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MASKANA (búsqueda en quechua), el nombre de la revista científica del Vicerrectorado de Investigación de la Universidad de Cuenca (VIUC), se refiere directamente a la definición de investigación, que en el sentido más amplio se entiende como la búsqueda del avance del conocimiento a través de la recopilación de datos, información y hechos.

MASKANA (searching in quechua), the name of the scientific journal of the ViceRectorate for Research of the University of Cuenca (VIUC), relies directly to the definition of research, which in the broadest sense means searching for advancement in knowledge via gathering of data, information and facts

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Editorial

The evolution of a research journal

La evolución de una revista de investigación

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In this edition, Maskana celebrates 13 years of uninterrupted publication, 27 editions with a total of 226 published works, mostly original research articles in various areas of knowledge. Since its inception in 2010, our mission has been to train new researchers in scientific writing. To achieve this, our editorial team conducts a thorough review of each work received so that, prior to the external peer review phase, the work can be improved, if necessary, and thus have a better chance of being accepted. This founding objective has also ensured that a large proportion of the works published are highly cited. In this regard, in the last five years alone, the number of citations of articles published in Maskana, according to Google Scholar, is 2,650 (December 2023), of which around 20% correspond to citations in papers published in high-impact journals, i.e., those listed in databases such as Scopus or Web of Science. Today, this indicator is by far the highest obtained by a scientific journal at the University of Cuenca.

Maintaining the pace of publication over time has not been easy. The number of alternatives for authors to publish their research is constantly growing. Today, in Scopus alone, the number of active journals exceeds 26,000, whereas in 2010, when Maskana began, that number was around 20,000. It should also be noted that the growth rate of academic journals that have not yet reached, or are not considering, high-level indexing databases is much higher. This is partly due to the diversity of alternatives, which largely arise from academic demands related to the urgent need for evidence for scientific publications, necessary for institutional or personal promotion. However, an editor should never lose sight of the factors that determine an author's choice of a particular journal, which can be summarized as follows: 1) the journal is listed in a prestigious database of articles, 2) the type of access to the published work, which varies between access paid for by the author or paid for by the reader, 3) the degree of impact of the journal, considered in quartiles based on the number of citations the articles receive on average, and 4) the time elapsed between receipt, review, and publication.

Faced with the already difficult challenge of keeping a journal active over time by receiving submissions with potential for acceptance and publication, it is unthinkable that this could happen without evolution. For this reason, the editorial board of Maskana is investing a great deal of effort in making the journal increasingly attractive to authors and readers, based on the basic parameters mentioned above, while maintaining the primary objective for which it was created. Thus, each manuscript we receive commits us to a swift, systematic, and meticulous search for expert reviewers in the subject area of the work, a process that undoubtedly improves both the quality of the published document and the speed of publication. Another attractive factor is that there is no charge associated with the publication process: publishing in Maskana is free of charge for authors and readers, as we firmly believe in free access to knowledge. Aware of the challenge of evolution, our editorial team has been given new impetus and enthusiasm through the addition of José Luis Crespo Fajardo, our new editor-in-chief, and Estefanía Chuiza, assistant editor. The baton has been passed by Jan Feyen, now editor emeritus of this journal. Jan has been instrumental in the altruistic task of disseminating knowledge; he was editor-in-chief from the journal's inception until 2017, and since then, he continued to contribute as co-editor and member of the editorial board until 2022. His tireless work and extensive experience as a researcher (author of more than 200 articles published in high-impact international scientific journals) were key to ensuring that the published works were managed efficiently and to the highest standards of the scientific world. Thank you, Jan, for your tireless work, dedication, and responsibility. These are certainly not the only lessons you left us, but also your good humor, simplicity, people skills, and patience. Perhaps the greatest challenge for those of us who continue your work will be to put all of your qualities—both professional and human—into practice in our daily work.

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Scientific paper

Working with local heritage from documentary historical sources. Didactic proposal for the Spanish northwest from the perceptions of the students

Trabajar patrimonio local a partir de fuentes históricas documentales. Propuesta didáctica para el noroeste español a partir de las percepciones del alumnado

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Abstract:
The aim of this paper is to describe a proposal for the transfer of local history starting from students' perceptions. Through an example applied to the north of Spain, specifically to the council of Carreño (Asturias, Spain), which was investigated from a historical point of view, a didactic transfer was proposed that starts from the study of school representations of the immediate environment. In the proposal, historical school knowledge is problematized by using documentary sources that give visibility to spaces, themes, and people traditionally made invisible by school history but which have been part of social history or women's history for a long time. The chosen case has allowed us to identify useful local sources for this task, generating a proposal aligned with the new Spanish curricular framework.

Palabras clave: local history, students' perceptions, documentary sources, didactics of history, school history.

Resumen:
Tras llevar a cabo una investigación histórica, se presenta una propuesta de trasferencia desde la historia local hacia la historia escolar. A través de un ejemplo aplicado al norte de España, concretamente al concejo de Carreño (Asturias, España), que se investigó desde el punto de vista histórico, se propuso una trasferencia didáctica que parte del estudio de las representaciones escolares sobre el medio próximo. En la propuesta se problematizan los saberes históricos escolares a través del uso de fuentes documentales que dan visibilidad a espacios, temáticas y personas, tradicionalmente invisibilizados por la historia escolar, pero que forman parte de la historia social o de la historia de las mujeres desde hace décadas. El caso escogido nos ha permitido identificar fuentes locales útiles para este cometido, generando una propuesta alineada con el nuevo marco curricular español.

Keywords: historia local, percepciones del alumnado, fuentes documentales, didáctica de la historia, historia escolar.

1. Introduction

This contribution presents a proposal for educational innovation in social sciences that involves the use of local heritage, using documentary sources to connect historical knowledge learned in school. Although this proposal is limited to a specific chronological and geographical framework, it can be extrapolated to other territories and stages. The proposal takes as its reference a group of students in their final year of secondary education (aged 16) at a secondary school in northern Spain, located in the municipality of Carreño, in the autonomous community of Asturias. The school is located in Candás, a fishing village that is the capital of this Asturian municipality. This area has a rich local and documentary heritage, as well as a suitable size that allows for small-scale activities that are accessible to students.

The municipality of Carreño is located on the central coast of Asturias in Spain. It borders the municipality of Gozón to the north, Gijón to the south, the Cantabrian Sea to the east, and the municipalities of Corvera de Asturias and Gozón to the west. With an area of 66.70 km², it has 10,288 inhabitants, according to 2021 data from the National Institute of Statistics (INE), distributed among its twelve parishes: Candás, Perlora, Albandi, Carrio, Pervera, Prendes, Piedeloro, Logrezana, Guimarán, El Valle, Ambás, and Tamón.

From a temporal point of view, the educational proposal focuses on the 18th century, the Age of Enlightenment in Europe, a period of great importance from a political point of view, with politics focused on promoting a series of important reforms or reformist projects within the Spanish crown. In order to carry these out, studies were necessary to understand what the enlightened thinkers insistently referred to as the situation of the country, both economically and demographically. This generated a huge amount of documentation in the wake of this reformist zeal, documentary collections that are largely preserved today.

Taking into account the curriculum, we proposed this educational innovation to be applied to teenagers in the final year of secondary education (4th year of ESO) at the Candás Secondary School. The primary objective is none other than to contribute to the development of historical thinking, which is closely linked to the development of critical thinking, including the dimensions of historical understanding, causality, perspective, and historical empathy (Santisteban, 2010) in all of the activity blocks.

2. Theoretical framework

The aims of teaching and learning history as advocated in universities and research do not always coincide with the reality in schools, where very traditional approaches to the curriculum predominate (Canals and González-Monfort, 2011).

In Spain, both in terms of social science teacher training and university research, the teaching of history and social sciences is based on a critical paradigm that links the subject to the development of social and civic competencies and education for global citizenship, as is the case internationally (Santisteban, 2019; Ross and Vinson, 2012; Ross, 2021).

Legardez (2003) considers that social sciences should deal with "living social and historical issues," which are those that are alive in society, in reference knowledge, and in school knowledge. The aim of the social sciences is to educate critical and responsible individuals within the democratic system, emphasizing their education in values such as freedom, education, participation, and equality (Benejam, 1997).

In this regard, although innovative programs are more frequently implemented in the field of social sciences in primary and secondary education, the curriculum reform that has been demanded for years is reflected in the new education law (LOMLOE) approved in Spain in 2020, whose new school curriculum is currently being implemented. Schools and teachers need resources and proposals that enable the development of this new curriculum framework for the development of critical proposals in school history. For this reason, it is necessary to design and make available to teachers resources and materials adapted to this conception of history teaching, so that students receive proposals related to their immediate environment that serve to connect and identify school knowledge, something essential in social sciences.

2.1. Documentary sources for working on local heritage

The new Spanish curriculum framework prioritizes competency-based learning and, among the specific competencies linked to history subjects, those related to the development of historical thinking skills stand out, where historical sources play an important role in historical interpretation (Santisteban, 2010). Activities related to local heritage are significant for learning history (Borghi, 2010), fostering a sense of identity through familiar, everyday examples and promoting critical thinking by using concepts and examples that are familiar to students (Guerrero-Elecalde and López-Serrano, 2021). In addition, local history and heritage also allow for the development of critical proposals, making people, spaces, and themes that are traditionally overlooked in school history lessons more visible (García-Morís et al., 2021).

The educational importance of local heritage is also evident in the growing number of educational research studies carried out on the subject (Fontal and Gómez-Redondo, 2016; Fontal and Ibáñez-Etxeberría, 2017; Jagielska-Burduk and Stec, 2019; Gómez-Carrasco et al., 2020), interventions and research carried out in experiences with trainee teachers (Valverde-Fernández et al., 2018). Likewise, teaching experiences on local heritage allow for cross-curricular work in different areas, such as Social Sciences, Mathematics, Natural Sciences, and Language and Literature, among others, with models that are perfectly exportable to our geographical area (Pastor Blázquez and Santisteban Cimarro, 2020). In this regard, documentary sources as a tool for addressing historical issues have proven to be an ideal and easily accessible resource for students. As a result, teaching proposals and research using documentary sources continue to be published in the field of social science education, particularly in history education (García-Morís, 2016; Guerrero Elecalde and Chaparro Sainz, 2019; Guerrero Elecalde and López Serrano, 2021; López Serrano et al., 2019; Ortega Cervigón, 2020) and archives (Ortega Cervigón, 2019 and 2021), highlighting their potential for teaching and learning history and for developing historical thinking skills (Ortega Cervigón, 2020; Santisteban, 2010).

Our proposal revolves around the use of documentary sources to work on local heritage, following the cooperative learning methodology.

2.2. Working on what is meaningful through cooperative learning cooperative

Ruíz Martín (2020) points out that no classroom methodology is effective per se, but rather must be tailored to the students, "the purpose and the context," as there is no "specific effective recipe" (p. 32). In accordance with the author, we have developed our proposal taking these factors into account, after analyzing the students' representations through a questionnaire designed for this purpose. In other words, in the first phase, we surveyed the selected students on historical and heritage concepts in their immediate environment, with the aim of learning about their knowledge, but also their opinions on local heritage.

Subsequently, taking their responses into account, we designed a series of activities based on the fact that the students are closely interrelated with the context. This is partly because the students are generally from the municipality, so they are familiar with its particularities and the environment in which the activities developed in this proposal are based.

With the exception of the first activity, all were designed to be carried out in groups, so we believe that the methodology used to implement them should encourage cooperative learning. Cooperative learning is the "educational use of small groups in which students work together to maximize their own learning and that of others" (Johnson et al., 1994, p. 3) and differs from individual learning in that it is believed that students progress more thanks to interaction with other classmates and

their group members through communication and the different skills they possess.

