed that this strategy was interactive and fruitful for learning new words based on the content of the text. For example, students were observed guessing the vocabulary word based on the fun activity. This encouraged active participation and reinforced understanding and retention of the meaning of the word in context.

## 7. Discussion

In this section, the results are discussed to answer the general research question and the two sub-questions. In addition, the results are compared with previous studies and with the theoretical framework, which provides valuable support to the present research.

Regarding the main research question, "How does cooperative learning influence the reading comprehension of high school students in a public institution in Loja, during the 20232024 academic year?", the results indicated a positive impact on reading comprehension. In relation to the main research question, "How does cooperative learning influence the reading comprehension of high school students in a public institution in Loja, during the 2023-2024 school year?", the results indicated a positive impact on reading comprehension. The results indicated that the application of this approach and its strategies helped to improve reading comprehension. In addition, students expressed their positive acceptance of these strategies for being dynamic and for their effectiveness in fostering collaborative learning environments in which individuals could support and improve each other's reading comprehension sub-skills. This finding is supported by the theory of authors Olsen and Kagan (1992), who assert that cooperative learning in language teaching is useful because it allows learning and practicing the language while students interact. Zhang (2010) states that cooperative learning offers learners greater chances for both receiving and expressing language, thus promoting language production.

The results corresponding to the sub-question addressed was "What is the effectiveness of cooperative learning on reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024?". The results obtained from both the pre-test and post-test indicated that the introduction of the cooperative learning principles promoted by Kagan, together with strategies such as jigsaw, think-pair-share, numbered heads together and fun-n-pick, were effective in improving the reading comprehension subskills such as predictions, vocabulary in context, skimming and scanning. Since there was a difference between the two tests. The scores obtained before the intervention are low, while after the implementation the situation changes favorably. Since the overall average increased from 5.05/10 to $8.2 / 10$ points, which indicates that there was an improvement of 3.18 points. Additionally, these findings were aligned with the research works of Pilco (2018), Aslan and Deneme (2021) and Asrifan et al. (2019) who also reported that the results were positive with the incorporation of CL and reading comprehension increased through collaboration, either in pairs or in groups.

The following sub-question was "What are the students' perceptions towards the use of cooperative learning on reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024?". The results of the questionnaire and field notes permitted to explore the views and behaviors of participants about this implementation which disclosed that the cooperative strategies were positively accepted by the students as they actively participated and complied with the activity in order to complete the reading comprehension activities assigned. Besides, the students expressed positive opinions about CL, noting that it allowed them to develop greater engagement, a deeper understanding of the reading material, and improved interpersonal skills through teamwork. Moreover, it was also observed that students showed greater interest in their learning process and the cooperative learning strategies fostered a supportive and inclusive classroom environment. These results are similar to the findings of Nelli and Hartayi’s (2018) work, which indicate that students showed acceptance of this approach and high levels of engagement and interest throughout each cycle of the learning process. In addition, CL provides a more dynamic and interactive environment which helps motivate students to participate and reduce fear and pressure when learning a foreign language (Al-Yassen, 2014).

Despite the positive results of this research, some limitations affected the research. For instance, some students presented initial difficulties in adapting to the cooperative learning model, citing problems such as integration, group organization, unequal contributions within groups, or conflicts arising from different learning styles and personalities. These obstacles posed barriers to the effective implementation of the approach, aligning with Gudinge's (2018) assertion that the engagement of all students is imperative to complete the task through CL. Furthermore, limited time, which sometimes prevented the correct development of the strategy, since the students took a long time to form groups or because of the institution's activities, class periods were reduced. Similarly, the classroom space also negatively influenced the formation of groups because the reduced space of the classroom did not allow the students to form a group similar to a round table, which would permit all members to feel part of the group. Finally, the indisposition of some students towards the heterogeneous grouping approach adopted by the preservice teacher also posed a challenge. When students were not allowed to self-select their groups based on affinity, they showed a negative attitude and were less inclined to participate in the activity.

To conclude, it is important to point out that the results and findings obtained in this study cannot be generalized or guaranteed to be the same in other academic settings even if the characteristics are similar such as the same research variables, students at the same educational
level or the application of the same methodology. It also cannot be generalized because the results that were given were from a small sample; so a larger sample might yield different results. Moreover, the time of the research may influence obtaining different findings. Finally, changes in the conditions under which the research was conducted or unexpected events that may occur may have a different impact and consequently affect the results. Because of this, it is suggested that further research be conducted with different grades, working on other subskills of reading comprehension as well as other English language skills such as writing, speaking and listening.

## 8. Conclusion

- This study concludes that cooperative learning strategies had a favorable influence on the development of reading comprehension. This approach fostered students' active participation and sense of responsibility when working in teams. In addition, these strategies encouraged collaboration and mutual support among students, providing them with opportunities to practice and improve their reading comprehension skills. Moreover, the strategies were especially beneficial in large classrooms, where it can be difficult to work with many students due to time limitations.
- Furthermore, incorporating both the principles of cooperative learning and strategies, including jigsaw, think-pair-share, numbered heads together, and fun-n-pick, significantly improved subskills of reading comprehension, such as skim reading, vocabulary acquisition, scanning, and prediction. For instance, with the jigsaw strategy, students effectively extracted the main ideas from the readings. The think-pairs method facilitated prediction, while the numbered heads together strategy helped scanning for specific information and the fun-n-pick strategy allowed students to learn new words in the context of the text. Besides, employing the principles of cooperative learning, it ensured the effectiveness and optimization of this approach for developing students' reading comprehension skills.
- In addition to the fact that the CL strategies were effective, students had a positive perception of this incorporation to enhance reading comprehension. As they indicated it helped promote a supportive environment, allowing them to learn and work as a team to develop reading comprehension subskills together. Additionally, CL helped them to be more confident and have more opportunities to participate.


## 9. Recommendations

- In accordance with the results, the implementation of cooperative learning strategies is suggested since it is an approach that facilitates and enhances a deeper understanding and retention of the reading material through interactive group work where students support each other. In addition, these strategies encourage collaboration and interaction among students as they develop their social skills, which was an important element that also influenced the development of the subskills of reading comprehension.
- Using cooperative learning in large classrooms is advantageous; however, it is advisable to take into account the need for ample space to allow for effective group formation. In fact, it would facilitate space management, ensuring that each member of the groups is included in the grouping and feels that he/she is included, thus guaranteeing the correct execution of the strategies.
- Finally, it is recommended that heterogeneous groups be established, that is, that the teacher or researcher be in charge of forming the groups, taking into account aspects such as the students' level of English, their individual needs, and their learning styles. This approach ensures equity among the teams, allowing students who have more strengths to support their peers who may find the activity difficult. In this way, it minimizes differences in the group's strengths, fostering a more balanced learning environment.


