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Pair Research Tasks: Promoting Educational Research with Pre-Service Teachers

Tareas de investigación en parejas: fomento de la investigación educativa en profesores en formación

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Abstract

This paper presents a study that explores the role of pair-work tasks to promote educational research in 20 pre-service English language teachers (eleven males and nine females) of a Colombian public university. The project was carried out to enhance educational research skills and knowledge by developing theoretical-practical pair-work research tasks. Data was collected through observation field notes, semi-structured interviews, and field journals. The results suggest that pair-work research tasks increased learners' opportunities to acquire theoretical and practical educational research knowledge and skills. Due to this exercise, the participants learned to define, formulate research objectives-questions, review the literature, and state research methodologies to finally write their research proposals. Additionally, pair-work research assignments offered an effective way to work together, negotiate, reach agreements, and gain experience by conducting theoretical and practical research exercises.

Keywords: academic research proposal, educational research, pair-work, research knowledge, task

Resumen

Este artículo presenta un estudio investigativo que explora el rol de las tareas en pareja para promover la investigación educativa en 20 profesores de inglés en formación (once hombres y nueve mujeres) de una universidad pública colombiana. El proyecto fue realizado para ampliar las habilidades y el conocimiento de la investigación educativa mediante el desarrollo de tareas de investigación teórico-prácticas de trabajo en pareja. La información se recopiló a través de notas de campo de observaciones, entrevistas semiestructuradas y diarios de campo. Los resultados sugieren que las tareas de investigación en parejas aumentaron las oportunidades de los estudiantes para adquirir conocimientos y habilidades en investigación educativa. Debido a esa práctica, los participantes aprendieron a definir, formular objetivos-preguntas de investigación, revisar la literatura y plantear metodologías de investigación para finalmente redactar sus propuestas de investigación. Las asignaciones en

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parejas ofrecieron una manera eficaz de trabajar juntos, negociar, llegar a acuerdos y ganar experiencia mediante la realización de ejercicios de investigación teóricos y prácticos.

Palabras clave: propuesta de investigación, investigación educativa, trabajo en pareja, conocimiento de investigación, tarea

Introduction

Promoting research in undergraduate programs is an essential component of the training process. Such knowledge allows students to reflect upon their future practice, learn about the theory of inquiry, and how to use that insight to interpret classroom difficulties practically. In a study regarding research, Edwards (as cited in [Reyes-Cruz et al., 2017](#)) stated that undergraduate education programs enable pre-service teachers to solve teaching and learning challenges, in addition to “encouraging preservice teachers to do research provided reflective practice” ([Viáfara-González, 2008, p. 2](#)). Based on Decree No. 2566 (2003) from the [Colombian Ministry of Education \(MEN\)](#), training learners in research can produce new knowledge and grant access to scientific information. In this vein, developing research in undergraduate English as a Foreign Language (EFL) learners would be a possibility to broaden their theoretical constructs of research, examine the implications of conducting it, and analyze the ways to integrate inquiry into the teaching and learning practice.

In reflections analyzing research, [Hensel \(2012\)](#), [Petrella and Jung, \(2008\)](#), and [Blank \(1982\)](#) agreed that this component is fundamental for a high impact in undergraduate programs. In this perspective, we consider that promoting research plays a significant role in training teachers. First, this knowledge enhances the understanding of the teaching profession by means of constant reflections on approaches, methods, or techniques that can be used to overcome teaching and learning challenges. Secondly, inquiry offers the possibility to exchange ideas, learn from the results of others, negotiate,

and work with others to gain experience in order to self-evaluate teaching practices. Thus, educating undergraduates in research components inspires a new understanding of the teaching and learning processes, helps overcome difficulties in the area, and generates research proposals.

On the other hand, [Castro-Garcés and Martínez-Granada \(2016\)](#), [Fagan \(2015\)](#), [Akyel \(2015\)](#), and [Banegas \(2012\)](#) ascertained that in the particular context of EFL programs, encouraging research would enhance undergraduates’ possibilities to develop insights into language teaching. These insights would help students self-evaluate their future EFL practices, foster teamwork, and reflect on what they do in the EFL classrooms. However, we realized that 20 trainee teachers from the EFL undergraduate program of a public university had multiple difficulties in formulating a research proposal. They struggled to choose and define their research topics, stating research objectives and questions, conducting literature reviews, and formulating the methodology of their proposals.

The worst thing was that they had to present said research proposals as an option to graduate in that semester. Therefore, we needed to find an alternative to meet this university requirement and teach them how to do research. One of the researchers had a previous experience with pair-work and proposed it as a plan to help overcome this dilemma. Then, pair-work assignments were considered as an opportunity to overcome the barriers these pre-service teachers had. On pair-work research, [Sert \(2005\)](#); [Raja and Saeed \(2012\)](#), and [Córdoba \(2013\)](#) suggested that such methodology contributed to enrich cooperative work, social interaction, and enrich classroom performance. Nevertheless, such findings seemed not to be put into context. Therefore, we decided to apply pair-work research assignments as an opportunity to broaden the theoretical and practical usability of research and overcome the barriers these pre-service teachers presented. Thereupon, this research attempts to find an answer to the research question: To what extent do pair-work assignments promote educational research in undergraduate pre-service EFL teachers?