According to Brown and Ciuffetelli (2009), there are five essential elements essential elements in cooperative learning:

1. Positive interdependence: the teacher sets a joint goal so that students become aware that they must work together, bearing in mind that if one person fails, the others cannot succeed.
2. Face-to-face interaction: students must help and motivate each other, solve any problems, share their knowledge, and analyze the concepts they are learning.
3. ndividual and group responsibility: all students must take responsibility for achieving their goals, fulfilling their roles correctly, and being clear about their objectives so that they can evaluate them, as well as each other's efforts. The group must be aware that they cannot succeed solely through the work of others and know who needs the most help.
4. Cooperative skills: group members must convey confidence, be able to verbalize how to resolve conflicts, have the ability to communicate and express themselves correctly, and have leadership and decision-making skills.
5. Group evaluation: the group must know to what extent they are achieving their objectives and how effective its members are, in order to know which tasks should be maintained and which should be changed.

As far as possible, we have taken these five elements into account in designing our proposed activities to connect school knowledge with local history, including in the assessment proposals objectives such as cooperative skills and individual and group responsibility, as well as positive interdependence (if one fails, we all fail), always working from different levels of analysis.

2.3. Study of students' representations of their immediate environment

To gain a better understanding of the image that students have of the municipality of Carreño, a questionnaire was given to a group of students from the local secondary school, with questions on general historical periods and the municipality's heritage.

Thirty-five students in the fourth year of compulsory secondary education (ESO) at the Candás Secondary School (aged 16) participated in the study. As stated in its P.E.C. (School Education Project), this school educates 80% of the population of Carreño between the ages of 12 and 16 and has been an educational institution for more than 50 years. Also noteworthy is the relationship that the center maintains with other organizations, such as nearby primary schools, the Teacher Training and Resource Center in Gijón, the University of Oviedo, and its active collaboration with the Carreño Town Council.

The questionnaire consists of 14 items divided into two sections (Table 1). The first section consists of three multiple-choice questions on chronological content, such as historical periods, the time frame of the Modern Age, and the years covered by the 18th century. The second section of the questionnaire focuses on Carreño and asks questions about the geography and territorial organization of the municipality, as well as specific heritage elements

for identification. There are also two open-ended questions that address the importance of caring for cultural assets and the value
that students attribute to these elements. Within the representations, it seems essential to understand the connection they have with the place where they live (Cuenca López et al., 2020).

The results obtained in the questionnaire on the municipality of Carreño were taken into account in the development of the teaching proposal, the structure of which is discussed below.

2.4 Structure of the proposal

The educational proposal was called "The Present of the Past in the Council of Carreño" and, although it is not based on an specific problem can be framed within what the curriculum defines as a Learning Situation, that is, a situation and activities that involve students carrying out actions related to the competencies of the curriculum, both key and specific, contributing to their development and acquisition. In Geography and History, work on causality should also be encouraged. Our proposal, structured in four blocks, will revolve around these principles and will always include the following sections:

Tabla 1: Questions from the questionnaire

Questions	Options
Block I. HISTORICAL CATEGORIES	
1. Put the following historical periods in chronological order (1 being the oldest and 5 the most recent).	Middle Ages; Ancient Age; Prehistory; Contemporary Age, Modern Age.
2. The Modern Age comprises the 16th, 17th, and 18th centuries, but two historical dates are considered milestones marking its beginning and end. What are these dates? Choose one option.	a) 1401-1789 b) 1492-1789 c) 1492-1801
3. Which years does the 18th century cover? Choose an option.	a) 1701-1800 b) 1601-1700 c) 1492-1516
Block II. ABOUT CARREÑO	
4. Carreño is a council or municipality divided into 12 parishes. Which are they?	a) Candás, Perlora, Albandi, Carrió, Prendes, Pervera, Piedeloro, Gui-ma-rán, Logrezana, El Valle, Ambás, and Tamón. b) Candás, Perlora, Bayas, Laspra, Santa María del Mar, Santiago del Monte, El Valle, Naveces, Pillarno, Quiloño, Salinas. c) Candás, Bañugues, Albandi, Luanco, Piedeloro, Guimarán, Logrezana, El Valle, Prendes, Pervera, Carrio, Prendes.
5. Which municipalities border Carreño?	Free answer.
6. Do you recognize these places? Can you say what they are and where they are? *Include a photograph of the remains of a medieval tower (Torruxón de Prendes) *Includes photograph of megalithic funerary archaeological remains (Monte Areo) *Includes photograph of seaport (Candás)	Free answers.
7. Can you say in which century the following buildings in the munici-pality were built? Choose one option: * Include a photograph of the Church of Santa María de Piedeloro, iden-tifying it in the caption. *Include a photograph of the Santarúa Fountain, identifying it in the caption.	Photograph 1: a) 13th century b) 18th century c) 20th century Photograph 2: a) 10th century b) 18th century. c) 20th
8. Do you recognize this image? Do you know the legend surrounding it? What festival is this image associated with? * Includes a photograph of the religious image of Christ of Candás	Free answers.
9. Are you familiar with the Delfines lawsuit? What does it involve? Do you know when it took place?	Free answers.
10. Do you know what the Clarian route is and where its name comes from?	Free answers.
11. Did you find it difficult to answer the previous questions about Carreño? Why?	Free answers.
12. List other monuments or places related to the historical and/or cultu-ral heritage of Carreño (maximum three).	Free answers.
13. Do you think it is important to preserve and care for architectural and cultural heritage? Explain your answer.	Free answers.
14. 14. Can you name another place in the municipality that is important to you? Where is it? Why do you consider it important? What value does it have for you?	Free response.

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Teaching rationale. This section will detail the specific competencies and key competencies linked to the proposal, the cross-curricular content, and other subjects related to the activity, providing guidelines for its implementation.

Historical information. This includes a brief introduction to the documentary sources contextualized in the period.

Activities. A total of 11 activities in which, through the use of documentary and oral sources in the case of the last activity, participatory, autonomous, and cooperative work is encouraged.

Heritage tip. A practical piece of information related to the architectural heritage of the municipality, including an image of a heritage element, information about it, and a brief question or discussion point for students.

2.5. Documentary sources used

The 18th century can be considered the century of censuses in Spain, as throughout the century a series of counts were carried out to determine the actual population of the country. The purpose was simply to implement economic policies aimed at improving the country, and although some reforms were never completed, they did generate an important body of documents that are extremely useful for historical research, such as the Catastro de Ensenada, a fiscal source, and the Censos de Aranda y Floridablanca, statistical sources that have been the basis for countless historical studies for decades (Camarero Bullón et al., 2021).

The Marquis of Ensenada's Land Registry, or Single Tax Project, came into being through the Royal Decree of October 10, 1749. After intense debate on "how and where" it should be implemented, the Land Registry was carried out in the 22 provinces of Castile, developing on two levels: the municipal level, where information was obtained through answers to 40 questions relating to the municipality (General Responses), and the individual level, where each secular and ecclesiastical legal entity declared its wealth (Treasury Book), having previously registered its personal and professional situation (Personal Book). This second collection of information is known as the Respuestas Particulares del
Ensenada Cadastre, the main source used in our teaching proposal. The investigation would be carried out by province, and within these by jurisdiction or district, generally ecclesiastical, i.e., by parish.

In addition, we also used other literary, bibliographic, documentary, and graphic references throughout the activities proposed in the teaching proposal.

3. Results and discussion

3.1. Where to start? School representations of Carreño

The analysis of the responses to the questionnaire completed by students in the final year of secondary school yielded results that led us to emphasize the importance of working on local heritage.

In response to the first questions on chronology, it is clear that most students have a good grasp of time, as 32 of the 35 participants correctly ordered the different historical periods and 34 correctly identified the years corresponding to the 18th century. However, this figure drops to 24 correct answers when asked specifically about the boundaries of the Modern Age, indicating that this is a less well-known or defined historical period for the students. In terms of spatial boundaries, 31 students correctly identified the parishes, while only 8 correctly identified the municipalities bordering Carreño.

The questionnaire also asked students to indicate the century of two monuments, represented in photographs: the church of Santa María de Piedeloro and the Fuente de la Santarúa fountain. In both cases, the number of correct answers was low: 10 in the first case and 6 in the second; in fact, only two students correctly identified both dates. As for the recognition of the municipality's heritage requested in the questionnaire, 25 people correctly identified the Monte Areo dolmen and there was only one incorrect answer in the image relating to the port of Candás, which was recognized by the vast majority. However, the Prendes tower, which is in a delicate state of conservation, is not so well known, and less than half of the students (16 people) were able to identify it. In contrast, it is not surprising that 27 students identified the Cristo de Candás, which is one of the emblems of the territory. However, only six of those 27 people mentioned that it was found in the sea by fishermen from Carreño.

Reference is also made to intangible heritage, such as the legend of the dolphin lawsuit. In this case, eight students explain, to varying degrees, what the lawsuit consists of; however, it is striking that several people link it mainly to the source that recreates this story and not so much to the legend itself.

As indicated, it was also interesting to know the students' perception of the value they place on heritage, so they were asked the following open question: "Do you think it is important to preserve and care for architectural and cultural assets?" The answer was unanimous, but the role that a certain social desirability may have played cannot be ignored.

The argument that appears most frequently is the importance of knowing the history of the place where one lives and the assets that previous generations have left to the present day (23 responses) as part of the culture of the territory (7 responses). The students seem to see the age of monuments as a value in itself (6 responses), figuring that they need to be preserved because they're historic and if not, "they'll fall down" (Student 11). They also mention the need to preserve these monuments for their aesthetic function (4 responses) or even for their economic or tourist value (2 responses). Two students also point out the commitment to future generations, indicating that these heritage assets "are important for our descendants" (Student 18). In short, the students reflect several of the functions that are currently defined for heritage education in social science teaching (González-Monfort, 2019).

Another issue raised was the reference to monuments or places of historical and cultural heritage other than those already mentioned in the questionnaire. One of the most frequently cited sites (14 students) is the Antón Museum, dedicated to the sculptor Antonio Rodríguez González, which is regularly visited by school groups. Secondly, seven students mentioned the church of San Félix de Candás, an iconic place in the town and linked to the patron saint festivities that house the image of Christ referred to earlier in another question in the questionnaire. Churches and chapels in other parts of the municipality were also mentioned, such as those in Guimarán and Piedeloro, in this case by students from these towns.

Not only monuments were mentioned, but also open spaces, such as the Plaza de las Conserveras (6 responses), which is a regular meeting place for people of their age, or the Plaza de la Baragaña, La Palmera beach, and Perlora, the latter two receiving one response each. Likewise, four students pointed to the Candás lighthouse as another significant site, where not only the building itself is important, but also its surroundings, which are considered natural heritage. Finally, the question about other places in the municipality that were important to the students revealed a diversity of opinions, with the common thread being places that are significant to the students, such as the soccer field or sports center, the promenade, and meeting places for teenagers. This points to the need to work, both in and outside the classroom, on the link between citizens and heritage, so that it is not seen as something alien (González-Monfort, 2019) and also because of its usefulness in promoting critical thinking (Cuenca López, 2023; Gil Cuadra, 2020); most of the responses are related to their "comfort zones" and elicit some kind of emotion (Suárez Álvarez, 2022).

Given that the students unanimously believe that it is important to learn about and work on Carreño's heritage, our teaching proposal addresses this concern based on the premise that it is appropriate to familiarize secondary school students with the Modern Age and, specifically, with the 18th century, as previously noted. In this sense, and although they have shown other relative weaknesses, for example, in their knowledge of religious heritage (date of the church in Piedeloro) or other periods (Torruxón de Prendes), we consider that the cultural, historical, and oral heritage rooted in the Modern Age is a hallmark of the municipality, even being present in their daily lives. Based on these issues, we have developed the educational proposal set out below.

3.2. Educational proposal for connecting school history with local history

We have titled the proposal *"The Present of the Past in the Municipality of Carreño,"* dividing the activities into five blocks, following the structure already mentioned.

1. Who governs Carreño?
2. Carreño in the 18th century.
3. Between the countryside and the sea.
4. The women of the paxa.
5. Let's be writers.