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## 11. Annexes

## Annex 1. Official Request to the Educational Institution

Hermano<br>Eduardo Bartolomé Martinez,<br>RECTOR DE LA UNIDAD EDUCATIVA FISCOMISIONAL DANIEL ÁLVAREZ BURNEO Ciudad

De mis consideraciones:
Me dirijo a usted, con el objetivo de comunicarle que en la oferta académica, de la Carrera de Pedagogia de los Idiomas Nacionales y Extranjeros de la Facultad de la Educación, el Arte y la Comunicación de la Universidad Nacional de Loja, consta el desarrollo de 60 Horas de Prácticas Pre-profesionales Docencia-Vinculación: Aplicación, Seguimiento y Evaluación de Propuestas Innovativas en el Proceso de Enseñanza Aprendizaje, así como la aplicación del Plan de Intervención, mismo que deben cumplir como parte de la formación académica de la Carrera; motivo por el que, mucho agradeceré a usted, se digne autorizar a quien corresponde, para que a CLAUDIA JOHANNA ALVAREZ GAONA, estudiante del Ciclo 8, período académico Octubre 16/2023 - Febrero 29/2023, se le brinde la apertura necesaria en la Institución de su acertada Dirección.

En la seguridad de ser atendida de la manera favorable, le anticipo mis agradecimientos, a la vez que aprovecho la oportunidad para expresarle los sentimientos de mi especial consideración y estima.

Atentamente,

## EN LOS TESOROS DE LA SABIDURİA ESTÁ LA GLORIFICACIÓN DE LA VIDA



Lcda.M.Sc. Rosa Paola Moreno Ordoñez, DIRECTORA ACADÉMICA

Elaborado por:


Dra.M.Sc. Nela Aguilera Asanza,
ANALISTA DE APOYO A LA GESTIÓN ACADÉMICA

## Annex 2. Inform Consent

## DECLARACIÓN DE CONSENTIMIENTO INFORMADO

Yo,
con cédula de identidad $\qquad$ representante legal de el/ la estudiante $\qquad$ autorizo que mi representado sea participe en la plan de intervención para mejorar la compresión lectora del idioma Inglés como parte del proyecto de investigación de Integración Curricular titulado Aprendizaje cooperativo y comprensión lectora en estudiantes de bachillerato de una institución pública de Loja, llevado a cabo por Claudia Johanna Alvarez Gaona, estudiante de la Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros, de la Universidad Nacional de Loja. Comprendo que la participación de los niños y niñas en el desarrollo del presente proyecto no tendrá repercusiones en sus actividades escolares, evaluaciones o calificaciones. Además, la identidad de los niños y niñas no será publicada, y las fotos registradas durante la propuesta de intervención, se utilizarán únicamente para fines investigativos y como evidencias del proyecto.

Declaro haber sido informado/a que mis datos personales y de mi representado/a, serán protegidos por el anonimato y la confidencialidad. Tomado ello en consideración, otorgo mi consentimiento para que se realice el proceso inherente de la intervención antes mencionada en las clases de inglés.

Loja, 13 de diciembre del 2023

Firma: $\qquad$

Nombres y Apellidos: $\qquad$
C.I: $\qquad$
Representante legal.

## Annex 3. Pre-test

Universidad
Universidad Nacional do tojo

## UNIVERSIDAD NACIONAL DE LOJA DEPARTMENT OF PEDAGOGİA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

PRE-TEST
Dear student, this test aims to examine any difficulties you may have in reading comprehension in English. Therefore, please answer the following test with sincerity and honesty. Your answers will be anonymous and confidential.

Student's code
Date

- MAKING PREDICTIONS (2.5 points)

1. Look the picture, and choose what the reading is about. (1 point)

| A. The Halloween <br> story | B. The most common <br> superstitions | C. The most important <br> traditions |
| :---: | :---: | :---: |


2. Match the images a-b with the statements 1-5. (1.5 points) ( 0.3 for each item)

## Statements

1) $\qquad$ Beliefs about broken reflections
2) $\qquad$ The meaning to see a black cat
3) $\qquad$ The symbolism of four-leaf clovers
4) $\qquad$ The mystery behind this day
5) $\qquad$ Horseshoes and the connection with prosperity

Images


## - SKIMMING (2.5 points)

## 3. Read the paragraphs quickly and choose the main idea for each paragraph from

1 to 5 . ( 0.5 for each item)

## Stories that Shape Culture

1 We have all grown up surrounded by myths, legends, and stories. They are part of our culture and our lives. Stories have an incredible influence on shaping culture. Stories not only entertain but also educate and inspire.
2 Every culture has its own stories that reflect its history and identity. These stories often tell of the battles, triumphs and significant events that have shaped a community. They are a way for people to connect with their roots, preserving the heritage of their ancestors and passing it on to future generations.
3 Many stories are designed to impart moral lessons. They often present characters who face challenges, make decisions and suffer the consequences, teaching the audience what is right and what is wrong.

4 In our interconnected world, stories from one culture often reach others. This cultural exchange through storytelling helps people understand different perspectives and appreciate the diversity of human experiences. It promotes tolerance, and respect for all traditions.
5 In today's digital age, storytelling has expanded beyond traditional forms. Movies, television shows, books and even social media all contribute to the transmission of stories. These modern stories continue to have the same imbortance within the culture.

........ The stories have the purpose to educate and inspire.
The power of stories to develop culture.
......... Learning of cultural heritage through stories.
........ New forms of sharing stories.
........ The importance of learning about different cultures.

- SCANNING (2.5 points)

4. Read the text and decide if the statements are true or false. Write in the parenthesis a $T$ if true or an $F$ if false. ( 0.5 for each item)

## The king of comedy

The famous comedian Jerry Lewis was born on March 16, 1926 in Newark, New Jersey, USA. His real name was Jerome Joseph Levitch but he took his last name from his actor-father's stage name. He is known for his slapstick humor, youthful appearance and voice changes: he also had a deep nasal voice with a unique "honking" timbre. At the beginning of his career, he was teamed up with singer Dean Martin: in addition to the duo's popular nightclub work, they starred in a successful series of comedy films for Paramount Pictures from 1946-1956. He was also known for his charity fund-raising telethons and was nominated for the Nobel Peace Prize in 1977 for his 50 years raising money to fight muscular dystrophy. In 2009, the Academy of Motion Picture Arts and
 Sciences awarded Lewis the Jean Hersholt Humanitarian Award. He died on August 20, 2017, in Las Vegas.
a) "Jerry Lewis" was a stage name. ( )
b) He had a particular voice. ( )
c) Dean Martin was his working partner for 9 years. ( )
d) He won the Nobel Peace Prize in 1977. ( )
e) He was a humanitarian person. ( )

## - VOCABULARY IN CONTEXT (2.5 points)

## 5. Read the text. Then choose the highlighted words and match each one with its correct definition. ( 0,25 for each item)

## Common Supernatural Stories in Our Country

"The Tamarind Widow" from Posorja, Guayas

People in this community talk about an extremely beautiful woman who used to enchant her victims, who were usually drunk men that were walking back home after a long night. The elderly people and taxi drivers say that men fell in love with her immediately and followed the beautiful lady to a tamarind tree. There, she showed her real figure, which was a skeleton and skull with a woman's shape and clothes. Nowadays, the tree is in the same place but with no sign of that story.

```
"The Loma Grande Countess" from Quito, Pichincha
```

A beautiful, high society young woman from Europe lived in an elegant house in the Loma Grande neighborhood. As old people still say, the lady would go out on Friday nights to have fun in the bars around downtown. The decade of the 1880's was all celebrations and parties. She was called "the countess" and many young gentlemen were in love with her beauty. People started to notice that the men that left the bars with her just disappeared without a trace. Years after she left the city, many corpses were found in the gardens around her former home. Everybody thought that she had killed the men and buried them.

