

Original Article

Impact of Cooperative Learning on Thematic Vocabulary
in 9th Grade EFL StudentsFRANCISCA P. MATAMALA-JOFRE¹ <https://orcid.org/0009-0001-9233-7852>NICOLL S. CASTILLO-TORRES² <https://orcid.org/0009-0005-5194-5244>^{1,2}Universidad de Concepción, ChileCorresponding author: ncastillo@udec.cl

Article history:

Received: 07/15/2025

Revised: 09/05/2025

Accepted: 09/15/2025

Keywords:

*Action-Research**Cooperative Learning**EFL Students**Thematic Vocabulary**Vocabulary Expansion*

Abstract

This action-research project explores the impact of the Cooperative Learning (CL) method on the development of thematic vocabulary in 9th-grade EFL students. The study involved twenty-six students from a public school in Los Ángeles, Chile, all from low-income backgrounds. The ten-week intervention began with a project proposal presentation, followed by a pre-intervention vocabulary test, and the implementation of six sessions using the CL method. These sessions integrated its four main features and three specific structures. Student participation and performance were documented in a research logbook. During the final week, a post-intervention vocabulary test and a perception survey were conducted. The findings showed a noticeable improvement in students' thematic vocabulary expansion. Additionally, students reported feeling more motivated and confident when working in groups. They appreciated the use of innovative resources and dynamic activities. The study concludes that CL can effectively enhance vocabulary learning while fostering collaborative skills and active participation among learners.

Introduction

In Chile, learning a foreign language, particularly English, has become essential for personal and professional growth in the 21st century (Agencia de Calidad de la Educación, 2018). English is crucial for global communication, enhancing both linguistic skills and cultural awareness (MINEDUC, 2024). However, studies indicate that only 32% of 11th-grade students in Chile achieve basic to intermediate proficiency in English (Agencia de la Calidad de la Educación, 2018). Moreover, international reports show that Chile consistently ranks at a moderate proficiency level in English (EF EPI, 2020-2023).

This issue became evident during prior teaching experiences and recent observations of 9th-grade English classes at a public school in Los Ángeles. The students demonstrated a low level of vocabulary and English proficiency, and traditional teaching methods appeared to limit their participation. National and international assessments highlight three key contributing factors: the insufficient English proficiency of students, the reliance on traditional teaching methods, and classroom organization, which impacts student interaction and engagement.

To address these challenges, this action research aims to explore the impact of Cooperative Learning (CL) on expanding the thematic vocabulary of 9th-grade English as a Foreign Language (EFL) students. The study draws upon the CL approaches proposed by Johnson and Johnson (2008) and Kagan (2013) to create an interactive learning environment. The research follows an action research cycle consisting of four main stages: observation (context description, identification of the problem, and theoretical framework), planning and action (development and implementation of the intervention), and reflection (analysis of results, discussion, and conclusions).

This research is pertinent as it seeks to contribute to improving English language proficiency among Chilean students by integrating innovative teaching strategies. The study aims to provide insights into the effectiveness of Cooperative Learning in fostering language acquisition and enhancing classroom dynamics.

Methods and Materials

This research was conducted using a mixed-methods approach, combining both quantitative and qualitative data to obtain a comprehensive understanding of the impact of the Cooperative Learning (CL) method on thematic vocabulary acquisition among ninth-grade English as a Foreign Language (EFL) students. The quantitative component focused on measuring students' vocabulary development through pre- and post-intervention vocabulary tests and a Likert-scale perception survey. These tools provided measurable data that allowed for a comparison of learning outcomes before and after the implementation of CL.

The qualitative component was incorporated through open-ended questions in the perception survey, allowing students to express their opinions and experiences with the CL method in their own words. A research logbook was also used, where the teacher-researchers recorded classroom observations, student behavior, and reflections throughout the intervention. This logbook offered contextual and descriptive insights into the process and student engagement. The combination of both approaches strengthened the validity of the findings, as the quantitative data measured the effectiveness of the method in vocabulary acquisition, while the qualitative data enriched the analysis by capturing students' perceptions, emotional responses, and classroom dynamics. This mixed-methods approach is in line with the recommendations of Hernández, Fernández, and Baptista (2014), who argue that mixed methods provide a deeper and more holistic understanding of educational phenomena.