In the first section, Who governs Carreño?, the aim is for students to value basic governing and participatory bodies as fundamental to the functioning of society, to learn about some of their powers, and to reflect on the role and importance of public affairs. Using transcripts from the Libros de Acuerdos (Books of Agreements), preserved since the 17th century, which contain the agreements or minutes taken at the Town Hall, questions and comprehension exercises have been devised that link the past and the present. As an example of this type of heritage, a photograph of the Town Hall of Carreño is proposed, a former mansion of the Indianos, the name given to the natives who emigrated to America and, after making their fortune, left their mark on the heritage of the territories in the form of representative mansions. In this section, after watching an excerpt from the BBC documentary The complicated legacy of Spain's super-rich indianos, students will be encouraged to research the figure of the indianos and then reflect on the origin and legitimacy of their fortunes.

The next block of activities, entitled Carreño in the 18th century, aims to enable students to put into practice their prior knowledge of geographical and demographic instruments, identifying the main demographic problems we face today by comparing the past and the present. They will also be expected to reflect on social inequalities and identify their historical and social origins.

Based on the General Responses of the Ensenada Cadastre, available on the Spanish Archives Portal (PARES), the first activity will encourage students to compare the geographical boundaries given by this source with the current ones. Then, in activity 2, they will work with the demographic information provided by the Cadastre and/ or the Floridablanca Census, comparing it with the current situation.

Activity 3 was developed using the information from the Specific Responses, in which the entry (personal and socioeconomic data of the heads of households in 1753, provided by this source) of a person with a socioeconomic status in the council was compared with another that was inferred to be of the opposite status based on the

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information provided, emphasizing the differences found between the two heads of households. In the architectural heritage section, the Carreño-Alas Palace in Logrezana was presented, which dates back to the 13th century and currently features architecture typical of the so-called Asturian palaces or rural mansions of the Modern Age.

In the block of activities Between the countryside and the sea, using the same type of source (Individual Responses), the aim is for students to be able to work in teams, reaching conclusions about the changes experienced in the municipality over the centuries, positively valuing both changes and the survival of their own culture, while developing historical empathy and critical thinking. through three activities which, in line with the previous block, analyze the relationship between livelihoods and the characteristics of a society, delving into the particularities that define its current environment and emphasizing the two most important economic resources of the municipality in the Old Regime: the countryside and the sea. Three activities are proposed. In "What the land gives us," based on information from the General Responses, we have created tables on crops, types of livestock, etc., in the neighborhood in the 18th century, proposing to contrast this data with qualitative testimonies from travelers. The second activity, What the Sea Gives Us, also presents data on economic activities related to the sea, but on this occasion, it encourages reflection on the economic legacy of these activities in the municipality. Finally, What the Sea Takes Away contrasts two tragic events for the municipality that are still present in the collective imagination today: shipwrecks. For the heritage tip, and related to agricultural work, we displayed a photograph of a Carreño-style bread bin (traditional agricultural infrastructure), representative of the municipality in terms of movable property used for storage, and asked students to research the style and use of the item described.

Les muyeres de la paxa addresses the same social issues, but incorporating a gender perspective. It does so through three activities that aim to encourage students to put their prior knowledge of demography and geography into practice, identify, analyze, and reflect on the origins of social and gender inequalities, and value the role of women in history, as well as their importance in traditional societies, far removed from the stereotypes that have been passed down to us. On the other hand, it also aims to encourage group and independent work, which will contribute to developing the competence of learning to learn. In the first activity, based on an analysis of the Respuestas Particulares (Particular Responses) of the Marquis of Ensenada, socially relevant women in the municipality will be investigated. In activity 2, the focus will be on women who were listed as workers, especially female traders, in order to show that social and economic relevance did not necessarily go hand in hand.

The last activity encourages reflection on traditional trades exclusive to women, related to textiles and pickling in our municipality, comparing these with other traditional trades in the area. In this section, an old canning factory in the municipality that employed hundreds of local women and whose legacy has survived to this day as an icon for the neighborhood was analyzed as a type of architectural heritage.

The last activity, Let's Be Writers, although related to Geography and History, takes an interdisciplinary approach with Spanish Language and Literature, working on linguistic competence, cultural awareness and expression, as well as personal, social, and learning to learn skills. The aim is for students to create their own narrative, gathering information about two legends with roots in the Modern Age that are still present in the current imagination, which were incorporated into the questionnaire and are intended to be addressed in a playful way, participating in both self-assessment and assessment of their classmates.

4. Conclusions

The new Spanish curriculum framework, at least in the subjects of Social Sciences, Geography, and History, is aligned with the main postulates of research in History and Social Science Education. This is because the curriculum proposes competency-based learning, but also because school knowledge relating to historical content gives visibility to people, places, and topics that are present in historiography but have been forgotten in school history for decades. This knowledge is related to long-standing branches of historiography, such as social history and women's history, but it did not permeate school proposals. However, the new curriculum framework allows it to be given greater visibility. This must be combined with the curriculum's requirement to generate learning situations, which is why it is

It is essential to transfer examples from local history research to school history, taking into account the context in which the school is located and the students for whom the teaching proposal is intended.

The proposal presented here is part of a broader historical research project, which aims to transfer local historical studies to the educational framework. Following research on the development of historical thinking as part of competency-based work in history subjects (González-Valencia et al., 2020), it is necessary to generate proposals that present existing historical sources in a broad space, which have generated their own documentation in different territories, as is the case of the Catastro de Ensenada.

In addition to selecting historical sources based on their characteristics and educational potential, it is necessary to establish examples that serve as models for questioning historical content. This is what is done in this proposal, giving visibility to different social groups, but also to working women. Documentary heritage is an ally in this approach, but it is not easy for teachers to select documentary sources, which is why it is important to transfer knowledge from historical research in collaboration with educational research. We have other examples that offer, from historical and educational research, models of documentary sources for school history (Guerrero Elecalde and Chaparro Sainz, 2019; Guerrero Elecalde and López Serrano, 2020; López

Serrano et al., 2022; Ortega Cervigón, 2021). This has been a constant feature in Spanish publications, especially those by authors with a background in historical and educational research. By applying this approach to a specific case, we aim to provide another example of working with documentary sources and local heritage to connect school history with local history by problematizing school content, using examples from the immediate environment to generate learning situations in line with the new Spanish curriculum framework.

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Scientific paper

Psychometric Properties of the Entrepreneurial Attitudes for Students and Wong and Law's Emotional Intelligence Scales in a Sample of Ecuadorian University Students

Propiedades psicométricas de las escalas de actitudes emprendedoras para estudiantes y de inteligencia emocional de Wong y Law en una muestra de universitarios ecuatorianos

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Abstract:
Emotional intelligence directly influences individual personal development and could influence entrepreneurship skills as well. The objectives of this study were to assess the construct validity, internal consistency, and metric invariance of the Spanish version of the Wong and Law Emotional Intelligence Scale (WLEIS-S) and the Entrepreneurial Attitudes Scale for Students (EASS) and correlate the levels of emotional intelligence and entrepreneurship in a sample of university students (n=558). The validity, reliability, and invariance analysis reveal adequate goodness of fit, internal consistency, and equivalence. In addition, statistically significant correlations were found between all dimensions of the scales. The Entrepreneurship and Emotional Intelligence Scales have adequate psychometric properties. In professional training, emotional intelligence acts as a decision-making ability and entrepreneurial capacity as a factor for future development.

Keywords: emotional intelligence, entrepreneurship, higher education, attitudes, psychometric properties, education.

Resumen:
La inteligencia emocional es un factor que influye directamente en el desarrollo personal y podría influir en la capacidad de emprendimiento. Este trabajo tuvo como objetivos evaluar la validez de constructo, consistencia interna e invarianza métrica de la versión en español de la Escala de Inteligencia Emocional de Wong y Law (WLEIS-S) y de la Escala de Actitudes Emprendedoras para Estudiantes (EASS) y correlacionar los niveles de inteligencia emocional y emprendimiento en una muestra de estudiantes universitarios (n=558). El análisis de validez, fiabilidad e invarianza revelan adecuada bondad de ajuste, consistencia interna y equivalencia. Se encontraron correlaciones estadísticamente significativas entre todas las dimensiones de las escalas. Las escalas de emprendimiento e inteligencia emocional poseen propiedades psicométricas adecuadas. En la formación profesional, la inteligencia emocional actúa como destreza para la toma de decisiones y la capacidad emprendedora como factor de desarrollo futuro.

Palabras clave: inteligencia emocional, emprendimiento, enseñanza superior, actitudes, propiedades psicométricas, educación.

1. Introduction

Since 1990, significant progress has been made in analyzing the construct of Emotional Intelligence (EI). Over the past three decades, considerable contributions have been made to how EI can be effectively assessed, developed, and trained (Fernández Berrocal et al., 2022). Salovey and Mayer (1990) point out that it should be understood through four dimensions, which should be understood as skills: a) perception, evaluation, and expression of emotions; b) emotional facilitation of thinking that allows the cognitive to be stimulated for effective development; c) analysis and understanding of emotions; and d) regulation of emotions and promotion of intellectual growth. In the same vein, some theories and models have been formulated that seek to explain EI; among the most cited approaches are those of Goleman (1995), who explains EI through a set of social and emotional competencies and skills.

In 1997, Mayer and Salovey reformulated the EI construct, defining it as a type of social intelligence that involves the ability to monitor one's own emotions and those of others and use this information to guide one's feelings and actions. Fernández-Berrocal and Extremera-Pacheco (2005) and Llamas-Díaz et al. (2022), following Salovey and Mayer's model, describe it as a person's ability to perceive, facilitate, understand, and adaptively regulate their own emotions and those of others, which affects well-being. In summary, Fernández-Berrocal and Extremera-Pacheco (2005) argue that the above approaches coexist due to how EI is assimilated and defined, and differ slightly in their theoretical approach.

EI, far from being a way of exclusively establishing priorities in emotions, allows emotion to be endowed with intelligence (Acosta, 2015). In other words, this skill facilitates more effective reasoning to perceive and understand signals in social interactions and the environment to generate a quick and controlled response (Bosch, 2010; Fernández-Berrocal and Extremera-Pacheco, 2005). Walker et al. (2022) also point out that the construct is associated with valuable life outcomes such as academic and work performance, well-being, satisfaction in romantic relationships, and physical and mental health.

In addition, EI could empower future professionals with emotional management skills (Guzmán et al., 2022). The proposal by García-Cabrera et al. (2015) suggests that entrepreneurial orientations promote competence, and these skills are not developed independently but are closely related to cognitive ability, especially emotional intelligence (EI). These authors argue that EI could even be considered a predictor of entrepreneurial skills and propose that this variable should be investigated during the entrepreneurship process. Similarly, Palomeque et al. (2020) indicate that there is a direct influence of EI on entrepreneurial attitude, motivation, and behavior.

Concerns about analyzing entrepreneurial skills in university students and their close link to IE stem from research findings that highlight the value of emotional training and, at the same time, the importance of training new professionals to be entrepreneurial. Entrepreneurship can be understood as the ability to translate ideas into action (Oliver, Galiana, and Gutiérrez-Benet 2016). Moriano et al. (2006) define an entrepreneur as a person who carries out a business initiative as a creator or partner. This skill is closely linked to the ability to take risks about controlled resources. Rodríguez López and Borges Gómez (2018) outline the profile of an entrepreneur as comprising seven distinctive traits: originality, proactivity, resilience, time management, freedom, sociability, and image creation.

In Ecuador, since 2008, public policy has been committed to promoting entrepreneurial capacity (Samaniego, 2014). Studies on the impact of these measures indicate that the country ranks sixth among forty-three countries studied. In 2019, the early entrepreneurial activity rate was 36.2%, and compared to other Latin American countries, Ecuador has the second-highest rate of entrepreneurship (Landsdale et al., 2012; Lasio et al., 2020).

Given these statistics, two factors may explain this behavior: necessity and opportunity.

Although these statistics appear favorable, youth participation is only 6.5%, and in recent years, activity has tended to decline (Lasio et al., 2020). In this sense, it is vitally essential that universities consider entrepreneurship as a skill to be developed in their professional training.