## Definitions

a) The bones of the head. $\rightarrow$
b) A woman of high social rank, or the wife of a count or earl. $\rightarrow$
c) To have a magical effect on someone or something. $\rightarrow$
d) A woman whose husband has died. $\rightarrow$ $\qquad$
e) An indication or sign of something. $\rightarrow$
f) To be hurt, damaged, or destroyed by fire or extreme heat. $\rightarrow$ $\qquad$
g) The frame of bones that supports the body. $\rightarrow$
h) An area of a city, town, etc. $\rightarrow$ $\qquad$
i) Old people. $\rightarrow$
j) A dead body. $\rightarrow$

## Annex 4. Test Scoring Guide Pre-Test

|  | Question | Answers | Indicator | Score |
| :---: | :---: | :---: | :---: | :---: |
| 1 | According to the picture, choose the topic you think this reading is about. | - Letter B | Making <br> Predictions | 1 point |
| 2 | Look at the image above and match the images a-e. There is one subheading which is related with one image. | 1) e <br> 2) $d$ <br> 3) $a$ <br> 4) $b$ <br> 5) c | Making <br> Predictions | 1.5 points <br> (0.3 for <br> each item) |
| 3 | Read the paragraphs quickly and match the paragraphs $1-5$ with the main idea of each paragraph. | a) 3 <br> b) 1 <br> c) 2 <br> d) 5 <br> e) 4 | Skimming | 0.5 for each item |
| 4 | Read the text to find the specific information to answer. Then write in the parenthesis a T if true or an $F$ if false. | a) True <br> b) True <br> c) False <br> d) False <br> e) True | Scanning | 0.5 for each item |
| 5 | Read the text. Then choose the highlighted words and match each one with its correct definition. | a) Skull <br> b) Countess <br> c) Enchant <br> d) Widow <br> e) Trace <br> f) Buried <br> g) Skeleton <br> h) Neighborhood <br> i) Elderly <br> j) Corpse | Vocabulary in context | 0.25 for each item |
| TOTAL |  |  |  | 10 points |

## Annex 5. Post-test

## (12) 1 ml <br> Universidad Nacional deloja <br> UNIVERSIDAD NACIONAL DE LOJA DEPARTMENT OF PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

## READING COMPREHENSION: POST-TEST

Dear student, please answer the following test with sincerity and honesty. Your answers will be anonymous and confidential.

Student's code.
Date: $\qquad$

- MAKING PREDICTIONS (2.5 points)

1. Look the picture, and choose what the reading is about. (1 point)

| Damage Caused by Humans | Four seasons around the World | Climate and Natural Disaster |
| :--- | :--- | :--- |


2. There is a subheading that is related to an image, therefore for subheadings 1-5 match with images a-b. ( 1.5 points) ( 0.3 for each item)

Statements
$\qquad$ Lethal droughts
$\qquad$ The consequences of volcanic lava
$\qquad$ Cold temperatures hazards
$\qquad$ Torrential rains and their consequences

Destroying hurricanes

## Images



- SKIMMING ( 2.5 points)

3. Read the paragraphs quickly and choose the main idea for each paragraph 1 to 5 . (0.5 for each item)

## Promoting a Culture of Disaster Preparedness

As we saw in the last pages, weather can cause natural disasters. However, there are many other factors that can also cause these events.
2 We live on an active planet. This means that it moves and reacts. Earth's movements can cause changes in the weather. In addition, there are many active volcanoes around the world, and our tectonic plates are always moving. This is why every place in the world faces the threat of a natural disaster. There has been major progress in technology that can help us prevent many disasters. However, there's still no way to predict some events, such as earthquakes.
3 Besides this, the way we have treated our planet has made natural disasters cause more destruction and suffering. This is why we have to be more responsible about the protection of natural resources, the environment, and nature in general.

4It is important to promote better practices when building houses or other constructions, and to be careful when choosing the places in which we settle. Education is also a powerful tool to teach people how we can reduce the impact of natural disasters on our lives.
5 There are specific institutions in our country (like the Ecuadorian Secretariat for Risk Management) that are in charge of informing people about ways to prevent damage and lower the impact of natural disasters.

Place to find true information and stay informed.

......... Responsible human actions and their impact on the planet.
......... Some actions to avoid damage from natural disasters
$\ldots . . .$. There are others conditions that can produce disasters.
......... The Earth is always in activity, so different events occur.

- SCANNING ( $\mathbf{2 . 5}$ points)


## 4. Read the text and decide if the statements are true or false. Write in the parenthesis a $T$ if true or an $F$ if false. ( 0.5 for each item)

## Severely Cold Temperatures May Affect your Health

Extremely low temperatures can affect you in many ways. For example, they can cause something called frostbite, an injury that makes your skin turn red and numb. Frostbite works like a cold burn; when the skin is exposed to the cold for too long, your tissues can freeze and die. It can occur on your fingers, toes, ears, and nose.
Another effect of low temperature is hypothermia. This occurs when a person's body loses heat faster that it can be produced. It may cause a state of shock in which the respiratory system can fail. Your body has some ways of protecting you against the cold. For example, shivering (which is when you tremble in the cold) helps your body generate heat. Additionally, there are some things you can do to protect yourself from the cold weather. In order to protect your lungs, it is suggested to cover your nose and mouth with a scarf or any available piece of clothing. When it is too cold, it is not recommended to practice sports outdoors. Remember that cold weather can also cause your skin to become dry and itchy, so you should apply moisturizing cream in the areas exposed to the cold.

Hypothermia occurs when the body gains heat faster than it can produce. ( )
Extremely low temperatures can lead to frostbite. ( )
Shivering is a mechanism of the body to generate cold. ( )
Covering nose and mouth with clothing helps to protect the lungs in cold weather. ( )
It is advised to apply moisturizing cream on the skin areas exposed to cold. ( )

- VOCABULARY IN CONTEXT ( 2.5 points)

5. Read the text. Then choose the highlighted words and match each one with its correct definition. (0,25 for each item)

## Cultural Changes and Natural Disasters

Culture can be understood as everything we are, eat, think, dress, etc., as well as the place in which we live. Our surroundings are part of who we are. When they are affected, our culture can be affected too. Sometimes this can happen because of natural disasters.

Earthquakes, landslides, floods, heat waves, fires, and other disasters can affect or destroy monuments, archeological sites, and landscapes. If these places are destroyed, which can be representations of culture, people may feel that they have lost part of their cultural identity forever. However, human beings have always adapted and reshaped culture by adjusting to different circumstances. Historically, large populations have moved away and started again in new settlements, creating new customs and building new monuments and houses. Other groups of people have stayed in the same locations and adapted their lives to the risks caused by natural disasters.