The study followed an action research (AR) design, as outlined by Mills and Butroyd (2014). The design included four stages: identifying the problem, collecting data, implementing an action plan, and evaluating the results. This design allowed the researchers to intervene directly in the classroom and make decisions based on systematic evidence, with the aim of improving teaching practices and student learning outcomes.

This research was both exploratory and explanatory in nature. It was exploratory in that it sought to investigate the potential effects of the CL method on vocabulary acquisition in a specific context, and explanatory in that it aimed to measure the changes in students' vocabulary knowledge after the intervention.

The study involved a sample of 26 ninth-grade students, aged between 14 and 16 years, from Liceo Bicentenario Los Ángeles, a public high school located in southern Chile. The students were selected from a larger class of 43 students during the second semester of 2024. Most of the students came from low-income families and attended two 90-minute English lessons each week. The sampling method was non-probabilistic and intentional, based on availability and voluntary participation. Informed consent was obtained from the parents, and assent was received from the students to ensure compliance with ethical standards.

The intervention lasted ten weeks. The first four weeks were dedicated to planning, including presenting the proposal, designing lessons, validating instruments, and obtaining consent. The remaining six weeks involved the implementation of the intervention, which consisted of one pre-test session, six 90-minute CL sessions, and one post-test and perception survey session.

The CL method was based on the theoretical framework of Johnson & Johnson (2008), Kagan (2013), and Pujolàs (2011), integrating four key features and three cooperative structures. Classroom organization involved arranging students in groups of four, which replaced the traditional row seating with a more circular or square arrangement to encourage face-to-face interaction. This setup promoted communication and collaboration, as recommended by Gavilan and Alario (2010). Initially, students worked in informal, self-selected groups, but after classroom observations, the teacher restructured the groups to ensure heterogeneity in terms of abilities and participation levels, following Coll and Colomina's (1990) recommendation that heterogeneous teams improve cooperative outcomes.

Each student was assigned a rotating role within their group: Leader (Coordinator), Secretary, Supervisor (Material Manager), and Motivator (Spokesperson). These roles were adapted from Pujolàs and Lago (2011) to ensure clarity and understanding among the students. The aim was to increase individual accountability and ensure equal participation, following the framework proposed by Johnson & Johnson (1994). In the first session, students co-constructed classroom norms with the teacher, which included respectful communication, active listening, turn-taking, and task focus, aligning with the recommendations of Johnson, Johnson, and Holubec (1994), who emphasize the importance of explicitly teaching social skills for effective group work.

Several cooperative learning structures were utilized during the intervention. The 1-2-4 structure (Pujolàs, 2008) had students first think individually about a question, then share their ideas with a partner, and finally discuss in their full group. This structure facilitated gradual interaction and ensured that all students' voices were heard. The "Pencils in the Center" strategy (Poquet-Catalá, 2024) required students to discuss a topic collaboratively before any member could write, placing their pencils in the center of the table as a sign of consensus. This encouraged shared accountability and thoughtful deliberation. Additionally, the "Numbered Heads Together" structure (Kagan, 2013) involved assigning numbers to students within their groups. After a discussion, the teacher called a number, and the student with that number had to respond, ensuring equal participation and engagement.

Data collection involved three main instruments: vocabulary tests (pre- and post-intervention test), a perception survey, and a research logbook. The vocabulary tests were designed to evaluate thematic vocabulary from Unit 3: Sports (pre-test) and Unit 4: Food, Glorious Food (post-test), based on the Chilean curriculum. These tests included four items: reading comprehension (True/False with short text), crossword puzzle, fill-in-the-gap activity, and a writing task. The tests were validated by five experts through expert judgment methodology, ensuring relevance, clarity, and alignment with learning objectives.