Moriano et al. (2006) point out that in Europe, becoming an entrepreneur is not always a highly sought-after option for university students due to the constant risks involved. Even entrepreneurship training tends to be concentrated in economics and business degrees and, in general, tends to prepare students for the role of employee, rather than for self-employment or entrepreneurship. To analyze the predominant values in entrepreneurs, Moriano et al. (2001) distinguish two main groups: individuals, oriented towards emotional independence, and collectives, associated with a sense of belonging and group dependence. Based on this differentiation, an entrepreneurial person will be mainly inspired by more individualistic values.

Therefore, referring to entrepreneurship and behavior at the initiation stage requires a more in-depth analysis. Moriano et al. (2006) argue that it is vital for an entrepreneur to consider at least three aspects: family: the way of Support and "examples" of economic management would motivate a person to develop their business idea; socio-labor: education, social Support, experience, and the difficulties and obstacles to creating a business would all influence how a company is established; and personal characteristics would facilitate the ability to consider, undertake, and assume objectives. On the latter, Moriano et al. (2001) list some personality characteristics of entrepreneurs, including: a high motivation to achieve, which drives them to improve, tackle challenging goals, and take calculated risks; a high need for achievement and a low need for power; a greater internal locus of control vs. a lower external locus of control, which would allow them to assume the success and/or failure of their behavior as a result of their responsibility rather than depending on the context; and personal initiative, which allows them to have a capacity for planning, persistence, directionality, self-motivation, and proactivity.

In contrast, a comprehensive study by Oliver and Galiana (2015) summarizes the characteristics of entrepreneurial personality as follows: proactivity, which refers to the ability to take initiative, identify opportunities, and plan for the long term; professional ethics, which is understood as an ethical way of working; empathy, which is the ability to understand emotions and contribute to others; innovation, which refers to a predisposition to create, participate in, and support new ideas that lead to new products or services; autonomy or "independent mindset"; and, finally, the ability to take risks.

Oliver, Galiana, Calatayud, et al. (2016) argue that entrepreneurs share specific skills, such as creativity, initiative, innovation, risk-taking, and project management, to achieve particular goals. However, not all entrepreneurs are the same or use the same approaches. It is important to highlight individual differences and the influence of context, as these factors determine the success or failure of each entrepreneur (García-Cabrera et al., 2015). Although various theories attempt to explain what makes someone an entrepreneur, such as trait theory, demographics, or parenting style (Kuratko, 2007; Louw et al., 2003; Patzelt and Shepherd, 2011), it is argued that the most accurate way to identify this characteristic is through emotional intelligence.

Research has shown that students with higher levels of emotional intelligence have a greater capacity to maintain constant effort and self-motivate (Fernández-Berrocal and Extremera-Pacheco, 2005). In addition, it has been found that different factors of EI can be correlated with certain personality traits (Tesoro et al., 2021). According to Hernández (2019), personality attributes are part of the initial phase of entrepreneurial development through people's entrepreneurial intention. Therefore, emotional intelligence is presented as an alternative variable to explain why people become entrepreneurs and under what conditions they do so. Zampetakis (2011) even defines emotional intelligence as a predictor of the success or failure of an entrepreneurial venture.

Consequently, the assessment of EI and entrepreneurial attitude (EA) becomes crucial as a key activity for analyzing vocational training and motivating university students to identify and enhance their professional skills. Palomeque et al. (2020) point out that, given the importance of EI in the success of entrepreneurship, it is essential to understand the relationship between EI and entrepreneurial behavior. The psychometric properties of the WLEIS have been extensively evaluated. For example, Merino et al. (2016) demonstrated high and satisfactory internal consistency, even considering the short number of items in each subscale. Sánchez (2016) concludes that internal consistency was satisfactory, with a Cronbach's alpha of 0.79 to 0.95 in all dimensions that were strongly correlated. Researchers Extremera Pacheco et al. (2019) found that the four-factor model had good goodness of fit, criterion validity, and adequate internal consistency.

Other studies have evaluated the WLEIS in other languages and contexts; in a Chinese sample, the four-factor model of Wong and Law's Emotional Intelligence Scale showed an excellent fit to the data with $\chi 2$ (98) = 386.74, p< 0.001, NNFI= 0.96, CFI= 0.96, RMSEA = 0.050, SRMR= 0.032, thus validating the instrument (Kong, 2017). Another study showed that a bifactorial model also fit the data well: $\chi 2$ (88)= 268.671, p < .001, CFI= .944, TLI= .923, SRMR= .043, RMSEA = .063 (90% CI: .054 – .071), and all factor loadings were significant, ranging from .465 to.641 (Di et al., 2021).

For the Italian version of the scale, confirmatory factor analysis confirmed a four-factor model with $\chi 2$ (98) = 200.45, CFI = 0.981, RMSEA = 0.047, providing a good fit with the data and adequately describing the relationships between the observed variables and the latent factors (Iliceto and Fino, 2017). In India (RMSEA = 0.10, GFI = 0.94, and CFI = 0.90; Traymbak et al. 2022), Korea (RMSEA=.07, GFI=89, CFI=.95, and TLI .93; Jeong et al. 2020), Chile (RMSEA=.031, SRMR=..077, CFI=.967, TLI=.959; Acosta-Prado and Zárate Torres, 2019), Colombia (RMSEA< 0.08; CFI> 0.95; TLI> 0.95; and SRMR < 0.06; Acosta-Prado et al. 2022).

Confirmatory factor analyses conducted by Oliver and Galiana (2015) on the Entrepreneurial Attitudes Scale for Students (EAEE) showed adequate internal consistency and construct validity, concluding that the instrument had sufficient psychometric properties. Subsequently, Oliver, Galiana, and Gutiérrez-Benet (2016), using the same instrument, concluded that: "Descriptive statistics show a high presence of entrepreneurial personality traits" (p.186) in the participating students. Similarly, the results in Oliver, Galiana, Calatayud, and Piacentini (2016) indicated a confirmatory factor analysis with an adequate overall fit and high and significant factor saturations.

García-Cabrera et al. (2015) concluded that both the direct and positive influence of emotional intelligence on the subject's entrepreneurial attitude, intention, and behavior, as well as its indirect influence through various factors—such as the entrepreneur's creativity and proactivity, their propensity for innovation, or their preference for risk-taking—are facilitators of entrepreneurship. in addition to the personality traits of the entrepreneur and the confidence that the entrepreneur can generate in others. In this sense, the novelty of this study is oriented towards the evaluation of the psychometric properties of the instruments.

2. Method

This descriptive correlational research, with a quantitative approach, seeks to analyze the possible relationships between the different dimensions of emotional intelligence and entrepreneurship. Digitalized scales were used to collect information through the Google Forms portal.

2.1. Participants

Participants were selected through non-probabilistic convenience sampling: students enrolled in the March-July 2018 academic period at the University of Cuenca (368 women, 190 men, with an age of M= 21.09) were invited to participate through visits to each of the courses. The inclusion criteria were: a) freely and voluntarily agreeing to participate in the research and b) being enrolled in one of the degree programs. Regarding marital status, 92.7% were single and 7.3% were married, in a common-law relationship, or divorced. The most significant areas of study were health (46.8%) and social sciences (45.5%), followed by administrative and technical studies (5.6% and 2.2%, respectively).

2.2 Procedure

To apply the instruments, we requested necessary permissions to access courses in various faculties. After obtaining consent to participate, participants were provided with a link to access the form from their smartphones. The application was completed in approximately 25 minutes for each group.

2.3 Instruments

The Wong and Law Emotional Intelligence Scale (WLEIS-S hereinafter) of emotional intelligence, adapted by Extremera Pacheco et al. (2019), is an instrument consisting of four factors assessed based on 16 Likert scale questions, in which one equals "completely disagree" and Seven means "completely agree." The dimensions considered by this instrument are: appreciation of one's own emotions, appreciation of the feelings of others, use of considered by this instrument are: appreciation of one's own emotions, appreciation of the feelings of others, use of emotions, and regulation of emotions.

The Entrepreneurial Attitudes Scale for Students (EASS, hereinafter) by Oliver Galiana, Calatayud, et al. (2016) assesses entrepreneurial personality traits through 18 items integrated into the dimensions of proactivity, professional ethics, empathy, innovation, autonomy, and risk-taking, and has adequate psychometric properties (GFI=.906, CFI=..959, SRMR = .044, RMSEA = .040). The instrument has been adapted for use with teachers and has shown evidence of validity and consistency (CFI =.963, TLI .953, SRMR = .011, RMSEA= .071).

Both scales are self-report instruments in which the subject had to mark the level they believed to be appropriate for the questions asked.

2.4 Data analysis

After data collection, the results from the Google Forms were filtered. The analysis was performed using R Core v 4.4.0 software (R Core Team, 2021).

Due to the ordinal nature of the items, a confirmatory analysis was performed with the DWLS (Diagonalized Weighted Least Squares) estimator and a polyphonic correlation matrix. To assess goodness of fit, the absolute chi-square index, the chi-square/degrees of freedom ratio, the incremental indices CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), RMSEA (Root Mean Square Error of Approximation) with its 90% confidence interval, and SRMR (standardized residual mean square root). The cutoff points for interpretation are taken from Hu and Bentler (1999) and Jöreskog and Sörbom (1993).

Internal consistency is assessed for each subdimension using Cronbach's polychoric alpha and the hierarchical omega reliability coefficient. In addition, the results of the item-total correlation are analyzed.
The invariance analysis is performed between men and women using multigroup confirmatory factor analysis.

Correlational analysis uses Spearman's correlation coefficient and the factor scores obtained in confirmatory factor analysis. Comparisons between sociodemographic variables are performed using nonparametric tests.

3. Results

The results of goodness of fit and internal consistency are shown in Table 1. The EASS proposes a model of six first-order correlated factors. For the WLEIS-S, a model of four first-order correlated factors is used.

Table 1: Goodness of fit and internal consistency of WLEIS-S and EASS

Scale	Dimension	α	ωH	χ^2	gl	χ^2/gl	CFI	TLI	SRMR	RMSEA	RMSEA IC 90%
EISW	Own emotions	.853	.585	301.880	98.000	3.080	.995	.994	.047	.064	.056 - .072
	Emotions of others	.831	.827								
	Use of emotions	.888	.875								
	Regulation	.896	.867								
EASS	Proactivity	.918	.775	190.130	120.000	1.584	1.000	.999	.027	.034	.024 - .043
	Professional ethics	.883	.844								
	Empathy	.924	.912								
	Innovation	.962	.951								
	Autonomy	.952	.933								
	Risk	.890	.853								

Note. α= Cronbach's alpha; ωH= hierarchical omega; χ^2=chi-square; gl=degrees of freedom; CFI= Comparative Fit Index; TLI= Tucker-Lewis Index Lewis; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation

The factorial structure of the two instruments, together with their factor loadings and correlations between dimensions, is shown in Figure 1

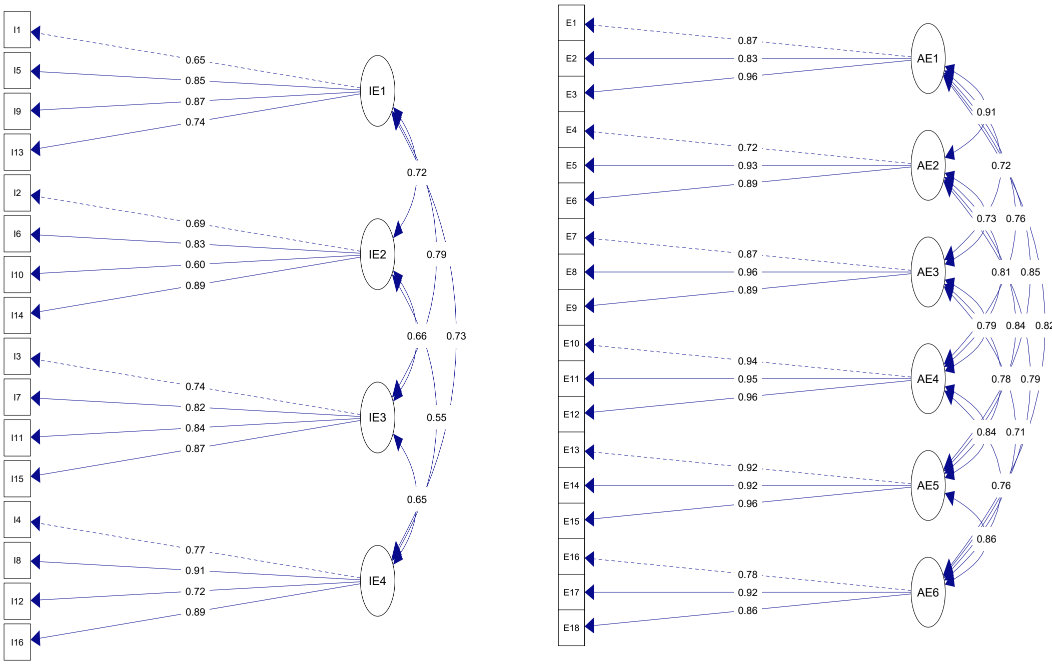

Figure 1: Factor loadings obtained through CFA
Note. IE1 = Appreciation of one's own emotions; IE2 = Appreciation of others' emotions; IE3 = Use of emotions; IE4 = Regulation of emotions; AE1 = Proactivity; AE2 = Professional ethics; AE3 = Empathy; AE4 = Innovation; AE5 = Autonomy; AE6 = Risk-taking.