People experience great pain after natural disasters but the
 they show after the losses they face is also related to their culture. This is because it is usually based on their beliefs and religion. We can definitely say that the relationship between humans and nature is essential in culture.
a) A place where people have come to live. $\rightarrow$
b) The possibility of something bad happening. $\rightarrow$
c) To shape something again or differently. $\rightarrow$
d) A large area of land, especially in relation to its appearance. $\rightarrow$
e) The ability to be happy again after something difficult has happened. $\rightarrow$
f) The place where someone lives and the conditions, they live in. $\rightarrow$........ $\qquad$
g) The feeling of being certain that something exists or is true. $\rightarrow$ $\qquad$
h) A shaking of a part of the Earth's surface that often causes great damage. $\rightarrow$ $\qquad$
i) A mass of rock and earth moving suddenly and quickly down a slope. $\rightarrow$ $\qquad$
j) A way of behaving or a belief that has been established for a long time. $\rightarrow$ $\qquad$

Annex 6. Test Scoring Guide Post-Test

|  | Question | Answers | Indicator | Score |
| :---: | :---: | :---: | :---: | :---: |
| 1 | According to the picture, choose the topic you think this reading is about. | - Letter C | Making <br> Predictions | 1 point |
| 2 | Look at the image above and match the images a-e. There is one subheading which is related with one image. | $\begin{array}{ll} \hline \text { 1) } & \mathrm{d} \\ \text { 2) } & \mathrm{a} \\ \text { 3) } & \mathrm{e} \\ \text { 4) } & \mathrm{c} \\ \text { 5) } & \mathrm{b} \end{array}$ | Making <br> Predictions | 1.5 points (0.3 for each item) |
| 3 | Read the paragraphs quickly and match the paragraphs 1-5 with the main idea of each paragraph. | a) 5 <br> b) 3 <br> c) 4 <br> d) 1 <br> e) 2 | Skimming | 0.5 for each item |
| 4 | Read the text to find the specific information to answer. Then write in the parenthesis a $\mathbf{T}$ if true or an $F$ if false. | a) False <br> b) True <br> c) False <br> d) True <br> e) True | Scanning | 0.5 for each item |
| 5 | Read the text. Then choose the highlighted words and match each one with its correct definition. | a) Settlement <br> b) Risk <br> c) Monument <br> d) Heat waves <br> e) Resilience <br> f) disaster <br> g) Belief <br> h) Earthquake <br> i) landslide <br> j) Custom | Vocabulary in context | 0.25 for each item |
| TOTAL |  |  |  | 10 points |

## Annex 7. Mixed Questionnaire

## UNIVERSIDAD NACIONAL DE LOJA DEPARTMENT OF PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

## QUESTIONNAIRE

Dear student, the purpose of this questionnaire is to describe your perceptions towards the use of cooperative learning to improve reading comprehension.
Student's code. $\qquad$ Date:
Instruction: Write an X in the square that corresponds to your answer.

- Positive interdependence

1. Forming groups allowed you to contribute and support each other in learning and completing the reading comprehension activities.

| Totally agree | 10 | Disagree |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |

- Individual accountability

2. Working in groups helped you to take more responsibility to fulfill the role assigned in the comprehensive reading task.


- Social skills

3. Teamwork encouraged you to improve reading comprehension through social interaction between group mates.

| Totally agree | $10$ | Disagree | Totally disagree |
| :---: | :---: | :---: | :---: |
|  |  |  |  |

Which social skills on reading comprehension develop? You can choose more than one option.

```
Conflict resolution ( ) Leadership ( )
Asking for help ( )
Sharing opinions ( )
Reaching consensus( )
Active listening ( ) Communication ( )
Making decisions( )
```


## - Equal participation

4. Having equal participation in group work contributed to develop and improve reading comprehension.

| Totally agree |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |

## Why?

- Simultaneous interaction

5. The simultaneous work allowed all students to work at the same time and all of them to improve their reading comprehension sub-skills.


## - Cooperative learning strategies

6. Which were the Cooperative Learning strategies that allowed you to develop the reading comprehension subskills? You can choose more than one option


Why did you like the strategy you rated 1 better?
7. The jigsaw strategy helped you develop skimming in reading.

| Totally agree |  |  | Totally disagree |
| :---: | :---: | :---: | :---: |
|  |  |  |  |

8. The think-pair-share strategy allowed you to make predictions in a text.

9. Fan-n-pick strategy helped you to develop scanning in reading.

10. Number head together permitted you to learn new vocabulary in reading.

| $A n$ <br> Totally agree | Agree | Disagree | Totally disagree |
| :--- | :---: | :---: | :---: |
|  |  |  |  |

## THANKS FOR YOUR COLLABORATION:

Annex 8. Rubric to Evaluate Reading Comprehension's Indicators

| Indicators | Proficient in the required learning (2.1-2.5) | Has achieved the required learning (1.1-2) | Approaching proficiency in the required learning (0.6-1) | Has not achieved the required learning ( $0-0.5$ ) |
| :---: | :---: | :---: | :---: | :---: |
| Predictions | Always makes correct and accurate predictions about the reading based on text elements such as images, titles, etc. | Almost always makes reasonable predictions about the reading based on text elements such as images, titles, etc. | Occasionally makes predictions but with difficulty, based mainly on superficial understanding. | Has trouble making predictions or makes inaccurate predictions. |
| Skimming | Always quickly identifies main ideas and key points with excellent accuracy. | Almost always effectively identifies most of the main ideas and key points. | Occasionally identifies some main ideas and key points but ignores others that are so important. | Has trouble identifying main ideas and key points. |
| Scanning | Always locates specific information in text quickly and accurately. | Almost always locates specific information accurately and occasionally needs help | Occasionally locates some specific information but often needs help. | Has trouble locating specific information in text such as dates, descriptions, characters, etc. |
| Vocabulary in context | Always demonstrates advanced understanding of vocabulary, effectively using context clues to infer meaning. | Almost always comprehends most vocabulary well in context using context clues to infer meaning. | Occasionally understands some vocabulary in context, but has difficulty with more advanced terms. | Has trouble comprehended due to unfamiliarity with vocabulary, and problems deducing meaning from context. |