The perception survey was administered after the intervention and consisted of 16 Likert-scale items and 3 open-ended questions in Spanish. The survey focused on three dimensions: affective (motivation and enjoyment), pedagogical (perceived effectiveness of CL structures and activities), and linguistic (perception of vocabulary improvement). The survey was also validated by experts, and minor linguistic adjustments were made based on their feedback. The research logbook was used by the teacher-researchers to document each CL session, including observations on student participation, group dynamics, difficulties, and reflections. This logbook was validated to ensure consistency and focus.

The instructional materials and resources used in the intervention included four primary tools aligned with CL methodology: flashcards (Ramírez Toledano, 2008) for vocabulary practice, online games (Wordwall) as warm-up activities to activate prior knowledge (Licorish et al., 2018), short texts (Garrote, 2019) for reading input related to food topics, and crosswords (Lomba Pérez et al., 2021) as formative assessments to reinforce vocabulary recall. Additionally, exit tickets were used at the end of some sessions to evaluate both individual and group perceptions of the day's learning.

Results

Using the CL approach, there was notable enhancement in students' thematic vocabulary knowledge. An average overall percentage score of 48% in the pre-test to 78% in the post-intervention test, representing a 30% increase across the four assessed areas. Relative to the baseline, the gains were largest for the crossword puzzle task (+45%) and for a writing task (+41%), indicating that CL method may have particularly strengthened student's ability to recall and apply vocabulary in context.

The perception survey also corroborated this trend. Affective, pedagogical, and linguistic dimensions, most students had favorable attitudes towards the CL approach, highlighting the value of interactive resources like flashcards and crossword. While 27% explicitly mentioned flashcards as useful, 23% valued group work, suggesting that these cooperative strategies were integral to their learning experience. Nevertheless, minor concerns emerged, such as a preference among some students to work in pairs and occasional distractions from classroom noise.

Observations recorded in the research logbook documented the increased independence, collaboration and engagement throughout the six-week intervention. These qualitative insights complement the quantitative data, reinforcing the positive impact of the CL method on thematic vocabulary acquisition. Taken together, these results suggest that the intervention successfully addressed the challenges identified in the pre-test, supporting the specific objectives of the study and highlighting the potential of CL to create more participatory and effective learning environments.

Participants

The participants were 26 students of 2° medio (age range 16–17) from a Chilean public school. [The sample consisted of an equal number of male and female students. None of the students had previous experience of systematic cooperative learning. All students and parents provided informed consent to participate in the action research

Instrument

The data collection relied on a combination of quantitative and qualitative instruments specifically designed to comprehensively assess the impact of the CL method on students' thematic vocabulary acquisition and perceptions of the learning process.

The primary instrument was a researcher-designed vocabulary test administered in two phases—as a pre-test prior to the intervention and as a post-test upon completion of the six-week implementation. This test was carefully aligned with the thematic units covered during the intervention and included four distinct tasks to measure different aspects of vocabulary proficiency:

- *Reading comprehension:* Students read a short text containing target vocabulary and answered comprehension questions, evaluating their ability to recognize and understand vocabulary in context.
- *Crossword puzzle:* This task assessed students' ability to recall and associate vocabulary meanings, requiring them to retrieve and apply definitions or synonyms in a problem-solving format.
- *Fill-in-the-gaps activity:* Students selected appropriate vocabulary items to complete sentences, testing their precision in applying target language structures within meaningful contexts.
- *Writing task:* Participants were instructed to produce short written responses or sentences integrating thematic vocabulary, thereby assessing productive skills and the ability to use new vocabulary coherently in written discourse.

The test was subjected to expert judgment validation, involving five specialists in English language teaching and assessment who reviewed it for content validity, clarity, and alignment with the learning objectives of the intervention. Based on their feedback, minor modifications were made to improve item formulation and ensure that the instrument robustly measured the intended constructs.

Additionally, a perception survey was administered following the intervention. This instrument consisted of 16 Likert-scale items, structured across three dimensions.:

- *The affective dimension*, exploring students' motivation, enjoyment, and comfort with CL activities;
- *The pedagogical dimension*, assessing perceptions of classroom organization, role clarity, and the effectiveness of specific CL structures; and
- *The linguistic dimension*, focusing on students' beliefs about their vocabulary improvement and the utility of learning tools such as flashcards and crosswords.