The invariance between gender in the WLEIS-S and EASS is carried out in stages. Based on the configural invariance analysis, restrictions are added, and the change in goodness of fit is evaluated (Table 2).

Table 2: Measurement invariance analysis

Scale	Invariance	CFI	RMSEA	Δ CFI	Δ RMSEA
WLEIS-S	Configural	.99	.063		
	Metric	.99	.062	<.001	.001
	Strong (factor loads and intercepts)	.99	.058	.001	.005
	Means	.99	.058	<.001	<.001
EASS	Configural	.99	.009		
	Metric	.99	0	<.001	.009
	Strong (multiple loadings and intercepts)	.99	0	<.001	<.001
	averages	.99	.018	<.001	.018

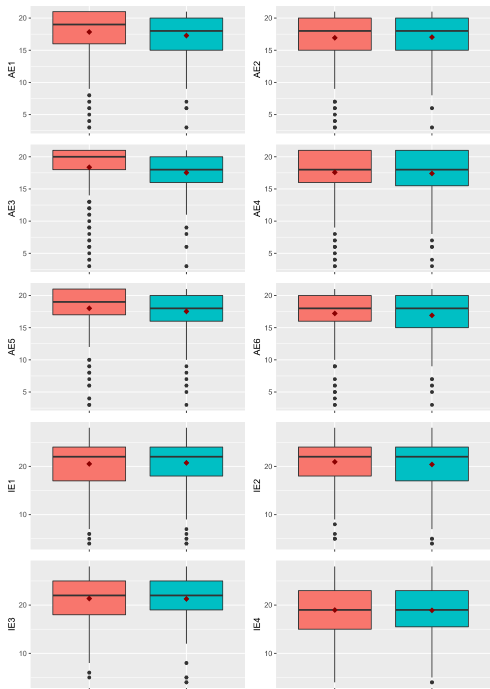

Figure 2: Descriptive characteristics of the dimensions of emotional intelligence and entrepreneurial attitudes among men and women
Note. AE1 = Proactivity; AE2 = Professional Ethics; AE3 = Empathy; AE4 = Innovation; AE5 = Autonomy; AE6 = Risk Taking; IE1 = Appreciation of one's own emotions; IE2 = Appreciation of others' emotions; IE3 = Use of emotions; IE4 = Regulation of emotions.

The distribution of factor scores, scatter plots, and correlations between the dimensions of attitudes toward entrepreneurship and the dimensions of emotional intelligence are presented in Figure 2.

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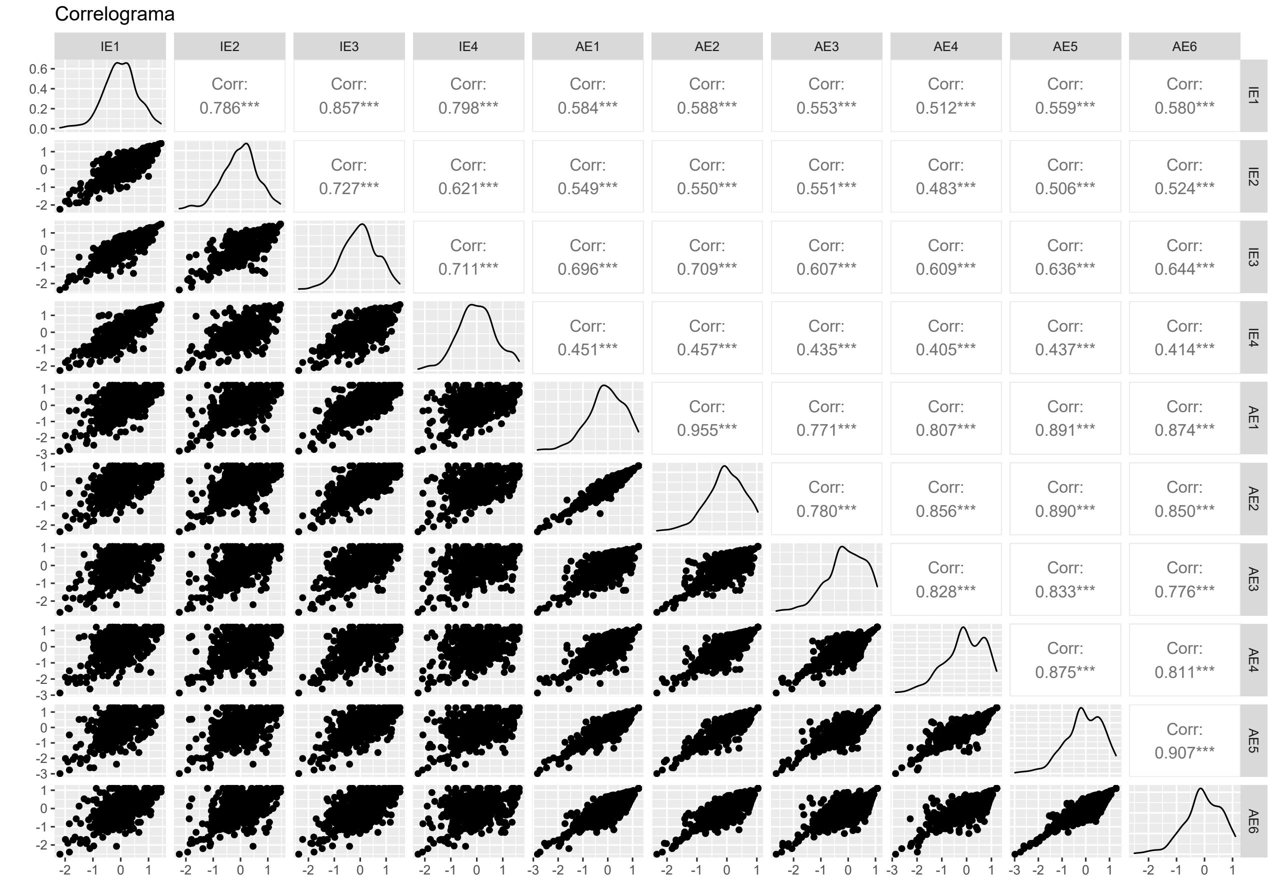

Figure 3: Correlogram of the relationship between the dimensions of entrepreneurship and emotional intelligence

Note. IE1 = Appreciation of one's own emotions; IE2 = Appreciation of others' emotions; IE3 = Use of emotions; IE4 = Regulation of emotions; AE1 = Proactivity; AE2 = Professional Ethics; AE3 = Empathy; AE4 = Innovation; AE5 = Autonomy; AE6 = Risk Taking.

4. Discussion

This article describes the characteristics of emotional intelligence and entrepreneurship in a sample of university students after evaluating the psychometric properties of internal consistency, construct validity, and invariance of the WLEIS-S and EASS instruments.

Ecuador is one of the countries with the highest rates of entrepreneurship in the region, especially among women. The early entrepreneurial activity rate is the second highest in the area, surpassed only by Chile, and the highest among middle-income economies (Lasio et al., 2020). Therefore, it is not surprising that the young population in this study tends to score very high on these items. Considering the subsequent psychometric analyses, the cultural context is the most plausible explanation. In the case of WLEIS-S, the asymmetry of the items is not as pronounced as in the case of EASS, where it is moderate. The items in both instruments have adequate values of difficulty and discrimination (item-total correlation).

Confirmatory factor analysis of the original EASS and WLEIS-S models reveals excellent goodness of fit in all coefficients except RMSEA for WLEIS-S, which slightly exceeds the conventional cutoff value (RMSEA = .06). However, the lower limit of the confidence interval is less than this value. Regarding internal consistency, Cronbach's alpha values show that it is excellent or perfect. McDonald's omega values corroborate this; the lowest omega coefficient is found in the proactive entrepreneurial attitude dimension (ωh=.775). In both instruments, the factor loadings obtained through confirmatory factor analysis are salient and significant. In the case of WLEIS-S, the item with the lowest value is 10, which also has the lowest item-total correlation. However, the results presented do not justify any modification or elimination of this question. In the case of EASS, no factor loading is lower than .7.

Regarding the analysis of invariance between sexes, which is essential for comparing total scores, we observed that as restrictions are added, the change in goodness of fit (ΔCFI) is less than .001. In other words, the instruments are invariant.

Once the psychometric properties of the instruments were defined, the scores for each dimension were compared between gender categories. In general, similar patterns were observed in the distributions of scores, which were slightly more asymmetrical in the case of women. In addition, a large number of lower outliers were observed, especially in the EASS. These results are consistent with the explanation given at the beginning of the discussion about the marked tendency of participants to score high on items due to the cultural context. Very high positive correlations were found between all dimensions of EASS and IE. The high correlation between dimensions of the same instrument suggests that the items could belong to a single dimension (for example, dimensions 5 and 6 correlate with .907). However, because the six-factor model showed adequate goodness of fit and internal consistency, and therefore there is agreement between the statistical constructs and the theoretical constructs, it is recommended that the six-factor correlated model be retained until a more appropriate theoretical and statistical version is presented.

Some authors agree that regulating emotions allows individuals to process better emotional information presented in everyday events, promotes higher levels of well-being, and facilitates the use of problem-solving strategies (Peña Garrido et al., 2012; Salovey et al., 1999). Similarly, Extremera Pacheco and Fernández Berrocal (2004) highlight that good levels of EI promote empathy, interpersonal relationships, and lower levels of aggression. In addition, Guzmán et al. (2022) point out in their study that the development of emotional skills allows professionals to manage their own emotions and those of others.

Regarding performance in AE, the scores achieved by participants indicate that a predominant trait is empathy, preceded by autonomy. At the same time, the level of professional ethics is a trait with a lower score. Although the scores show differences, these are not significant or below average.

The EASS measures show high levels, consistent with the results obtained in other studies with university students. Oliver, Galiana, Calatayud, and Piacentini (2016) and Oliver and Galiana (2015) point out that the descriptive results reflect positively skewed distributions in all entrepreneurial attitudes, with very similar characteristics for women and men. The authors note that this information can be helpful as a baseline for dimensions susceptible to intervention, as well as for monitoring their development.

Empathy is one of the most prevalent attitudes, with a minimal difference from autonomy. In a study on entrepreneurial attitudes among Peruvian university students, the results coincide about this attitude, indicating that empathy is of vital importance in entrepreneurial intentions, since it allows entrepreneurs to consider their own needs and those of others (Bustos, 2016; Olson, 2013).

This significant relationship would indicate that skills for reflecting on, managing, and prolonging emotional states (Mayer and Salovey, 1997) and the characteristics of proactivity—maintaining anticipatory, adaptive, and self-motivating thinking and behavior—are closely related and would favor the development of entrepreneurial and innovative behaviors (Oliver and Galiana, 2015).