## Annex 9. Intervention Lesson Plans

Universidad
Carrera de Nacional Pedagogía de los Idiomas de Loja

| INTERVENTION PLAN \#1 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Institution Name: | Unidad Educativa Fiscomisional "Daniel Álvarez Burneo" |  |  |  |
| Date: | December $4^{\text {th }}$ to December $8^{\text {th }}, 2023$ | School Year: | 2023 | 2024 |
| Type of Instituttion | Public () Private () Fisco-Misional (X) |  |  |  |
| Institutional Tutor: | Mgtr. Omar Armijos Coronel |  |  |  |
| Thesis Director | Mgtr. Rosa Paola Moreno |  |  |  |
| Academic Tutor: | Mgtr. Edgar Mariano Castillo Cuesta |  |  |  |
| Preservice Teacher: | Claudia Johanna Álvarez Gaona |  |  |  |
| Schedule: | 1BGU "O"- Wednesday - 11:15-12:00 |  |  |  |
| Time per lesson | 45 min • |  |  |  |
| Class / Number of Students: | 1BGU "O": 38 | Language level: | A2.2 |  |
| Topic: Contents: | Pre-test <br> - Reading comprehension |  |  |  |
| Lesson Objectives: | To identify the level of the students in reading comprehension |  |  |  |
| Materials | - Pre-test |  |  |  |
| Starter (warmer, lead in, review) |  |  |  | Time |
| Warm up: Boom! |  |  |  | 5 min |
| All participants will number themselves quickly and loudly and everyone who gets a multiple of three (3-6-9-12, etc.) or a number ending in three (13-23-33, etc.) must say BOOM! instead of the number; the next participant must continue the numbering. |  |  |  |  |
| : | Presentation | , |  | Time |
| - Teacher gives general instructions about the purpose of the Pre-test. <br> - Teacher explains the test questions and checks students' understanding by answering. |  |  |  | 5 min |
| Practice |  |  |  | Time |
| - Students put into practice the reading subskill to read the texts of the pre-test. |  |  |  | 5 min |
| Production |  |  |  | Time |
| - Students develop the pre-test by answering the questions. |  |  |  | $\begin{array}{\|l\|} \hline 20 \\ \mathrm{~min} \\ \hline \end{array}$ |
| Assessment |  |  |  | Time |
| - Teacher monitors the completing of the pre-test. |  |  |  | 5 min |
| Feedback / Closure |  |  |  | Time |
| - Teacher answers students' doubts and concludes the application of the pre-test. |  |  |  | 5 min |



| INTERVENTION PLAN \#2 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Institution Name: | Unidad Educativa Fiscomisional "Daniel Álvarez Burneo" |  |  |  |
| Date: | December $11^{\text {th }}$ to December $15^{\text {th }}, 2023$ | School Year: | 2023-2024 |  |
| Type of Instituttion | Public () Private () Fisco-Misional (X) |  |  |  |
| Institutional Tutor: | Mgtr. Omar Armijos Coronel |  |  |  |
| Thesis Director | Mgtr. Rosa Paola Moreno |  |  |  |
| Academic Tutor: | Mgtr. Edgar Mariano Castillo Cuesta |  |  |  |
| Preservice Teacher: | Claudia Johanna Álvarez Gaona |  |  |  |
| Schedule: | 1BGU "O"- Thursday - 12:00-13:30 |  |  |  |
| Time per lesson | 90 min |  |  |  |
| Class / Number of Students: | 1BGU "O": 35 | Language level: | A2.2 |  |
| Topic: Contents: | Verb to be Past Simple |  |  |  |
| Lesson Objectives: | - To express states or situations that happened in the past through the verb to be in past simple. <br> $\checkmark$ To improve reading prediction skills through the think-pair-share strategy, by analyzing information and collaborating effectively. |  |  |  |
| Materials | - Posters <br> - Worksheet <br> - Book <br> - Word cards <br> - Images <br> - Sticky notes |  |  |  |
| Starter (warmer, lead in, review) |  |  |  | Time |
| Review: Brainstorm $\rightarrow$ Students write the seasons and the months of the year on the whiteboard that they remember. <br> Warmer: Teacher uses the vocabulary and each word has a command. For example, the word "summer" means sit, so when teacher says "summer" students have to sit. |  |  |  | 5 min |
| Presentation |  |  |  | Time |
| Teacher introduces the past simple tense of the verb "to be" using a poster with some examples. Then the teacher provides them with some word cards to make sentences. <br> - The teacher gives an image, half of the students have one image and half of the students have another image, however both images are related to the reading text that the students are going to read. The image will be used for students to analyze and then make predictions about the text. |  |  |  | $\begin{aligned} & 15 \\ & \mathrm{~min} \end{aligned}$ |
| Practice |  |  |  | Time |
| Students order the word cards to create sentences using the verb to be in past simple, taking into account the grammatical structure. <br> Students complete the activities in the book on page 31. |  |  |  | $\begin{aligned} & 40 \\ & \min \end{aligned}$ |

- Students analyze individually the image provided by the teacher and predict what the text will be about.
- In pairs discuss the relation of the two images and their predictions about the topic of the reading help. Next, they have to create a title for the reading based on their predictions and write it on a sticky note.
- Students share the predictions that they made and page their sticky note on the board.
- Finally, students read a text in pairs and check if their predictions were correct. In addition, they identify sentences in the simple past tense using the verb to be.

| Production | Time |
| :--- | :--- |
| Time Travel Journal: Students write a short paragraph about a past adventure in the first <br> person. They can describe where they went, how they felt, and who they were with using | 15 <br> min <br> "was" and "were." For example: <br> Last summer I was in Salinas with my family. My family and I were on a boat, I was <br> excited. |
| Assessment | Time |
| Students develop the worksheet that the teacher elaborated on, where there are activities <br> to complete positive and negative sentences, and questions using the vert to be in the <br> past. | 10 |
| min |  |
| Teacher summarizes the key points of the lesson. <br> Teacher reviews the activities with the students and provides feedback | Time |



Carrera de Pedagogia de los ldiomas

| INTERVENTION PLAN \#3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Institution Name: <br> Date: | Unidad Educativa Fiscomisional "Daniel Álvarez Burneo" |  |  |  |
|  | December $18^{\text {th }}$ to December $22^{\text {nd }}, 2023$ | School Year: | 2023 | 2024 |
| Type of Instituttion | Public () Private () Fisco-Misional (X) |  |  |  |
| Institutional Tutor: | Mgtr. Omar Armijos Coronel |  |  |  |
| Thesis Director | Mgtr. Rosa Paola Moreno |  |  |  |
| Academic Tutor: | Mgtr. Edgar Mariano Castillo Cuesta |  |  |  |
| Preservice Teacher: | Claudia Johanna Álvarez Gaona |  |  |  |
| Schedule: | 1BGU "O"- Thursday - 12:00-13:30 |  |  |  |
| Time per lesson | 90 min |  |  |  |
| Class / Number of Students: | 1BGU "O": 35 | Language level: | A2.2 |  |
| Topic: Contents: | Verb "to be" in past simple Dates and past time expressions |  |  |  |
| Lesson Objectives: | - To indicate the exact date or moment that a specific action happened in the past. <br> - To develop scanning skills in order to locate specific information in reading through the numbered-heads together strategy. |  |  |  |
| Materials | - BINGO cards <br> - Posters <br> - Flashcards <br> - Workbook <br> - Reading sheet |  |  |  |
| Starter (warmer, lead in, review) |  |  |  | Time |
| Warmer $\rightarrow$ Pin the nose on Rudolph: Teacher divides the class into teams and one member from each team will be blindfolded. Teams will have to use English (to the left/right; up/down; stop) to help their teammate correctly stick their nose on Rudolph. <br> Review: Teacher asks students some questions. For example: How did you feel yesterday? Were you in the morning? Were you in Cuenca last weekend? To refresh the use of the verb "to be" in the past. |  |  |  | $\begin{aligned} & 10 \\ & \min \end{aligned}$ |
| Presentation |  |  |  | Time |
| Teacher explains the difference between ordinal and cardinal numbers with the use of flashcards. <br> Teacher presents through posters the different ways to say the date in both British and American English. Also, teacher explains the correct form to write and say the dates and how to use them in a sentence. <br> Teacher explains which past time expressions students can use in sentences that emphasize the verb "to be" in past. <br> - The teacher presents a text where dates and past time expressions are used. Also, teacher prepares questions that encourage the use of dates or past tense expressions to answer. <br> - Teacher conforms 9 groups of 4 students and numbers each student from 1 to 4 . |  |  |  | $\begin{aligned} & 15 \\ & \min \end{aligned}$ |