Theoretical framework

Educational research in undergraduate programs

There has been an increasing amount of literature on undergraduate research as a critical component in initial teacher education (e.g. [Blank, 1982](#); [Hensel, 2012](#); [Walkington, 2015](#); [Petrella and Jung, 2008](#)). These authors all agree that research creates academic environments to understand teaching and learning processes better and enhance teaching reflection. In our perception, research encourages undergraduates to learn how to use academic-scientific works, helps them discover their research interests, and provides opportunities to start a possible research career. Furthermore, research enables learners to use research results and interpret scientific knowledge with a certain degree of confidence, and it fosters undergraduates' capacities to integrate theory and practice.

Additionally, [Hensel \(2012\)](#) states that undergraduate research captures students' interest and creates enthusiasm for making an original intellectual or creative contribution to their field. [Petrella and Jung \(2008\)](#) say that "incorporating a research component (...) allows students to develop independent critical thinking skills along with oral and written communication skills. The research process impacts valuable learning objectives that have lasting influence as undergraduates prepare for professional service" (p.1). According to [Blank \(1982\)](#), this component encourages the practice of theoretical and practical tasks that simulate difficulties which need to be solved or analyzed from multiple perspectives.

Undergraduate research is essential for fostering a research culture that provides high-quality research experiences for students, along with a broad disciplinary understanding in the field. Encouraging such knowledge may be a way to successfully articulate the mission, vision, and strategic plans of the institution. Adopting research may be a pivotal component to mobilize the possibilities of undergraduate education programs to help develop education and foster critical thinking among the pre-service teachers. We defend a critical research perception as a component that generates

opportunities to develop critical thinking, reflection, innovation, and disciplinary understanding.

This research perspective is shared by [Cárdenas-Ramos and Faustino \(2003\)](#), [Akyel \(2015\)](#), [Allison and Carey \(2007\)](#), [Banegas \(2012\)](#), [Benson et al. \(2009\)](#), [Borko et al. \(2007\)](#), [Borg \(2009\)](#), [Fagan, \(2015\)](#), and [Castro-Garcés and Martínez-Granada, \(2016\)](#). They agree that such knowledge encourages permanent academic and pedagogical examination of problems to discover intellectual responses and make decisions in the field of education. In this sense, research helps learners become aware of the need to conduct constant reflection in education. This perspective suggests that research is a meaningful alternative for EFL undergraduates to empower the EFL learning process, increase undergraduates' knowledge about language, the theories about language learning, and the methodologies applied to foster EFL learning and teaching.

Based on the previous perspective, we are clearly in contrast with what the American Educational Research Association (AERA) (2020) stated as educational research. They expressed that this is a careful, systematic, and reflective process that provides reliable contributions by developing flexible examination that offers measurable and statistical interpretations of data to overgeneralize results. We confronted [Ary et al. \(2018\)](#) when they stated that "(...) the scientific approach is regarded as the single most reliable source of new knowledge" (p. 20). For them, research is a scientific field of study that embraces the full spectrum of rigorous methods that answer questions and drive new tools and techniques. However, we believe that more than discovering realities, it is about assuming statistical interpretations as facts that represent situations or embracing the full spectrum of rigorous methods to respond to the research questions appropriately. Research, especially in education, offers the possibility to understand human behavior and the interaction process to assume a reflective perspective about human perceptions, about a problem, and to provide various interpretations of data by using prolonged engagements. Thus, we may state that enhancing education research helps foresee, clarify, associate, and analyze how to improve the teaching and learning process both analytically and critically.

Pair-work assignments

Pair-work assignment is a teaching and learning strategy that increases student-centered classes, enriches classroom environments, raises motivation, and enhances class productivity. Several studies ([Sert, 2005](#); [Raja and Saeed, 2012](#); [Córdoba 2013](#)) define pair-work as a teaching technique that increases opportunities to develop intellectual capacities. In this context, it “creates a high level of academic solidarity and confidence which increases task development” ([Sert, 2005, p. 1](#)). Moreover, [Córdoba 2013](#) concluded that this method allows students to work together, assume responsibilities for their learning process, and expand their knowledge through constant negotiation with their classmates. Thus, teamwork has become an alternative method to clarify, double-check, and finish assignments by interacting, working cooperatively, and making decisions on how to submit a task.

We agree that this method, as a teaching and learning methodology could strengthen research and facilitate the construction of theoretical and practical knowledge. [Kutlay \(2013\)](#), [Lombard and Kloppers \(2015\)](#), [Lopatto \(2003\)](#), [McNulty Ferri \(2010\)](#), [Mello et al. \(2008\)](#), and [Raja and Saeed \(2012\)](#) all conclude that group work assignments are an opportunity to apply what the prospective teachers are learning: “pair work provides different alternatives to foster learning” ([Bercicova, 2007, p.22](#)). [Achmad \(2014\)](#) explains that pair-work assignments are a valuable teaching strategy that empowers classroom interaction, self-directed work, and independence, in addition to lessening teachers’ class involvement.