In the same vein, for Lumpkin and Dess (1996), innovation manifests a tendency to create, generate, and support new ideas, while autonomy enhances these skills and allows the individual to act freely on them, so that adequate emotional management would allow this skill to be managed appropriately.

Let's consider that university students with high levels of EI, according to Ciarrochi et al. (2000), show greater empathy, higher life satisfaction, and better quality social relationships. They should receive an entrepreneurship education that gives greater value to their professional work, since, according to Oliver and Galiana (2015), an entrepreneurship education promotes competence and intentions toward self-employment.

Although public policy in Ecuador has been committed to entrepreneurship, socioeconomic and bureaucratic conditions do not always provide the necessary guarantees for entrepreneurship. However, intrapreneurship can be an option for those working within a company who prefer not to take risks. Moriano et al. (2009) distinguish that an intrapreneur is characterized by feeling identified with the organization, tending to innovate, and taking risks in favor of the place and group with which they work.

Even the way of establishing an exemplary work commitment would be closely related to higher levels of positive affect (Gorgievski et al., 2014). In contrast, good emotional management would allow for better positive interactions and fewer negative interactions (Extremera Pacheco and Fernández Berrocal, 2004). If higher education environments favor emotional and entrepreneurial development, then it would be possible to invest in training future professionals in emotional and work management skills.

5. Conclusions

The data found shows that emotional intelligence and entrepreneurial traits are personal aspects that are closely linked, concluding that if there is good emotional intelligence, there will be positive entrepreneurial traits. If analyzed in a more theoretical way, one could hypothetically distinguish elements such as internal locus of control, related to the ability to appreciate one's own emotions, and external locus of control, linked to the appreciation of other emotions, empathy, and the use and regulation of emotions. Specifically, both skills would be closely related.

More specifically, it is crucial to highlight that emotional intelligence shows positive and statistically significant relationships with entrepreneurial attitude, thus corroborating the research hypothesis that proposed a relationship between these constructs. In this case, the relationships to highlight include emotion regulation and proactivity, or emotion regulation and risk-taking. Emotions and proactivity, or emotion regulation and risk-taking.

It should be noted that these scores predominated in all dimensions with above-average scores, which is why it would be relevant to analyze a larger population with data that has a normal distribution. A qualitative analysis could even be established to confirm the hypothesis of a possible theoretical relationship.

On the other hand, we should point out that, as this is a cross-sectional study, the data cannot strictly define the extent to which emotional intelligence and entrepreneurial attitude variables modify the relationship between the intention to start a business and the maintenance of a business idea. It would be interesting in the future to establish a case study to analyze the scope of the relationship between these two constructs over time.

This theoretical review and the various analyses carried out have shown that emotional intelligence plays a fundamental role in professional training and encourage higher education institutions such as the University of Cuenca to enter into a virtuous circle of formal training by integrating EI and entrepreneurship into their curricula, academic programs, research, and intervention, in such a way as to benefit both their students and their teachers.

The EASS and WLEIS-S scales have adequate psychometric properties and can be used for professional practice and research.

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Scientific paper

The subject of art history in university studies from a gender perspective. Analysis and proposals for its application

La asignatura de Historia del arte en los estudios universitarios bajo la perspectiva de género. Análisis y propuestas para su aplicación

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Abstract:
Art history education in the university context continues to transmit the same obvious sexist bias that permeates the discipline even today. In order to recover the erased memory of women artists and problematize their absence/presence in history, this paper analyzes the current situation of the basic subject History of Art taught at different levels of the Faculty of Philosophy and Letters of the University of Alicante. Likewise, opportunities are identified for the introduction of a gender perspective in the subject that makes it possible to adapt the educational resources to the current social and academic reality. Finally, a proposal for the application of the gender perspective is presented, carried out during the 2022/23 academic year, which focuses its efforts on those areas that are most difficult to modify in practice: the contents and bibliography of the subject.

Keywords: Art History, Gender Perspective, University, teaching, women.

Resumen:
La educación de la historia del arte en el ámbito universitario sigue transmitiendo el mismo evidente sesgo sexista que atraviesa la disciplina aún hoy en día. Con el objetivo de recuperar la memoria borrada de las mujeres artistas y problematizar su ausencia/presencia en la historia, esta investigación analiza la situación actual de la asignatura de formación básica Historia del arte, impartida en diferentes grados de la facultad de Filosofía y Letras de la Universidad de Alicante. Asimismo, se identifican las oportunidades para la introducción de una perspectiva de género en la asignatura que posibilite adaptar los recursos educativos empleados a la realidad social y académica actual. Por último, se presenta una propuesta de aplicación de la perspectiva de género, llevada a cabo durante el curso 2022/23, que centra sus esfuerzos en aquellos ámbitos más difíciles de modificar en la práctica: los contenidos y la bibliografía de la asignatura.

Palabras clave: historia del arte, perspectiva de género, Universidad, docencia, mujeres.

1. Introduction

This research revolves around the problem of the lack of gender perspective in the hegemonic discourse of Western art history, which is transferred, full of shortcomings and stereotypes, to the educational sphere and, consequently, to the teaching of the discipline itself at the university level. The way of understanding art history from an androcentric perspective that excludes women and other groups outside the modern male subject of knowledge is deeply rooted in culture. Since its inception, art historians have eliminated women, the memory of their lives and their work from historical memory and have belittled the areas in which they developed their creativity, leaving new generations without female artistic role models (Fernández, 2001; López, 2011).

Fortunately, this canonical art history has been challenged by feminist art researchers and historians, who have been developing a large body of scientific literature since approximately the 1970s in the Anglo-Saxon world and the 1990s in Spain (Nochlin, 1971; Parker and Pollock, 1981; Combalía, 2006; De Diego, 1987; Mayayo, 2003). In recent decades, academic feminism, parallel to feminist social movements, has had an impact on multiple fields. The social sciences, the humanities, and specifically art history have benefited from the debates introduced by feminist epistemology (Harding, 1986), in a context of institutional criticism characteristic of postmodernity and the development of social art history (Hauser, 1951).

Along these lines, research has been undertaken in the university context that sees education as a vehicle for social transformation, based on the premise that "the invisibility of women in textbooks leads students of all ages to subconsciously assume that it is men who have led the great actions of humanity" (García-Sinausía and Valtierra, 2021, p. 253). As Parker and Pollock (1981) pointed out decades ago, we must refute the lies about the non-existence of women artists or, in the case of those who have been admitted, the idea that they were second-rate.

However, as we will see throughout this text, there is still much to be done to transform the history of art and its education into a more critical, open, diverse, and up-to-date field of knowledge in favor of gender equality. Proposals such as this research aim to contribute to this, as researcher Antonia Fernández Valencia rightly points out:

> Teachers must bring theoretical and methodological innovations in different scientific disciplines into the classroom in order to contribute, on an ongoing basis, to updating the social conception of these disciplines and to stimulating students' interest in new fields of study. (2001, p. 11).

1.1 Laws and regulatory frameworks support change

The legal framework supporting the introduction of the gender perspective in universities is broad, both internationally (Fifth European Framework Program for Research and Innovation, 1998-2002; Action Plan of the Women and Science Unit, 1999) and nationally (Organic Law 3/2007 on effective equality between men and women, Article 25; Organic Law 1/2004 on Comprehensive Protection Measures against Gender Violence, Article 4.7; Law 9/2003 of the Generalitat, for Equality between Women and Men, Article 9).

The recently enacted Organic Law 2/2023, of March 22, on the Spanish University System (LOSU), explicitly states the importance of "educating citizens through the transmission of democratic values and principles" (Article 2). In addition, it highlights the integration of gender equality in research (Article 13) and the general role of the university, which, according to the legislative text, "shall be guided by human and fundamental rights, democratic memory, the promotion of equity and equality, the promotion of sustainability, the fight against climate change, and the values derived from the Sustainable Development Goals" (Article 12).

To understand how these ambitious goals are being achieved, it is interesting to look not only at the regulations but also at the actions promoted by each university's equality units, as they are the ones with the powers assigned in this area. In the context of the University of Alicante (UA), the IV Equal Opportunities Plan 2022-2025 is clear on this point. The section on teaching (axis 2) includes, among other objectives, "promoting, disseminating, and accrediting knowledge on gender equality" and "integrating the gender perspective into university teaching." Within this second objective, there is mention of actions to incorporate the gender perspective into the teaching guides for UA degrees, specifically "in the objectives, content, use of inclusive language, and assessment" (UA, 2022, action 2.6).

A recent report[1] analyzing the level of inclusion of the gender perspective in the degree programs offered at the UA, based on the teaching guides for their courses, provides future lines of work that may constitute priority action points. Two of these relate to the content of the subjects. Firstly, it proposes making gender training compulsory and fundamental in undergraduate studies, incorporating this dimension as an essential pillar of university education and in all disciplines, with a twofold aim: to equip students with the knowledge and skills to enable them to identify the impact of gender in their future professional practice.

Secondly, it aims to highlight the mechanisms of exclusion that operate in the scientific system and, in general, in society.

All these indications open up opportunities for us to introduce the gender perspective as a complex phenomenon, working to recover the lives and artistic works of women. However, not only that, also deconstructing the sexist structures that permeate academic knowledge. Following Parker

1 This report, published in 2021, contains data on the situation of the gender perspective and teaching in the universities that form part of the Xarxa Vives network in Spain, France, Italy, and Andorra, and is available at https:// www3.vives.org/publicacions/arxius/pu13.pdf [08/30/2023].

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and Pollock (1981), this requires tracing the changing definitions of artist and woman in order to decipher how women have been subjects in the changing relationships between patriarchy and society over the centuries. In the words of Sonia Reverter (2022),

> The aim will therefore be to create a new interpretative framework that allows us not only to recover silenced voices and knowledge but also to organize and produce knowledge differently; that is, with a commitment to equality, diversity, and social justice. (p. 10).

1.2 The gender perspective as a methodological approach in university teaching

Reverter (2022) discusses two different ways of introducing the gender perspective into university teaching: across the board and through specialized courses. However, he warns that neither formula is entirely effective on its own, but that both must be applied in combination for there to be a fundamental transformation in the structure of the educational project.

Other authors propose establishing specific competencies on gender equality in teaching guides to encourage the introduction of the gender perspective in university studies (Marín and Giménez, 2022). In the case of the UA, the institution where this research is being conducted, the current Equality Plan states that only on rare occasions are specific competencies and objectives on gender or equality included in the content section of teaching guides and that, in addition, less than 16 percent of degrees have one-third of female authors among the total bibliographic references for their subjects (UA, 2022, p. 29). It is therefore difficult to determine whether or not the gender perspective is being incorporated into two fundamental aspects of the subjects: content and recommended bibliography.

About this process of implementing equality guidelines and feminist discourse in the classroom, researchers such as Rosalía Torrent (2022) point to the fundamental role played by teachers and their desire to change things. Indeed, as the author explains, gender studies are present in specialized publications, but their application in teaching has not yet become widespread.

Recent research has reflected on the introduction of the gender perspective in teaching, particularly noteworthy among which are those that address art history studies in teacher training (Díez et al., 2017; Rebollar, 2013; Triviño, 2014). (Rausell and Talavera, 2017; Rausell and Valls, 2021), History (Bolufer, 2018; Torrent, 2022) and art history (Caballero, 2022; Marín and Giménez, 2022; Moreno and Vera, 2016; Olmedo et al., 2019; Sanjuán, 2015).

However, most studies on the absence of women artists in current curricula are limited almost entirely to analyzing primary and secondary education (García-Sinausía and Valtierra, 2021; García et al., 2023; Sanjuán, 2020). It is worth highlighting the work of teachers in compulsory secondary education who are making efforts to introduce the gender perspective at earlier stages of education. This research, therefore, aims to provide an analysis and a proposal for introductory art history courses taught at universities in Alicante, to contribute, as far as possible, to progress in incorporating the gender perspective in this field.