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| Practice | Time |
| :--- | :--- |
| Students complete the activities related to dates and past time expressions in the book (p. <br> 32 ) <br> -Students read the text "My vacation in Spain" to scan specific dates or past time <br> expressions to answer the questions. <br> - All group members are ready to answer the questions. When the teacher calls out <br> a number, the student with that number must pass and answer the question. <br> In groups, the students play BINGO, if they have the date the teacher mentions they have <br> to mark it on their card. The group that first fills in a column or row of the table wins. | 40 <br> min |
| Production | Time |
| Students work individually to create a timeline about their life with the four most important <br> events that happened, they must indicate the exact date. For example: I was in school in <br> August 2023 /I was in Quito last year. | 10 <br> min |
| Assessment | Time |
| Students complete the activities related to dates and past time expressions on the book (p. <br> 32). | 10 <br> min |
|  | Time |
| Teacher summarizes the key points of the lesson. <br> Teacher reviews the activities with the students and provides feedback | 5 min |



| INTERVENTION PLAN \#4 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Institution Name: | Unidad Educativa Fiscomisional "Daniel Ȧlvarez Burneo" |  |  |  |
| Date: | From $8^{\text {th }}$ to $12^{\text {th }}$ January, 2024 | School Year: | 2023-2024 |  |
| Type of Instituttion | Public () Private () Fisco-Misional (X) |  |  |  |
| Institutional Tutor: | Mgtr. Omar Armijos Coronel |  |  |  |
| Thesis Director | Mgtr. Rosa Paola Moreno |  |  |  |
| Academic Tutor: | Mgtr. Edgar Mariano Castillo Cuesta |  |  |  |
| Preservice Teacher: | Claudia Johanna Álvarez Gaona |  |  |  |
| Schedule: | 1BGU "O"- Thursday - 12:00-13:30 |  |  |  |
| Time per lesson | 90 min |  |  |  |
| Class / Number of Students: | 1BGU "O": 35 | Language level: | A2.2 |  |
| Topic: Contents: | Verb "to be" Past Simple Professional Biography |  |  |  |
| Lesson Objectives: | To summarize important information about a person's skills, education or training in a short professional biography, taking into account the appropriate structure. <br> - To skim the main idea of paragraphs to sequentially order a reading through the use of the jigsaw strategy. |  |  |  |
| Materials | - PowerPoint Presentations <br> - Workbook <br> - Example of professional biography (divided into sections) <br> - Reading worksheet <br> - Online game (https://www.baamboozle.com/game/963575) <br> - Flashcards |  |  |  |
| Starter (warmer, lead in, review) |  |  |  | Time |
| Leand in $\rightarrow$ Online game: in groups, the students answer the questions that appear in the game. And if they answer correctly, they win points. The questions are related to the use of the verb "to be" in the past, which is a review of the unit. |  |  |  | 5 min |
| Presentation |  |  |  | Time |
| The teacher starts with the pre-reading activities, which consist of discussing the purpose of a professional biography and, the elements to be taken into account to write one through PowerPoint presentations. Teacher gives an example of a professional biography and indicates the parts of the text with the flashcards. <br> - The teacher applies the jigsaw strategy, which involves dividing a professional biography into three sections and making eight groups of 4 students and one group of 3 students. Each group has the three sections to put in order. <br> - Teacher checks the ordering of the sections to the whole class before answering the questions. |  |  |  | $\begin{aligned} & 15 \\ & \text { min } \end{aligned}$ |


| Practice | Time |
| :--- | :--- |
| Students share their ideas about what they know about professional biography. <br> Students read the short professional biography of Mary Jones in the book, which is an <br> example. After reading, students develop the activities in the book (page 35) and in the <br> workbook (page 21). <br> -Students work in groups, first they sort the paragraphs of the professional <br> biography according to the example given by the teacher (Personal information, <br> mission/vision, and achievements/hobbies). <br> - Once the sections are checked for correct order, students answer the multiple- <br> choice questions for each section on the reading sheet. <br> At the end of the activity, the correct answers on the worksheet are reviewed with <br> the whole class. <br> Production <br> Students develop the activities on pages 22 of the workbook, where they have to write a <br> draft a and then the final professional biography <br> Assessment | Time <br> min |
| Students check their biography one last time and present it to the entire class. | Time |
|  | Feedback / Closure <br> min |
| Teacher summarizes the key points and the elements to write a professional biography. <br> The teacher reviews the students' writings and provides feedback. | Time |

Observations


| INTERVENTION PLAN \#5 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Institution Name: | Unidad Educativa Fiscomisional "Daniel Álvarez Burneo" |  |  |  |
| Date: | From $8^{\text {di }}$ to $12^{\text {th }}$ January, 2024 | School Year: | 2023-2024 |  |
| Type of Instituttion | Public () Private () Fisco-Misional (X) |  |  |  |
| Institutional Tutor: | Mgtr. Omar Armijos Coronel |  |  |  |
| Thesis Director | Mgtr. Rosa Paola Moreno |  |  |  |
| Academic Tutor: | Mgtr. Edgar Mariano Castillo Cuesta |  |  |  |
| Preservice Teacher: | Claudia Johanna Álvarez Gaona |  |  |  |
| Schedule: | 1BGU "O"-Thursday - 12:00-13:30 |  |  |  |
| Time per lesson | 90 min |  |  |  |
| Class / Number of Students: | IBGU "O": 35 | Language level: | A2.2 |  |
| Topic: Contents: | Verb "to be" in the past tense Review |  |  |  |
| Lesson Objectives: | To use the verb "to be" in past tense through the elaboration of a journal about holiday. <br> - To expand vocabulary during reading by applying the fun-n-pick strategy. |  |  |  |
| Materials | - Reading Sheet <br> - Cards <br> - Poster <br> - Fhashcards |  |  |  |
| Starter (warmer, lead in, review) |  |  |  | Time |
| Warm up $\rightarrow$ Simon says: Teacher says some commands and students have to do the activity that teacher mentioned. |  |  |  | 5 min |
| 1 Presentation |  |  |  | Time |
| Teacher presents a summary in a poster about her last holiday in a journal. <br> - The teacher prepares a reading with unknown vocabulary and, presents the new words with their meanings in cards. |  |  |  | $\begin{aligned} & 15 \\ & \min \end{aligned}$ |
| Practice |  |  |  | Time |
| In groups, students read the text "Martin's Vacation" to identify the new vocabulary and then decipher the meaning through the application of fun-n-pick. <br> - Students work in groups and each group will have a "Fan", a "Picker", "Responder", and "Reporter". <br> -The "Fan" holds the word cards like a fan (facing away from the "Picker"). <br> - The "Picker" selects a card from the fan without looking and pronounces the word that he or she chose. <br> -The "Responder" selects the meaning of the word chosen by the picker, which it considers to be correct based on the context of the reading. <br> -The "Reporter" says whether he or she agrees or disagrees with his or her partner's matching of the word with the meaning. |  |  |  | $\begin{aligned} & 40 \\ & \min \end{aligned}$ |