Equally important, students who are less competent in research can receive support from their classmates to become proficient in this area. This point of view is related to a well-known theory (the zone of proximal development) proposed by [Vygotsky \(1998\)](#), which “says that if a more competent person and a less competent person face a task, the less competent person becomes independently proficient at what was initially a jointly accomplished task” ([Chaiklin, 2003, p. 2](#)). In this sense, group work seems to be an option to foster research knowledge. If one student does not possess the knowledge to comply with the

tasks, a classmate can help him/her overcome the barriers. The students would then cooperate to learn from each other and grow when they work alone to encourage the learning process. This study suggests that this strategy would significantly encourage such knowledge in 20 trainee teachers because pair-work seemed to be a possibility of developing tasks with a higher level of success and increasing opportunities to become independent and grow into research. However, there is no theoretical evidence that ascertains the importance of such tasks to promote research in forthcoming teachers.

Methodology

This study used qualitative analysis to gain insights into the effectiveness of pair-work tasks to encourage educational research in 20 pre-service EFL teachers of a public university. [Berg and Lune \(2004\)](#) and [Brydon-Miller et al. \(2003\)](#) state that this approach helps educational researchers to holistically examine problems from their practice.

Research context and participants

This study took place at a public university located in Florencia, Colombia. The institution has a Department of Education Sciences that offers over five undergraduate degree programs: Social Sciences, Mathematics, Spanish and Literature, Child Pedagogy, and the EFL Program. The study plan suggests that the students complete two research courses, submit and implement a research proposal, and socialize its results to get the bachelor’s degree in EFL. Consequently, when the undergraduates are taking the fifth semester, they are supposed to learn educational research theory and submit a research proposal in the sixth semester. Then, in the seventh and eighth semesters, the students need to implement their research proposals. Finally, in the ninth semester, they socialize their results. The participants of this study were 20 undergraduates, whose age ranged between 20 and 25 years old. In addition, there were twelve females and eight males who showed a shared willingness to overcome their barriers in order to complete a research proposal.

Data collection instruments

We used three different instruments to gather information: observations, interviews, and field journals. Firstly, we conducted classroom observations to understand the attitudes, behavior, feelings, and types of ongoing interactions during the assignments. Jacobson *et al.* argue that “the use of observation provides direct access to the phenomenon under consideration by providing accurate and complete information from the participants’ behavior” (as cited in [Córdoba, 2016, p. 6](#)). The authors support this instrument with semi-structured interviews. On his part, [Wengraf \(2001\)](#) shows that this method is an indispensable way to collect qualitative data and improve knowledge of the phenomenon under research. [DiCicco-Bloom and Crabtree \(2006\)](#) conclude that this kind of interview is a meaningful way to collect qualitative data. Based on that, we conducted six interviews with the undergraduate learners.

Procedures to implement the task in EFL

To carry out the study, we followed three steps and invested 60 hours. During step one (pair-work assignment organization), the researchers explained each of the ten research tasks, the objectives, and the criteria of the exercises. Then, we negotiated the deadlines and the amount of time available for each work (see [Appendix 1: List of Pair-work assignments with aims and expected results](#)). For step two (pair-work assignment development), the students performed their corresponding tasks. Meanwhile, they exchanged their ideas with other pairs and submitted their draft reports. At this stage, they also

discussed with other teams to refine their work. In step three (pair-work assignment presentation), the undergraduates presented their written reports based on the criteria designed for each activity. Then, the researchers gave the information back to the students and asked them to correct them with different pen colors. They also had to self-evaluate their performance while completing the tasks. Once the learners did that, the researchers checked the written reports, and the undergraduates received meaningful feedback.

Data analysis

This section provides an overview of the process for analyzing the data that we collected, examined, compared, and contrasted, to finalize with the emergent theoretical model, as shown in [Table 1](#) along with the procedures followed.

All observations and interviews were audio-video taped and lasted approximately 40 minutes. They served to obtain reliable information about the efficacy of tasks to enhance research abilities. We then contrasted the data obtained from these sources with the researchers’ field journals. [Wallace \(2008\)](#) states that this technique allows researchers to collect essential data, especially in qualitative research studies. Moreover, “keeping and using the journal in the qualitative research process creates transparency in the research process and explores the impact of critical self-reflection on research design” ([Ortlipp, 2008, p. 1](#)). In addition, this process allowed the researchers to keep a written reflection and record of the usefulness of pair-work

Table 1. Grounded theory analysis process

Data collection	Analysis	Findings	Emergent theoretical model
Procedure - Observations - Semi-structured Interviews - Field journals Results - Transcripts - Documents	Procedure - First- and second-order coding - Theme development - Literature review Results - Coded texts - Themes	Procedure - Description of the themes Results - Description of the themes	Procedure - Linking identified themes Results - Coherent framework

Source: Authors

assignments to promote research, as well as to collect information during a continuous process. We transcribed all the information into Microsoft Word documents, marked each document with names, dates, and organized them in different files (interviews, observations, and journals).