2. Materials and methods

The Art History course is a compulsory semester-long introductory and general subject offered in the first year of the History, Geography and Land Management, and Humanities degrees at the UA. It consists of a theoretical part and two different types of practical work. At the end of the course, there is a multiple-choice test to assess students' understanding of the concepts, categories, basic vocabulary, styles, works, and key artists covered in the theory sessions.

2.1. Phases of the research

Taking into account the characteristics of the subject and the issues that, as we have been explaining, are currently being discussed in academic feminism, art history, higher education, and legislation for the achievement of equality in university studies, the fundamental aspects of the subject are analyzed first. This is achieved through reflective commentary on the teaching guide, which serves as the primary source of information and observation of opportunities to introduce critical and feminist perspectives into teaching practice. The questions that guide the analysis are as follows:

- Is the gender perspective present in the objectives and competencies?
- Is the gender perspective present in the content and recommended reading list?
- Is the gender perspective present in the assessment?

To try to answer these questions, we based our analysis on the work carried out by two organizations. On the one hand, the University, Teaching, Gender, and Equality Network, coordinated by Mª José Rodríguez Jaume. On the other hand, the Network for the Implementation of Gender Perspective in Teaching at the Faculty of Philosophy and Letters (Philology) is coordinated by Professor Herminia Provencio Garrigós. Both have developed a series of recommendations and self-assessment tools (UA, 2023) so that teaching staff at the UA's Faculty of Philosophy and Letters can assess gender bias in the formal or explicit curriculum and the hidden curriculum (Maceira, 2005) of the undergraduate and postgraduate courses offered by this faculty (Provencio and Arráez, 2016).

We therefore draw on the questions in Table 1, as they focus specifically on our area of interest: the content, objectives, bibliography, and assessment of the course. We are interested in knowing whether the contributions of women scientists in the discipline are valued, the existence or absence of female protagonists, gender stereotypes in the narrative of artistic styles and works, gender-based social inequalities present in art history, and the treatment of difference and intersectionality.

Secondly, a detailed analysis of the recommended bibliographic references is carried out, which will be the sources of information in this second phase, to check whether we find women artists in the texts of the recommended books and, if so, what place they occupy within the narrative. That is, whether they are simply mentioned or whether any aspect of their biography or work is developed.

Finally, a proposal for introducing the gender perspective into the subject is presented, which has been carried out during the 2022/23 academic year in a group of 30 students over a semester, in the context of undergraduate studies in History, Humanities, and Geography and Land Management at the UA. To reflect on its implementation, the analysis tool described in phase one is used, and the aspects that have favored the realization of the gender perspective are highlighted, as well as the difficulties encountered along the way.

3. Results and discussion

3.1. Analysis of competencies, bibliography, content, and assessment

The course content is organized conventionally, in styles framed in large blocks (ancient, medieval, modern, contemporary), following the introductory sections and sections analyzing and interpreting the works. This way of understanding art history, as a meta-narrative of the evolution of male genius, has, as we know, been criticized for decades by feminists for perpetuating a sexist and exclusionary art canon (López, 2011). However, the teaching guide does not mention this aspect or specify problems related to the absence or recovery of women's memory.

All of this leads us to believe that the historical inequality in representation between men and women is not perceived as a specific problem and that, therefore, there is no need to make any changes in this regard. However, there are some cracks in this static approach to art history. These cracks generate a certain structural instability, but at the same time allow some rays of light to filter through.

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For example, the general competencies for the subject of History (CG1, CG8), Geography and Land Management (CG10), and Humanities (CG1, CG4) refer to critical thinking, recognition of diversity, equality, and ethical commitment. There is no mention of gender inequality, but there is mention of raising awareness, a criticism which, when applied to gender differences, could offer the possibility of raising questions about the lack of female authors in history, how women and men are represented in the iconography studied, or the values that are transmitted and promoted in the readings of the works from a gender perspective.

Furthermore, in some specific competencies (History, CE1) and educational objectives, art history is presented as a complex and dynamic phenomenon. We could therefore consider that this subject is susceptible to change, connections with other areas of knowledge, and allows for multiple interpretations. Thus, if we consider the advances made by feminist studies in art history, we see that it is indeed possible to open up spaces for transformation.

However, a first glance at the bibliographical references in the teaching guide for the subject confirms that there are no recommended books that deal either encyclopaedically or specifically with the lives and creations of women artists, even though in recent years. Over the years, several monographs have been published on this subject, as will be seen below.

In terms of figures, as we can see in Table 2, there is an underrepresentation of women artists in the books that make up the recommended bibliography. The vast majority do not include any, which is hardly surprising given the conclusions of similar studies (Rebollar, 2013; Bel, 2016). In our case, very few books feature more than twenty women on their pages. Considering the volume of

Tabla 1. Currículum oculto y los recursos docentes
Fuente: Provencio y Arráez, 2026, p. 2643

Hidden Curriculum: Teaching Resources	YES	No	NS/NC
Do I check whether the materials I provide highlight the contributions of women scientists?			
Do I check whether the materials I provide feature women as protagonists in the content being conveyed?			
Do I check whether the materials I provide convey stereotypes or an androcentric view?			
Do I highlight gender inequalities and inequities in any of the topics covered in the course?			
Do I take into account the consequences that comments/explanations/examples may have on students in terms of identity: sexual, racial, ethnic, religious, national, etc.?			

information contained in these manuals, the number of women we find in them is anecdotal. It is therefore easy to conclude that, in general, the bibliographical references are out of date.

In general terms, the books that review more women are also the most recent, but this is not always the case. For example, Antón Chapitel and Carlos Reyero have both published in the new millennium. However, they include 0 and 3 women, respectively. Likewise, we could assume that books focusing on modern or contemporary art should contain more references to women artists simply because of their proximity our era. However, authors such as Amy Dempsey and Valeriano Bozal (both of whom address contemporary art and postmodernism in their works) include little information and very few female artists. Despite being the authors who introduce the most women, it is mainly their names that appear. For example, of the 47 women artists in Valeriano Bozal's text, only 11 are mentioned in terms of their lives, and their works are analyzed. In Dempsey's case, out of 77, only 16 female authors have any of their works commented on.

Therefore, it is possible to observe a specific relationship between the temporal proximity of the editions and the artistic periods studied, and the appearance of women artists. However, their presence or absence is not a question of artistic or literary relevance in the bibliographical references, but instead of (lack of) perspective. Take, for example, the Spanish edition of Amy Dempsey, a work that includes a greater number of women artists. It has been coordinated by Anna María Guasch, an expert in contemporary art studies who is no stranger to the importance of feminism in recent art (Guasch, 2000). Not surprisingly, Dempsey herself (2008) states that she finds the idea of not including women ridiculous and that researching them, as well as other groups, is essential.

Sometimes, when women creators are approached, it is archaic and sexist. As Marian López Fernández-Cao (2011) states, when female artists appear in encyclopedias and manuals, they are treated differently and their absence and dependence on men are highlighted, their personal lives are valued more than their professional careers, and their works are often interpreted from parameters that fit the stereotypical idea of femininity. This is the case, for example, in Frederic Hartt's textbook (1989), which justifies historical amnesia in his book with a biologistic (implying that it is an unchanging reality, impossible to modify) and stereotypical argument:

Tabla 2: Referencias bibliográficas en la guía didáctica de la asignatura UA
Fuente: Elaboración propia

Reference (book)	Authors	Chronological	Generalist?	No. of female artists	Year of first edition	AYear and edition consulted
Boardman, John	1 male author	Ancient Egypt - Hellenism	Greek art	0	1964	2002 (4ª ed)
Capitel, Antón	1 male author	Renaissance - Contemporary	Architecture	0	2009	2009
Bianchi Bandinelli, Ranuccio; Torelli, Mario	2 male authors	Etruria - Rome	Italian art	0	1986	2000
Blanco Freijeiro, Antonio. León Alonso, Pilar.	1 male author. 1 female author of the revised preliminary study	Cretan - Hellenism	Yes	0	1956	2011 (3rd ed)
Grabar, Oleg	1 male author	622 BC – 1005 AD	Islamic art	0	1973	1990 (6th ed)
Lafuente-Ferrari, Enrique	1 male author	Paleolithic – 19th century	Spanish art	0	1934	1987 (5th ed)
Zabalbeascoa, Anatxu; Rodríguez Marcos, Javier	1 male author, 1 female author	1377 - 1943	Architecture	0	1998	1998
Gombrich, Ernst H.	1 male author	Prehistory – Avant-garde	Yes	1	1950	1994 (16th ed)
Chastel, André	1 male author	311 – 1970s	Italian art	2	1982	1988
Reyero, Carlos	1 male author	19th century	Yes	3	2014	2014
Argan, Giulio Carlo; Bonito Oliva, Achille	2 male authors	1950 - 1990	Yes	4	1992	1992
Wittkower, Rudolf	1 male author	1600 - 1750	Italian art	4	1979	2007 (12th ed)
Argan, Giulio Carlo	1 male author	Neoclassical – 1970s	Yes	5	1977	1977
Ramírez, Juan Antonio (Ed.)	26 authors, 6 female authors	Ancient world – Contemporary world	Yes	11	1996	2005
Janson, Horst	4 male authors, 1 female author	Ancient world – Modern world	Yes	12	1986	1990 (3rd ed)
Honour, Hugh; Fleming, John	2 male authors	Neolithic - Postmodernism	Yes	24	1982	2002 (6th ed)
Hartt, Frederick	1 male author	Paleolithic – 1980	Yes	26	1985	1989
Bozal, Valeriano	1 male author	20th century	Spanish art	47	1995	2000 (4th ed)
Dempsey, Amy	1 female author	1860 - 2000	Yes	77	2002	2008 (2nd ed)

> Part of the explanation for the exclusion of women from artistic endeavors, as well as other fields, must undoubtedly be sought in their physical status in the era before modern medicine. […] A woman tied to domestic life and constant pregnancies could hardly participate in other more strenuous physical activities […] Even painting, in the Renaissance, was a strenuous activity carried out on scaffolding, constantly carrying sacks of sand and mud and pots of water. The only known female artists of antiquity painted portraits, which could be done in comfortable studios. Unfortunately, however, their work has been lost. (pp. 21-22).

Perhaps the author did not take into account the kind of physical and domestic tasks that women performed in the 14th-16th centuries, particularly those who were of modest social standing or poor. Nor did he probably think of female artists such as the Mannerist painter Lavinia Fontana, who gave birth to 11 children, was an artist at the papal court, and ran her painting studio.

Another aspect worth highlighting is how often women artists are presented in these works as partners or wives of, or generally affiliated with, a male artist who is usually given more space in the text.

The harmful effects of identifying female artists as wives or relatives of other artists rather than as creators have been pointed out by authors such as García-Sinausía and Valtierra (2021). The insistence on making their achievements invisible continues to reinforce unequal power relations between men and women to the detriment of the latter. Furthermore, defining the identity of female artists in terms of their role as wives or partners shifts the focus away from their artistic activity. It reinforces gender differences in art and society. Furthermore, women have historically been relegated to mere passive sources of inspiration, since "almost every artistic movement from the 19th century onwards has women whose contributions have been erased or defined by their outdated role as muses" (McCabe, 2021, p. 14).

While it is important to study the life, work, and style of an artist, it is important to remember that we must stop identifying the person who creates as an isolated entity linked to the figure of the male creative genius. Both men and women have been nurtured and supported by their partners, networks, and communities. Professional and emotional resources to create. However, canonical art history has emphasized the supposed genius and independence of male artists to explain their lives and artistic production. From a gender perspective, this is relevant, since the celebration of only a few selected (male) milestones constitutes the core of patriarchal history (McIntosh, 2019) and the myth of male individuality (Hernando, 2022) as the basis of that history. From this approach, it is possible to see the need to study the context of creation and the circumstances that have hindered and enabled the production of art in each historical moment. Furthermore, in this way, we aim to raise awareness of how sexism operates to the detriment of women and other minority groups.

Finally, regarding the course assessment, no criteria with a gender perspective are explicitly stated.