To gather qualitative data, the survey also included three open-ended questions, which invited students to share opinions on the most and least effective aspects of the intervention and to offer suggestions for improvement. These qualitative responses were later coded and analyzed thematically.

Finally, a research logbook maintained by the teacher-researchers served as an observational tool throughout the intervention. This logbook systematically recorded students' engagement, role performance, group interactions, emergent conflicts, and overall classroom atmosphere. This instrument provided valuable contextual insights, triangulating quantitative results, and offering a deeper understanding of how the CL method functioned in practice.

Together, these instruments were designed to provide a multi-dimensional perspective, enabling the study not only to measure changes in thematic vocabulary knowledge quantitatively but also to explore the affective and social dynamics fostered by the CL approach.

Procedure

The intervention lasted six weeks, with one session focused on collaborative learning each week. It included thematic vocabulary through flashcards, online games, exit tickets, short stories, and teamwork activities, such as group roles and norms. We gave the pre-test before starting the sessions and the post-intervention test right after the last one. Each lesson included classroom observations that looked at student attitudes, interactions, role performance, and conflict resolution. This three-part method allowed for a thorough assessment of the impact of the collaborative learning method.

Discussion

The results of this study show that using the Cooperative Learning (CL) method greatly improves thematic vocabulary knowledge among Chilean secondary EFL students. The overall increase of 30% from pre-test to post-intervention test, with particularly significant gains in the crossword (45%) and writing task (41%), shows that structured cooperative activities help both vocabulary recall and use.

These findings support earlier research on the benefits of CL in language learning. Johnson and Johnson (1999) argue that the positive interdependence and individual accountability found in CL frameworks boost students' cognitive engagement and retention. In this study, using flashcards, online games, and group-designed activities fits well with these ideas, promoting a deeper understanding of new vocabulary.

Additionally, students' perceptions back up the quantitative results. Most participants report high satisfaction and engagement levels, noting that working together and using interactive resources make vocabulary learning more enjoyable and effective. This connects with Krashen's (1982) Affective Filter Hypothesis, which suggests that a low stress, motivating environment helps in acquiring language. The survey results and open-ended responses indicate that the CL method reduces anxiety and increases participation, positively affecting vocabulary development.

However, while most students view the method positively, some face challenges with group dynamics, such as uneven participation and noise distractions. These points stress the need to carefully structure roles and group sizes, as Kagan (1994) proposes, to ensure balanced involvement and limit interruptions. Smaller groups or pairs could help address these issues, according to students who prefer more intimate collaborative settings.

This research contributes to the field by providing evidence on the impact of CL on thematic vocabulary learning in a Chilean EFL context, which is an area that needs more attention in existing literature. It highlights the teaching value of mixing cooperative structures with tools like flashcards and digital games, which address both cognitive and emotional aspects of vocabulary learning.

Future studies could build on this work by looking into long-term retention and transfer of vocabulary knowledge gained through CL, or by examining its effects on other language areas such as oral fluency or writing complexity. Overall, the study confirms that CL is a very effective method for enhancing thematic vocabulary, providing practical insights for EFL educators who want to create more engaging and supportive learning environments.

Conclusions

This study showed that using the Cooperative Learning (CL) method effectively improved thematic vocabulary acquisition among secondary EFL students. It also encouraged collaboration and created a positive classroom environment. The intervention met its goals, even with external challenges that required changes to the original plan. The findings confirmed that combining CL

structures with multimodal resources led to deeper vocabulary processing and boosted student motivation, even during the usually low-engagement period at the end of the school year.

The study added to our knowledge by providing evidence of how CL works in a Chilean EFL context, which has little existing research. It emphasized how the method can offer both cognitive and emotional benefits, highlighting the value of collaborative approaches in learning languages. These results suggested practical uses for teachers looking to improve vocabulary instruction through student-centered, interactive methods. Future research could investigate how well vocabulary learned through CL is retained over time, how it can be used at different educational levels, or how it could work in multilingual and multicultural classrooms to better understand its possible impact.

Acknowledgments

We are grateful to God for granting us the strength, passion, and patience that made it possible to carry out this research and share its results. This paper reflects the dedication and effort we invested in the development of our thesis.