We started the analysis by coding the transcribed data inductively. At this stage, we identified the initial categories without using prior codes. In the following step, we implemented selective coding to integrate the initial codes into more elaborated patterns to form coherent theoretical categories. We then reviewed the literature to contrast the information by using constant comparison to adequately examine the participants' perception of the research process. [Glaser \(2007\)](#) argues that constant comparison is a research method that enhances validity and trustworthiness to data analysis. [Table 2](#) relates what we found from the initial codes to the literature review.

Findings

The data analysis and interpretations followed the principles of grounded theory. Consequently, we collected the data, transcribed it, labeled it, and coded it on Word documents with names, dates, and purposes. Once we organized the information, we grouped and wrote the initial concepts. Then, categories emerged from the ideas: initial and repeating codes (codes and segments). We elaborated meaning and links among their types to construct the theoretical descriptive and explanatory model. Then, we went back and forth to compare and redefine categories, concepts, and interpretations based on the ideas, codes, and segments. The grounded theory "provides an explanatory framework to understand the phenomenon under investigation, so it helps to identify, refine and integrate categories, and ultimately to develop theory" ([Strauss and Corbin, 1994, p. 70](#)). This method helps researchers "decide

Table 2. Examples of what was found in each step (initial categories, selecting codes, coherent theoretical categories, and literature review)

Initial categories	Selective coding	Coherent theoretical categories	Literature review
- Promoting research knowledge in EFL programs - Research in EFL programs	- Increases research knowledge. - Facilitates practical and theoretical rehearsal. - Explores foreign language research. - Helps identify research characteristics and processes. - Facilitates research involvement. - Gains research experience. - Allows opportunities to develop research proposals.	Promoting research in the EFL program.	López-Alvarado (2017) Walkington (2015) ; Hensel (2012) ; Petrella and Jung (2008) ; Blank (1982) Lombard and Kloppers (2015) ; Ware et al. (2002) Lombard and Kloppers (2015) ; Ware et al. (2002) - Research knowledge helps students know the philosophy and features of inquiry.
- Applying pair-work research tasks in this group of undergraduates. - Pair-work research tasks in undergraduates.	- Facilitates opportunities to develop practical tasks. - Offers possibilities to do theoretical and practical tasks. - Helps overcome weaknesses to conduct research. - Augments opportunities to conduct research proposals collaboratively. - Enhances possibilities to exchange research ideas.	Applying pair-work research tasks as a way to enhance EFL research.	Sert (2005) ; Raja and Saeed (2012) ; Córdoba (2013) Sert (2005) ; Kutlay (2013) ; Lombard and Kloppers (2015) ; Lopatto (2003) ; McNulty Ferri (2010) ; Mello et al. (2008) ; Raja and Saeed (2012) ; Achmad (2014) - Pair-work facilitates cooperative work and enhances research in EFL.

Source: Authors

on the codes to be used, to group the information into categories and subcategories, and to integrate codes for analysis" (Pérez and Alvira, 2017, p. 109). In this regard, Kreiner et al. (2006) suggested three phases. First, coding shows the list of codes. Next, the themes, in which the first codes make significant themes. Thirdly, the codes and themes help develop categories, as demonstrated by Table 3.

Promoting research in the EFL program

This category was created with three main themes (research knowledge, benefits of conducting research, and learning about the research process in detail) and eleven repeating codes supporting these statements. Each of the themes will be explained below.

Research knowledge

Informants emphasized that promoting research knowledge led them to care about the theory and practice of research as the main component to reflect upon the teaching and learning process. They

increased their research knowledge by developing tasks that demanded that they understood what research is and the implications of integrating such knowledge in the field of education.

Participant 1 stated that *the formation in educational research was a good way to learn about the theory of research, its principles and its basic characteristics* (interview 2).

Participant 2 considered that *enhancing educational research knowledge helped have a general understanding of what research entails in terms of benefits for education* (interview 5).

Participant 3 explained that *expanding his background in research let him open his conception about this important component of professional development. He learned research has different ways to get a better understanding of a problem or difficulty* (interview 3).

The participants shared this perception about research knowledge because it made it possible to get acquainted with the principles, philosophy,

Table 3. List of codes, themes, and categories

Codes	Themes	Categories
- Facilitates opportunities to achieve research competencies - Practical and theoretical assignments help foster research - Increases research knowledge. - Helps realize the importance of EFL education	Research knowledge	Promotes research in the EFL program
- Helps identify research characteristics and processes - Facilitates more research involving - Helps develop theoretical and practical research assignments - Allows learners to know about the usability of research - Enables students to have research accountability	Benefits of conducting research and learning about the research process in detail	
- Offers opportunities to explore foreign language research - Benefits the EFL education program and profession	Explores foreign language research process	
- Enhances understanding of the EFL education process - Understands the EFL education process - Gains insights from their classmates, teacher-researches, and the reading material	Pair-work as a way to foster EFL research education	Applies pair-work research tasks as a way to enhance EFL research
- Increases opportunities to exchange research ideas - Augments negotiate among classmates - Expands peer-correction and productions - Receives more insights to do each task - Fosters knowledge on how to develop research proposals	Pair-work research assignments as a possibility to conduct research proposals	