After completing the interaction, have the students switch roles.

| After completing the interaction, have the students switch roles. <br> After matching the words with their meaning and checking with the whole class that they <br> are correct, sentences are made using the new vocabulary. <br> Production | Time |
| :--- | :--- |
| Students make a journal holiday in a cardboard where they describe how their last holiday <br> were. For example: I was on the beach since December $26^{\text {th }} 2023$ until January st $2024 /$ It <br> was sunny/My family and I were in a whale museum. <br> Students develop the assessment which is related with the contents of the unit 2 on the <br> student book. | 15 <br> min |
| Assessment | Time |
| Students publish their journal holidays in the classroom. | 10 <br> min |
|  | Time |
| The teacher clarifies any doubts or questions the students may have about the <br> assessment. | 5 min |

## Observations


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## Signatures:



Mgtr. Edgar Mariano Castillo Cuesta Academic Tutor


Mgr. Rosa Paola Moreno
Thesis Director


Mgr. Omar Armijos Coronel Institutional Tutor


Claudia Johanna Álvarez Gaona Preservice Teacher

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de Loja


| $\circ$ The teacher checks the answers with the whole class. |  |
| :---: | :--- |
| Production | Time |
| Assessment | Students complete the activities on the workbook page 27, where they have to order <br> the letters to form regular verbs and change them from their base form to past <br> simple. |
| Feedback / Closure | Time |
| Students develop the activities on page 41 where they have to listen to an audio and <br> classify the verbs according to the correct pronunciation. | 10 <br> min |
|  | Time |
| The teacher summarizes the key points and clarifies any doubts the students may have <br> about the topic. | 5 min |



| INTERVENTION PLAN \#7 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Institution Name: | Unidad Educativa Fiscomisional "Daniel Álvarez Burneo" |  |  |  |
| Date: | From $22^{\text {nd }}$ to $26^{\text {th }}$ January, 2024 | School Year: | 2023-2024 |  |
| Type of Instituttion | Public () Private () Fisco-Misional (X) |  |  |  |
| Institutional Tutor: | Mgtr. Omar Armijos Coronel |  |  |  |
| Thesis Director | Mgtr. Rosa Paola Moreno |  |  |  |
| Academic Tutor: | Mgtr. Edgar Mariano Castillo Cuesta |  |  |  |
| Preservice Teacher: | Claudia Johanna Álvarez Gaona |  |  |  |
| Schedule: | 18GU "O"-Thursday - 12:00-13:30 |  |  |  |
| Time per lesson | 90 min |  |  |  |
| Class / Number of Students: | 1BGU "O": 35 <br> Past Simple (Irregular verbs) Affirmative sentences | Language level: | A2.2 |  |
| Topic: Contents: |  |  |  |  |
| Lesson Objectives: | - To describe past situations using irregular verbs through past simple tense. <br> - To acquire new irregular verbs through the implementation of fun-n-pick strategy. |  |  |  |
| Materials | - Reading Sheet <br> - Student book <br> - Grammar Flashcards |  |  |  |
| Starter (warmer, lead in, review) |  |  |  | Time |
| Lead-in: Acrostic $\rightarrow$ Post a long word, "vacation," on the board that is related to the theme of the unit. Next, the students will write a regular verb they learned that begins with the letter of the main word on the board. |  |  |  | $\begin{aligned} & 10 \\ & \min \end{aligned}$ |
| Presentation |  |  |  | Time |
| - The teacher presents a list with the most common irregular verbs in base form and past simple. <br> - The teacher explains how to make affirmative sentences using regular and irregular verbs with grammar flashcards. <br> Teacher gives a reading "Lali's story" which is in past and uses irregular verbs. Also teacher prepared <br> The teacher gives a reading "Lali story" with unknown irregular verbs and, presents the new verbs in cards. <br> - Next, the teacher makes 9 groups of 4 students and each group has a set of cards with irregular verbs. |  |  |  | $\begin{aligned} & 15 \\ & \mathrm{~min} \end{aligned}$ |
| Practice |  |  |  | Time |
| - Students complete the activities on the book page 45 , which consist of completing the sentence with the correct verb in past. |  |  |  |  |


| Students read the text to find new vocabulary which are irregular verbs. <br> Students work in groups and each group will have a "Fan", a "Picker", <br> "Responder", and "Reporter". <br> -The "Fan" holds the word cards like a fan (facing away from the "Picker"). <br> - The "Picker" selects a card from the fan without looking and pronounces the irregular verb that he or she chose. <br> -The "Responder" selects the meaning of the verb chosen by the picker, which it considers to be correct based on the context of the reading. <br> - The "Reporter" says whether he or she agrees or disagrees with his or her partner's matching of the verb with the meaning and congratulates him/her. <br> - The teacher checks the answers with the whole class. | $\begin{aligned} & 40 \\ & \min \end{aligned}$ |
| :---: | :---: |
| Production | Time |
| - Students write 3 affirmative sentences about their holiday using the regular verbs and vocabulary they learned in the last class. For example: <br> -I travelled by car to Cuenca. <br> -I visited a museum. | $\begin{array}{\|l\|} \hline 15 \\ \text { min } \end{array}$ |
| Assessment | Time |
| Students develop the activities on page 41 where they have to listen to an audio and classify the verbs according to the correct pronunciation. | $\begin{array}{\|l\|} \hline 10 \\ \mathrm{~min} \end{array}$ |
| Feedback / Closure | Time |
| The teacher summarizes the key points and clarifies any doubts the students may have. | 5 min |



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| Feedback / Closure | Time |
| :---: | :---: |
| - Teacher answers students' doubts and concludes the application of the post-test |  |
| and questionnaire. |  |$\quad 5$ min $\quad$.



Annex 10. Field notes

| Field Notes $\mathbf{N}^{\circ} 1$ |  |
| :---: | :---: |
| Institution:Unidad Educativa Fiscomisional <br> Daniel Álvarez Burneo | Individuals <br> Observed: 35 first-year students of high <br> school |
| Research: Claudia Johanna Álvarez Gaona | Time: $\quad$ Thursday: 12:00 to 13:30 |
| Observed <br> involved: Student participant | Duration of the observation: $\qquad$ |
| Date: $\quad$ Thursday, December 14 ${ }^{\text {th }}$, 2023 | Class topic: Verb "to be" in past |
| Descriptive Notes | Reflective Notes |
| 1. What cooperative strategies were implemented for the writing task? <br> - Think-pair-share was used to make predictions of reading using images that are related to the content of the reading. <br> 2. How were the students grouped together? <br> - The teacher formed heterogeneous informal cooperative learning groups. In other words, the teacher formed pairs that only collaborated during the class period to complete the activity. <br> 3. What happened during the application of this cooperative strategy? <br> - Some students disagreed with the partner they were assigned to work with. <br> - Some pairs did not complete the individually assigned work which was to analyze the pictures and immediately discuss the predictions of the pictures with their partners. <br> - Students took turns to exchange ideas in pairs. <br> - In some pairs, some students talked more than their partners. <br> - In pairs students created a title to the reading according to their predictions and wrote it on a sticker note, then students pasted it on the whiteboard to check their work. | 1. Did the cooperative activity allow the students to practice any reading sub-skills? <br> - Yes, the students practiced the subskill of making predictions of a reading using pictures. <br> 2. Were cooperative learning principles present during the cooperative work? <br> - Although to some extent all 4 principles were applied. The most notable principles in this strategy were simultaneous interaction and social skills. Because several pairs work at the same time to make their predictions and also, they communicated to share the ideas in order to accomplish the tasks assigned. <br> 3. How did the application of the cooperative learning strategy help to develop this reading subskill? <br> - The students had a support at the moment that they worked in pairs to make predictions. Since they could share their ideas and combine them to decipher the content of the reading. <br> - In addition, the students develop their social skills, because first they have to communicate and listen to their partner's opinions. And finally share their predictions with the whole class which helps to make feedback with everyone to reinforce the knowledge. |