We would also like to thank our families and friends who always stand behind and support us without reserve. This article is not only a milestone in our own professional growth, but also an offering to the field of English Language Education.

We hope our findings can help other teachers gain new perspectives around the reality in today's classrooms and to find new strategies to adapt to students' needs. We hope to foster deeper, more connected and more thoughtful word instruction as we share this learning opportunity.

References

- Agencia de Calidad de la Educación. (2018). *Informe de resultados Estudio Nacional de Inglés III medio 2017*. Santiago de Chile.
https://archivos.agenciaeducacion.cl/Informe_Estudio_Nacional_Ingles_III.pdf
- EF Education First. (2020). *English Proficiency Index 2020*.
<https://www.ef.com/assetscdn/WIBlwq6RdJvcD9bc8RMd/cefcom-epi-site/reports/2020/ef-epi-2020-english.pdf>
- EF Education First. (2021). *English Proficiency Index 2021*.
<https://www.ef.com/assetscdn/WIBlwq6RdJvcD9bc8RMd/cefcom-epi-site/reports/2021/ef-epi-2021-english.pdf>
- EF Education First. (2022). *English Proficiency Index 2022*.
<https://www.ef.com/assetscdn/WIBlwq6RdJvcD9bc8RMd/cefcom-epi-site/reports/2022/ef-epi-2022-english.pdf>
- EF Education First. (2023). *English Proficiency Index 2023*.
<https://www.ef.com/assetscdn/WIBlwq6RdJvcD9bc8RMd/cefcom-epi-site/reports/2023/ef-epi-2023-english.pdf>
- Hernández, R., Fernández, C., & Baptista, P. (2014). *Metodología de la investigación* (6a ed.). McGraw Hill.

- Johnson, D. W., & Johnson, R. T. (1994). *Learning together and alone: Cooperative, competitive, and individualistic learning*. Prentice-Hall.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1994). *El aprendizaje cooperativo en el aula*. Association for Supervision and Curriculum Development.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1999). *El aprendizaje cooperativo en el aula*. Paidós.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (2008). *El aprendizaje cooperativo en el aula* (1a ed.). Paidós.
- Kagan, S. (2013). *Cooperative learning structures*. Kagan Publishing.
- Krashen, S. (1982). *Principles and practice in second language acquisition*. Pergamon Press.
- Licorish, S. A., Owen, H. E., Daniel, B., & George, J. L. (2018). Students' perception of Kahoot!'s influence on teaching and learning. *Research and Practice in Technology Enhanced Learning*, 13(1), 1–23. <https://doi.org/10.1186/s41039-018-0078-8>
- MINEDUC. (2024). *Bases curriculares inglés 1° Básico a 2° Medio: Propuesta de actualización para consulta pública 2024*. Ministerio de Educación de Chile. https://www.curriculumnacional.cl/614/articles-351761_recurso_010.pdf
- Pujolàs, P., & Lago, J. R. (Coords.). (2011). *El programa CA/AC (Cooperar para Aprender/Aprender a Cooperar) para enseñar a aprender en equipo: Implementación del aprendizaje cooperativo en el aula*. Universidad de Vic. https://cife-ei-caac.com/wp-content/uploads/2015/06/EL_APRENDIZAJE_COOPERATIVO.pdf
- Poquet Catalá, R. (2024). Lápices al centro como técnica de aprendizaje cooperativo. En L. Villalustre Martínez & M. Cueli (Eds.), *Una mirada hacia la Universidad del futuro* (pp. 13–22). Servicio de Publicaciones de la Universidad de Oviedo. <https://hdl.handle.net/10651/74734>
- Ramírez Toledano, R. (2008). Materiales y recursos en la enseñanza del inglés. *Revista Innovación y Experiencias Educativas*, 13. https://archivos.csif.es/archivos/andalucia/ensenanza/revistas/csicsif/revista/pdf/Numero_13/RAFAEL_RAMIREZ_1.pdf
- Schmitt, N. (2008). Review article: Instructed second language vocabulary learning. *Language Teaching Research*, 12(3), 329–363. <https://doi.org/10.1177/1362168808089921>