Source: Authors

procedures, and the implications of such knowledge in the field of education. Research principles allow for a synthesis, analysis, and reflective process that increases their understanding of how and why research needs to be incorporated in an education program. In our view, knowing about the principles of research allowed pre-service teachers to realize that this component is a fundamental way to critically understand the behavior of human beings, as well as to collect, analyze, and interpret data ethically. Promoting such knowledge allowed students to realize that educational research, rather than being a rigorous process of systematic data measurement, is a process that seeks to understand the forms of interaction that take place in educational contexts.

The participants realized that research demands good practices, such as ethical consideration guidelines that confidentially protect data, seek consent, and take care of the participants. Another reason that may explain why the pre-service teachers became concerned about research is that they learned about research philosophies. They understood the most critical assumptions that determine a research philosophy, such as the ontology, epistemology, and axiology of qualitative research. These assumptions were more than basic research concepts, terminologies, or principles, and they helped learners realize that qualitative research demands that researchers understand social phenomena and social interaction. Equally important, qualitative research demands that they get involved in the research process as another member. It is also important to understand that the data collection process is varied, and data analysis and interpretation are subjective.

Consequently, we may state that promoting research among the pre-service EFL teachers was a fundamental way for them to learn about the logical, systematic principles and processes that research demands. They fulfilled assignments that required them to read about research, its importance in academic life, and the practical research processes to elaborate research proposals. The participants got acquainted with the methodologies of research, as well as with its types and purposes. The findings of our study seem consistent with those of [López-Alvarado \(2017\)](#), who explained that educating learners about

research trains them to know about philosophies and research methodologies. In this regard, [Walkington \(2015\)](#), [Hensel \(2012\)](#), [Petrella and Jung \(2008\)](#), and [Blank \(1982\)](#) all agree that enhancing research was essential to broaden academic and scientific interpretations in the initial undergraduate learning process. Promoting such knowledge was a valuable opportunity to have hands-on experience that allowed the participants to expand what they already knew about inquiry. We cannot extrapolate this finding to all the contexts and pre-service EFL teachers, given that, in this study, the contestants had a previous research background, which helped them perform the research tasks easily. However, this study seemed to be a significant opportunity to expand the undergraduates' theoretical knowledge of educational research and gain practical experiences to develop research processes.

Benefits of conducting research in an education program

Enhancing research aided the participants in discovering the practical implications of research, in expanding their knowledge of education, and in better understanding teaching and learning theories as well as teaching as a profession. They also understood how researchers examine problems or difficulties that appear in their academic field.

Participant 6 realized that

research is a fundamental way to examine problems, seek solutions, and broaden his understanding of teaching profession. Moreover, by receiving such education he found out the specific elements needed to conduct research. For example, that many research methods have particular ways to collect information, select participants, and analyze data (interview 4).

Participant 8 agreed that

Studying research allowed me to recognize that to conduct this process, I need to identify a problem, review literature, set questions-objectives, choose appropriate methodology, collect and analyze data and finally come out with the results, conclusions, and recommendations (interview 4).

The data revealed that promoting research in undergraduate EFL teachers significantly broadened the experience and expertise in research topics and processes. Pre-service teachers expanded their research experiences and went through each inquiry stage by developing activities that led them to learn about the different parts of the research process (see [Appendix 2](#)). Another important reason was that research education provided opportunities to the contestants in order for them to broaden their research comprehension by developing diverse exercises such as reading, writing, discussions, and debates. Reading, writing, and oral exercises were alternatives that the pre-service teachers used to expand their research experiences and promote helpful knowledge in each stage of an inquiry. Such knowledge enlarged the learners' backgrounds to select the methodology of the study and observe the benefits of other research processes such as literature reviews. Most students referred to the benefits of research as a possibility to increase knowledge and foster competencies to analyze, understand, or overcome difficulties. In our perception, the training process they had in this study was appropriate for identifying a research problem or theme and reviewing the literature by developing the aforementioned exercises.

In the same way, it was a way to learn how to state questions and objectives, select the methodology, and collect, analyze, and process data. In recent research on the implications of promoting research in pre-service teacher education, [Lombard and Kloppers \(2015\)](#) and [Ware et al. \(2002\)](#) showed that such knowledge was a fundamental element to fostering professional development and offered possibilities to reshape the teaching practice. However, this study did not find a significant relationship between fostering research and promoting professional growth. Instead, we observed that enhancing such content was a way to reflect upon the benefits of research as a significant cluster of finding ways to understand or interpret the consequences of a problem, which does not necessarily imply a way to grow professionally. That is why we consider that more studies are necessary to examine that effect.