| Field No |  |
| :---: | :---: |
| Institution: | Unidad Educativa Fiscomisional Daniel Álvarez Burneo |
| Research: | Claudia Johanna Álvarez Gaona |
| Observed involved: | Student participants |
| Date: | Thursday, December 21 ${ }^{\text {st }}, 2023$ |
| Descriptive Notes <br> 1. What cooperative strategies were implemented for the writing task? <br> - Number-head-together was used to scan specific information from the reading in order to answer questions related to the reading. <br> 2. How were the students grouped together? |  |
|  |  |
| - The teacher formed homogeneous informal cooperative learning groups. This means that the groups were formed by the teacher and only collaborated during the class period to accomplish the activity. |  |
| 3. What happened during the application of this cooperative strategy? |  |

- Students made 9 groups of 4 students and numbered from 1 to 4 each.
- Students made affinity groups; however, some students did not have classmates to form groups. For that reason, the teacher intervened to integrate them in a group.
- Some students forgot which number was assigned by the teacher.
- The teacher randomly called the students by their number to answer a question about the reading. Before writing on their own board, the students gathered to discuss the correct answer and support the student who had to answer and finally the assigning student showed the answer to the whole class.
- All the members collaborated in order to win points for their team.

| ield Notes ${ }^{\circ} 3$ |  |
| :---: | :---: |
| Institution: Unidad Educativa Fiscomision |  |
| Research: Claudia Johanna Álvarez Gaona | Ti |
|  |  |
| Date: $\quad$ Thursday, January |  |
| Descriptive Notes <br> 1. What cooperative strategies were implemented for the writing task? <br> - The jigsaw strategy was applied to skim central ideas from the paragraphs to order the reading. <br> 2. How were the students grouped together? <br> - In this case students formed homogeneous informal cooperative learning groups. This means that the groups were formed according the students' preference and they work in groups during the class period to do the activity. <br> 3. What happened during the application of this cooperative strategy? <br> - Eight groups of 4 students and one group of 3 students were formed. <br> - Each group had three sections of a reading, which was a professional biography. <br> - Previously, the student learned the structure of a short professional biography. And with this background knowledge, each student read the sections to give their contributions. <br> - Then students gave their opinions and identified the central idea of each paragraph with the whole group to order the biography. <br> - Then the teacher checked with the whole class the correct order, which was personal information first, then mission/vision and finally achievement/hobbies. <br> - To conclude the activity, students answer multiple-choice questions related to the reading. |  |
|  | 1.Did the cooperative activity allow students to practice at least one writing component? <br> - Yes. Student developed their skills to skim central ideas and use it to order a reading in this case a professional biography taking into account the structure that they learned. <br> 2. Were cooperative learning principles present during the cooperative work? <br> - During this strategy the most visible principles observed were simultaneous interaction, individual accountability and social skill. <br> - This is due to the fact that students was responsible to analyze the sections and was necessary to use communicate skills to order the reading puzzle. In addition, during this activity not only one group was working, on the contrary, there were several groups working at the same time. <br> 3. How did the application of the cooperative learning strategy help to develop this reading subskill? <br> - It was evident that students' prior knowledge before ordering a reading was essential for them to be able to identify the main idea of each paragraph. |

Annex 11. Matrix Research

| Theme | Cooperative learning and reading comprehension among bachillerato students at a public institution in Loja. School year 2023-2024 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Problem | Objectives | 5. Theoretical Framework | Methodological design. Action Research | Techniques/Instruments |
|  |  | Independent Variable <br> 5.1Cooperative Learning <br> 5.1.1. Theories of cooperative learning | Preliminary Investigation <br> Mixed action research model <br> - Quantitative | 1. Technique: Testing Instrument: Pre-test and post-test |
| General problem <br> How does cooperative learning influence on reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024? | General Objective <br> To analyze the different cooperative learning strategies on the development of reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024. | 5.1.1.1. Social interdependence theory <br> 5.1.1.2. Cognitive development theory <br> 5.1.1.3. Social learning theory <br> 5.1.1.4. Constructivist learning theory <br> 5.1.2. Cooperative learning in | Intervention model: Lesson plan PPP model <br> - Presentation <br> - Practice <br> - Production | 2. Technique: Survey <br> Instrument: <br> Questionnaire <br> 3. Technique: Observation Instrument: Field notes |
| Subproblems <br> What is the effectiveness of cooperative learning on reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024? | Specific Objectives <br> To identify the effectiveness of cooperative learning on reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024. | EFL classroom <br> 5.1.3. The teacher's role in cooperative learning <br> 5.1.4. Types of cooperative learning <br> 5.1.4.1. Formal cooperative learning <br> 5.1.4.2. Informal cooperative |  |  |
| What are the students' perceptions towards the use of cooperative learning on reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024? | To describe the students' perceptions towards the use of cooperative learning on the development of reading comprehension among bachillerato students at a public institution in Loja, school year 2023-2024. | learning <br> 5.1.4.3. Base group cooperative learning <br> 5.1.5. Principles of cooperative learning <br> 5.1.5.1. Positive <br> Interdependence <br> 5.1.5.2. Individual accountability <br> 5.1.5.3. Equal participation <br> 5.1.5.4. Simultaneous interaction. <br> 5.1.6. Cooperative learning strategies to teach reading |  |  |

comprehension
5.1.6.1 Jigsaw
5.1.6.2. Fan-n-pick
5.1.6.3. Numbered heads together
5.1.6.4. Think-pair-share
Dependent variable
5.2. Reading Comprehension
5.2.1. Reading skill
5.2.2. Definition of reading
comprehension
5.2.3. Factors that influence reading
comprehension
5.2.3.1. The reader's characteristics
5.2.3.2. The text characteristics
5.2.3.3. Activity characteristics
5.2.4. Models of reading
5.2.4.1. Bottom-up model
5.2.4.2. top-down model
5.2.5. Levels of reading
comprehension
5.2.5.1. Literal reading
comprehension
5.2.5.2. Interpretation reading
comprehension
5.2.5.3. Critical reading
comprehension
5.2.5.4. Creative reading
comprehension
5.2.6. Sub-skills for reading
comprehension
5.2.6.1. Skimming
5.2.6.2. Scanning
5.2.6.3. Making predictions
5.2.6.4. Vocabulary in context
5.3. Previous Studies