Exploring the foreign language research process

The data revealed that promoting such knowledge in undergraduate EFL teachers led to exploring the EFL research process. The learners developed theoretical and practical assignments to conduct research processes in order to explore how the foreign language research theory and processes contribute to them and the field.

Participant 11 claimed that

the project was essential to increase research knowledge about foreign language teaching and learning philosophies. The project was a great possibility to learn about the theory of research and practical ways to overcome research weaknesses to define a problem, state a research objective, conduct a literature review, and select a methodology for a study (interview 6).

Participant 10 confirmed that *promoting educational research in undergraduates was a good way to learn how to overcome problems that might have in his future career as a teacher (interview 2).*

During the classroom observations (five and six), we could see the participant sharing and discussing the research assignments. In addition, the researchers found and wrote in their journals that educational research in undergraduates facilitated more research involvement, and the students performed real tasks, in which research proposals were constructed step by step (interview 5).

The participants highlighted that exploring the foreign language research process is one of the benefits of promoting research in this context because it was an alternative for them to know more about EFL teaching and learning. Along this process, they reviewed EFL teaching and learning theories, and they identified ways to implement them in practical research. They realized that doing practical and theoretical exercises allowed them to analyze how they would use those studies to enhance learning possibilities. To this effect, they read and wrote collective reports to participate in theoretical and practical discussions and reflections

on how to overcome classroom problems. After this discussion, they started to define a research problem, state a research objective, conduct a literature review, and select the methodology of the study (see [Appendix 2](#)).

In our perception, those exercises, activities and tasks led the pre-service teachers to strengthen research in foreign language education and let them create a scenario from where they gained experience on theories of foreign language acquisition, teaching, and learning by providing a framework of references of most influential authors, current tendencies, and the pedagogical implication of said theories to better understand the fields of phonology, morphology, syntax, semantics, and pragmatics. Previous studies have demonstrated that research knowledge in EFL should lead pre-service teachers to comprehend their future professions well (e.g. [Elliot, 1990](#); [Gitlin et al., 1999](#)); [Viáfara-González, 2008](#); [Guerra-Sánchez et al., 2015](#); [Hagevik et al., 2012](#)). From our viewpoints, research knowledge in EFL education should seek out advances in EFL teaching-learning processes and in understanding the teaching profession. In this regard, [Viáfara-González \(2008\)](#), [Cárdenas-Ramos and Faustino \(2003\)](#), and [Weinberger et al. \(2016\)](#) agreed that research knowledge in EFL education promotes reflection and skillful conceptualization about the profession.

Another possible explanation for such a finding would be that exploring foreign language research encouraged the participants to examine language skills (listening, speaking, reading, and writing). They found that an EFL teacher-researcher needs to master his/her field of study satisfactorily. According to [Reyes-Cruz et al. \(2017\)](#), [Zheng \(2009\)](#), [Price \(2001\)](#), [Pellerin and Nogués \(2015\)](#), [Mello et al. \(2008\)](#), and [Mehrani \(2015\)](#), EFL research generates suitable academic environments to transform EFL teaching and learning processes. Educating pre-service teachers in these subjects increased the participants' reflections; it made them aware of the need to learn how to seek solutions to the possible problems they may find in the teaching and learning process. This process allowed prospective EFL teachers to gain more insights about their professions and broaden

their perspectives about the benefits of research to facilitate EFL education processes.

Applying pair-work research tasks as a way to enhance EFL research

This category emerged after contrasting the information gathered and grouped into two subcategories: pair-work to foster EFL research education and pair-work research assignment as a possibility to elaborate research proposals.

Pair-work as a way to foster EFL research education

Data analysis revealed that pair-work seemed to be an effective methodology to enhance EFL research education in this particular context and in undergraduate students. This method facilitated opportunities to work cooperatively and gain more theoretical and practical insights in order to broaden research perceptions, understand the importance of inquiry in the EFL education process, and discover the impacts of such knowledge in foreign language teaching and learning. Additionally, the methodology promoted teamwork, exploration, and interaction, which led the participants to exchange research ideas, materials, and initiatives. It also develops brainstorming exercises and work as a team to performed each research task, which broadened their perceptions and understanding of the research characteristics and their importance in the EFL education process.

Interviewee 20 explained that *working with a classmate helped realize the importance of research as a way to solve problems, get acquainted with the EFL profession, and develop research assignments* (interview 5).

Participant 12 believed that *pair-work tasks strengthened research because working together and receiving support from his classmates was fundamental to do the scheduled tasks* (interview 5).

Participant 11 acknowledged that *the theoretical-practical tasks developed provided different learning experiences that helped develop his skills to define, formulate research objectives and questions, review literature, and state research methodologies* (interview 5).

The findings suggest that pair-work was an alternative to foster EFL research education among the 20 participants in the study. We found that these assignments offered possibilities to get acquainted with theoretical and practical research by offering different activities and exercises to do practical research tasks. The participants had more exposure to research concepts, processes, implications, and opportunities to explore the benefits of research in their future careers as teachers. As an example, they had more opportunities to exchange research ideas for materials and initiatives, and they developed assignments that were oriented towards fostering teamwork, exploration, and interaction. This led to discussions about the roles of EFL research, its impact in foreign contexts, and how to integrate research knowledge to examine teaching-learning problems.

During these tasks, we noticed that students worked together, negotiated, and reached agreements about how to have research accountability, how to discuss how to conduct research, and how to learn about the research process in detail. In addition, pre-service teachers participated in oral debates, writing reports together, and asking and answering questions to clarify research concepts and practical usage. Interestingly, there was a close relationship between these findings and those presented by [Sert \(2005\)](#), [Raja and Saeed \(2012\)](#), and [Córdoba \(2013\)](#), who clarified that pair-work tasks enhance class productivity. Such relationships were presented mainly because pair work research tasks increased possibilities to conduct research proposals collaboratively. The participants negotiated, interacted, reached agreements, and self-evaluated their tasks before submitting or receiving clarifications from the researchers.

Pair-work research assignment as a possibility to conduct research proposals

The data analysis revealed that pair-work assignments had a positive impact on promoting EFL research education. The participants constantly participated in theoretical and practical exercises, discussions, and works to increase their insights into EFL research and its characteristics, process, and

methodology. Pair-work tasks offered possibilities to get acquainted with the theoretical and practical research usage and encouraged them to learn from each other, correct their work, and, as a consequence, enlarge their research background to complete a proposal (see [Appendix 2](#)). Theoretical and practical research rehearsal enhanced constant pair discussions and negotiations on elaborating research proposals and assuming research as a possibility to know more about how to teach English as a foreign language and a way to appreciate research as a vehicle to mobile language teaching and learning.

Based on the above mentioned, we believe that pair-work research tasks encouraged practice and exposure to research through self-directed work and independent theoretical and practical assignments, which led future teachers to overcome their difficulties in incorporating research knowledge into practice. Pair-work research assignments offered practical exploration that encouraged negotiation, critical thinking, and practicing shared reading and collaborative writing. These assignments enhanced the students' familiarity with research and empowered and broadened their understanding to write their own research proposals. The pre-service-teachers showed significant improvements that helped them expand their capability in EFL research. In this sense, the methodology was significant because it increased the students' opportunities to double-check their tasks, share research ideas, do negotiated tasks, reach agreements, and work cooperatively with their peers.

The above-mentioned finding is associated with [Sert \(2005\)](#), who insisted that this methodology creates a high level of academic solidarity and confidence (p. 1). In this regard, [Kutlay \(2013\)](#), [Lombard and Kloppers \(2015\)](#), [Lopatto, \(2003\)](#), [McNulty Ferri \(2010\)](#), [Mello et al. \(2008\)](#), and [Raja and Saeed \(2012\)](#) manifested that pair-work assignments may promote research in pre-service EFL teachers. This result confirmed that working together made it easier for pre-service teachers to integrate different backgrounds, foster decision-making, create group environments where they incorporated various perspectives. Learners overcame their difficulties in understanding the

main content of a research proposal and opened up respectful communication that contributed to satisfactorily completing their tasks and elaborating their proposals.

Conclusions and implications

The analysis showed that the project seemed to be an essential response to promoting research by completing academic and practical research assignments. First, this study was a meaningful way to realize that research is a vehicle to examine, synthesize, evaluate teaching and learning practice, and enhance reflection in education. In addition, the tasks promoted a better understanding of the research knowledge, its processes, methodologies, and characteristics that need to be considered while conducting an inquiry. It was also essential to foster ethical research principles and the alternatives to conduct an inquiry in education, as well as to reflect upon the benefits of this academic insight. However, acquiring research is not only decoding or mastering its structure. Pair work gave contestants the chance to practice, discuss, and reflect on how they could integrate such components in their future professional careers. In this sense, the study indicated that pair-work was a significant methodology to boost educational research.

Secondly, pair-work research assignments were opportunities to overcome the participants' research difficulties before the project and offered possibilities to conduct research proposals. Said assignments created a class environment where theoretical and practical exercises demanded participation, collaboration, and negotiated exploration. The participants cooperated in expanding their ability to identify a problem, formulate research objectives-questions, conduct a literature review, write the methodology of a study, and develop a research proposal. This practical and cooperative theoretical exploration led them to have significant improvements in defining, formulating research objectives and questions, conducting literature reviews, and stating the methodology of a research proposal. This interaction trains them to complete their research proposal, which is one option that the university gives to graduate as a bachelor in

EFL. The tasks were planned and designed for them to not only learn the importance of inquiry, but also to complete a research proposal. The pair-work assignments were indeed a successful way to foster research. The participants wrote research titles, introductions, justifications, objectives and questions, conducted literature reviews, and proposed the methodology for their projects. These two capabilities played a prominent role in enhancing research comprehension and developing tasks properly.

Finally, conducting this study showed the various implications of fostering research in such a context. Firstly, pair-work assignments could become a flexible, creative, and multifunctional methodology oriented towards enabling undergraduates to get acquainted with research and overcome research difficulties collaboratively. Pre-service teachers might also understand the importance of sharing, discussing, and negotiating ideas to learn about the research process from others. Secondly, the evidence suggests that pair-work research assignments seemed to be an effective method that develops opportunities for pre-service teachers to achieve theoretical and practical research competencies, promote educational research in undergraduate programs, and increase undergraduate's possibilities to master the research process. Therefore, it would be necessary to apply pair-work research tasks in other contexts and with different students to analyze whether or not this method may enrich the theoretical literature of EFL research mediated by teamwork.

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Appendix 1: List of pair-research tasks

Number	TASK	AIMS	Expected result
1	Educational research background	To get a general insight on what educational research is	Written and oral report of education research
2	Educational research: a need or a must for EFL teachers	To determine the need and the must of conducting educational research for future EFL teachers	Written and oral report of educational research in EFL education
3	Practical use of educational research	To know the process to conduct educational research	Written and oral report of practical use of educational research
4	Selecting a research topic	To select a research topic according to the significance and interests To describe a research problem	Written list of research interests Description of a research problem Justification to select such a problem
5	Stating research objectives and questions	To state research objectives and questions	Research objective and question
6	Conducting a literature review	To conduct a literature review	Literature review
7	Selecting the methodology for a research study	To select the appropriate methodology for a research study	Methodology
8	Collecting data and choosing participants	To collect data and choosing participants	List of data collection methods and sampling techniques
9	Designing data collection instruments	To design data collection instruments	Pilot of data collection instruments
10	Analyzing data and reporting the findings	To learn how to analyze data and report the findings	Data analysis and interpretation
	Final research proposal	To submit an educational research proposal	Research proposal

Appendix 2: Summary of areas improved

TASK	AIMS	Before	Final result
Selecting and stating a research topic	To select a research topic according to significance and interests To describe a research problem	<i>Pair 1: Broad topic</i> Analyzing oral interaction in English teaching in Florencia	<i>Pair 1: Narrowed topic</i> Analyzing the effectiveness of teachers' made materials to foster oral interaction in English learning at a local school in Florencia
		<i>Pair 2: Broad topic</i> Task-based teaching in Colombia	<i>Pair 2: Narrowed topic</i> Exploring the implications of applying task-based teaching at a public institution in the rural area of Florencia, Caquetá
		<i>Pair 3: Broad topic</i> English language teaching and learning process at the Colombian universities	<i>Pair 3: Narrowed topic</i> Describing the English language teaching and learning process at a public university in Florencia
		<i>Pair 4: Broad topic</i> English teaching and learning approaches to be used in class	<i>Pair 4: Narrowed topic</i> Contextualizing English teaching and learning approaches
		<i>Pair 5: Narrowed the topic</i> Current approaches to language teaching	<i>Pair 5: Narrowed topic</i> Comparing and contrasting current approaches to language teaching and learning
Stating research questions	To state research questions	<i>Pair 1: Broad question</i> How is oral interaction in English teaching in Florencia?	<i>Pair 1: Narrowed question</i> What is the effectiveness of teacher-made materials to foster oral interaction in English learning at a local school in Florencia?
		<i>Pair 2: Broad question</i> Why is task-based teaching used in Colombia?	<i>Pair 2: Narrowed question</i> What are the implications of applying task-based teaching at a public institution in the rural area of Florencia, Caquetá?
		<i>Pair 3: Broad question</i> How is English language teaching and learning process at Colombian universities?	<i>Pair 3: Narrowed question</i> How is the English language teaching and learning process at a public university in Florencia?
		<i>Pair 4: Broad question</i> How many English teaching and learning approaches could be used in class?	<i>Pair 4: Narrowed question</i> What are the effects of contextualizing English teaching and learning approaches?
		<i>Pair 5: Broad question</i> What are the current approaches to language teaching?	<i>Pair 5: Narrowed question</i> What are the differences among current approaches to language teaching and learning?
Stating general research objectives	To state research objectives	<i>Pair 1: Broad objective</i> To know oral interaction in English teaching in Florencia	<i>Pair 1: Narrowed objective</i> To analyze the effectiveness of teacher-made materials to foster oral interaction in English learning at a local school in Florencia
		<i>Pair 2: Broad objective</i> To compare task-based teaching in Colombia	<i>Pair 2: Narrowed objective</i> To explore the implications of applying task-based teaching at a public institution in the rural area of Florencia, Caquetá
		<i>Pair 3: Broad objective</i> To know English language teaching and learning process at Colombian universities	<i>Pair 3: Narrowed objective</i> To describe the English language teaching and learning process at a public university in Florencia
		<i>Pair 4: Broad objective</i> To make English teaching and learning easy through approaches to be used in class	<i>Pair 4: Narrowed objective</i> To contextualize English teaching and learning approaches in a rural school in Florencia
		<i>Pair 5: Broad Objective</i> To know current approaches to language teaching	<i>Pair 5: Narrowed objective</i> To compare and contrast current approaches to language teaching and learning