3.2. Proposal for the introduction of a gender perspective in the Art History course

By conceptualizing gender perspective as a methodological tool, as previously expressed, and based on the analysis of the subject at hand, the proposal presented here is structured around three axes: bibliography, content selection for theoretical sessions and practical activities, and theoretical and practical assessment.

Firstly, new bibliographical references are introduced: Women Artists (Frigeri, 2020), Women Painting History. Las chicas del óleo. Pintoras y escultoras anteriores a 1789 (Del Río, 2010), Historia del arte sin hombres (Hessel, 2022), Historias de mujeres, historias del arte (Mayayo, 2003), More Than a Muse: Creative Relationships That Eclipsed Women (McCabe, 2021), Bauhaus Mädels (Rössler, 2019), and Women and Painting in 19th-Century Spain. Four Hundred Forgotten Women and a Few More (De Diego, 1987). These works have been selected for their focus on the lives and careers of women artists and as current sources of introductory information on art history.

One difficulty associated with the bibliography search has been the scarcity of encyclopedic or monographic publications on art history with a clear gender perspective. Compared to the sources that support the official discourse, there are still very few that question it and provide new information about female artists. It has also been challenging to attribute credibility to new hypotheses or theories about works attributed to men, which are speculated to have been created or co-produced by women. This is the case with the debate surrounding Duchamp's world-famous 1917 work, Fontaine, which, according to recent research (Durán, 2013; Gammel, 2011; Hustvedt, 2019)[1]. Nor does the resistance of museums and other institutions with authoritative voices in art to include women in their permanent exhibitions help (Ballesteros, 2016; López and Fernández, 2018). On the other hand, new research projects[2] and exhibitions are appearing every day where we can find leading artists (Reverter, 2022; Mujeres en las Artes Visuales [MAV], 2020 and 2021).

As for resources for theory sessions, new teaching materials

1 This theory was developed in an exhibition in Edinburgh entitled A Lady is not a Gent's, curated in 2015 by Gly Thompson and Julian Spalding, as part of the Summerhall Festival in Edinburgh. https://festival15.summerhall.co.uk/exhibi-tion/a-ladys-not-a-gents/index.html

2 The research project Women Artists in the Spanish Cultural Scene and Their Relationship with Europe, 1803-1945 (PID2020-117133GB-I00) was carried out between 2018 and 2021 by researchers from the universities of Seville, Valencia, Zaragoza, and Complutense Madrid, with the collaboration of other Spanish and European institutions. It is funded by the State Agency for Research of the Ministry of Science and Innovation (Government of Spain). It has resulted in exhibitions and publications on Spanish women artists written by Concha Lomba Serrano, Ester Alba Págán, Alberto Castán Chocarro, and Magdalena Illán Martín. The project website is https://maes.unizar.es/. Also, the research project Women's Legacy: Michael the Archangel by Luisa Roldán. Our Cultural Heritage for Equity 2020-2023 within the European Erasmus framework + Brings together educational resources on women's productions in art generated in collaboration with Spain, Scotland, Lithuania, and Italy. Its website is https:// womenslegacyproject.eu/es/home/

are being incorporated and made accessible to students through the University of Alicante's virtual campus.

In the first two blocks of the course (Introduction to Art History and Analysis and Interpretation of Works of Art), the aim is to provide an introduction to the most important debates in the discipline promoted by feminist art history, which we have highlighted throughout this article. Thus, we propose to reflect on the importance of context in understanding women's artistic productions, analyze the stereotypical representation of women in painting, sculpture, and other visual media, problematize the role of the woman as muse, and offer theoretical foundations for feminist art history and criticism.

In the Ancient World and Medieval World sections, we reflect on the classical ideal of beauty about female and male gender stereotypes. We also look at women's participation in artistic creation in the religious sphere through the figure of Christine de Pizan.

Finally, the section on the modern and contemporary world provides a list of important women artists in each historical-artistic period or style. In modern art, the list includes Ana María Luisa de Medici (patron), Sofonisba Anguissola, Sor Plautilla Nelli, Marietta Robusti La Tintoretta, Properzia de' Rossi, Luisa Roldán La Roldana, Artemisia Gentilleschi, Mari Moser, Angelica Kauffmann, Vigee Le Brun, Adelaide Labille-Guiard, Clara Peeters, Judith Leyster, and Élisabeth-Sophie Chéron. In terms of contemporary art, Rosa Bonheur, Elisabeth Eleanor Sidall, Mary Cassatt, Berthe Morisot, Eva Gonzalès, Marie Bracquemond, María Blanchard, Maruja Mallo, Juana Francés, Frida Kahlo, Gunta Stöltz, Ana Mendieta, Judy Chicago, Ester Ferrer, and Elena Asins and Remedios Varó are studied.

It should be noted that in the four thematic sections, the works of art created by these artists serve to explain the artistic periods in which they are historically framed, so that these works are not analyzed as isolated entities, but as examples of the style and aesthetic forms of each era.

In addition, this proposal develops other participatory classroom activities based on selected sources of information and carried out in the form of classroom debates, prepared in advance in small groups of four people. The first is based on an article (Fernández, 2007) accompanying La Ciudad de las Damas (Lemarchand and Cirlot, 2018), to broaden reflection on this paradigmatic work of the early stages of feminism about artistic and literary creation. The second activity focuses on Queridas viejas, an artistic work by María Gimeno[3] that attempts to correct the mistake made by art historian Ernst Gombrich when he failed to include women artists in his world-renowned History of Art. The materials used are the performance and documentation related to the research project.

The dissemination of artists' lives through social media is also included in this proposal, as we believe that using information sources that are close to students' everyday experience is positive (Moreno and Vera, 2016). Throughout the sessions, traditional conceptual references are combined with other educational resources, such as those provided by the association La Roldana Plataforma por la inclusión de las mujeres en el currículum (La Roldana Platform for the Inclusion of Women in the Curriculum), Concha Mayordomo's blog, and the Instagram profiles of femme. sapiens, the great women artists, eugenia tenenbaum, whose protagonists are authors who have recently published the following monographs: Ni musas ni sumisas (Satoca, 2022), Historia del arte sin hombres (Hessel, 2022), La mirada inquieta (Tenenbaum, 2022), and Las mujeres detrás de Picasso (Tenenbaum, 2023).

These sources, disseminated through various channels, incorporate recommendations from students, other teachers, and social media interactions, often presenting the problem of validating knowledge. However, they can always serve as triggers that offer clues about new artists to discover.

As for problem-solving exercises, a work by a female artist is included in each of the four groups into which the class is divided. The works are illustrations from The City of Ladies by Christine de Pizan, Giuseppe e la moglie di Putifarre by Properzia de Rossi, and Saint Michael the Archangel by Luisa Roldán. Such as La Roldana, Sculptures from the south facade of Strasbourg Cathedral by Sabina de Steinbach, and Still Life with Flowers and a Silver Cup by Clara Peeters.

About assessment, this proposal is in line with an inclusive vision, where women are not incidental or optional, but are part of the body of knowledge of the subject. Consequently, the selection of artists for practical exercises includes women, as we have seen, and the theoretical exam introduces questions about works by female authors or that relate a particular artistic style to the author in question. On the other hand, as a positive result, it should be noted that the students of the 2022/2023 academic year have mostly chosen female artists to work on their seminar practical assignments. The topics they have selected are Post-Impressionism and Vincent Van Gogh, French Neoclassicism, Contemporary Art and Yayoi Kusama, Romanticism and Carlota Rosales, Surrealism and Maruja Mallo, and finally, Impressionism and Mary Cassatt. This demonstrates a special interest in women and provides clues about the students' openness to an updated, diverse, and inclusive art history. Thus, we can infer that, in the specific context of a course that pays attention to the stories of traditionally silenced women and reflects on gender inequalities in art, female authors are considered by students to be as important as or more important than male authors for their assessment.

3 The audiovisual recording comes from the performance held at the CCCB in Barcelona in 2019 and can be found, along with the rest of the documentation, on the artist's official website https://www.mariagimeno.com/

4. Conclusions

This research shows that there are opportunities for feminist intervention in the teaching of art history at the UA. However, we can conclude that the recommended bibliography remains rooted in the past in many respects, is outdated, and sometimes promotes alarming sexist stereotypes. In addition, the curriculum needs to be adapted in terms of content, objectives, and competencies to comply with relevant legislation on equality. This study, therefore, demonstrates the need for changes in this regard.

In the 2022/23 academic year, the proposal to introduce a gender perspective discussed here has been well received and has sparked great interest in the lives and work of women artists in art history. Through the incorporation of new references to women art historians, critics, and artists, it has been proven that it is possible to open up knowledge to works and lives that have been relegated to oblivion for decades by the official discourse. It is also possible to reinterpret the past through practical activities and to consider women artists as a fundamental part of history through an evaluation that includes them. Finally, it can contribute to making us more aware of inequalities in society, and specifically in art history.

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Scientific paper

Transnational families and gender inequality in contexts of migratory circularity in the Victoria del Portete parish, Azuay, Ecuador

Familias transnacionales y desigualdad de género en contextos de circularidad migratoria en la parroquia Victoria del Portete, Azuay, Ecuador

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Abstract:
The article analyzes the readjustments of the care system that take place within Ecuadorian transnational families living circular and return migration processes in the rural parish of Victoria del Portete (Azuay, Ecuador). Using a qualitative methodology and in-depth interviews with adolescents, children of migrants between 15 and 18 years of age, the study examines how the reorganization of care activities in contexts of migratory circularity implies not only an overload of work, but also the perpetuation and exacerbation of gender inequality. The research findings show how this transfer of care falls on the older daughters of nuclear families, in many cases still adolescents, who also assume productive roles, causing early adulthood processes that reinforce traditional gender mandates and roles.

Keywords: transnational families, gender roles, caregiving, early adulthood, gender inequality.

Resumen:
El artículo analiza los reajustes del sistema de cuidados que se gestan en el interior de las familias transnacionales ecuatorianas que viven procesos migratorios circulares y de retorno en la parroquia rural Victoria del Portete (Azuay, Ecuador). A partir de una metodología cualitativa, haciendo uso de entrevistas a profundidad a adolescentes hijos e hijas de migrantes entre 15 y 18 años, se estudia cómo la reorganización de las actividades de cuidado en contextos de circularidad migratoria implica no solo una sobrecarga de trabajo, sino también la perpetuación y exacerbación de las desigualdades de género. Los hallazgos de la investigación dan cuenta de cómo esta transferencia de cuidados recae en las hijas mayores de las familias nucleares, aún adolescentes en muchos de los casos, quienes asumen también roles productivos, provocando procesos de adultez precoz que refuerzan los mandatos y roles tradicionales de género.

Palabras clave: familias transnacionales, roles de género, cuidados, adultez precoz, desigualdad de género.

1. Introduction

Migration in the 21st century is taking on new structural spatial and temporal dimensions (Ortín, 2013), which invite us to investigate its macro, meso, and micro levels of understanding. In this sense, the transnational perspective offers important contributions to the analysis and understanding of the reasons behind these phenomena, as well as investigating "the links that are established, both in the sending and receiving societies, as well as between the two, once the flows become more dynamic and universal" (Solé et al., 2008, p. 7). This perspective not only questions classic conceptions of the nation-state, but also discusses "the subjectivities that emerge from collective displacements, highlighting the circulation of cultural, religious, ethical, and identity meanings" (Boric Bargetto et al., 2021, p. 10).

However, this perspective has not placed sufficient emphasis on "the gender causes and specific gender experiences of migration" (Jolly and Reeves, 2005, p. 4). This is despite empirical evidence showing how "women play a predominant role in both countries of origin and destination" (Palacios, 2016, p. 158). This is true across a wide range of situations involving a broad spectrum of vulnerabilities and exclusions, but also situations of empowerment and personal autonomy.

Attempts to include gender as a variable in migration studies have emphasized the presence of women in migration and their relationship with migrant domestic work, moving toward a more holistic view of the social organization of care. and has led, in a new reflective turn, to the dissemination of studies on transnational families that link the crises in care policies, the transnationalization of social reproduction work, and the increase in women's migration worldwide (Herrera, 2013). This has made it possible to highlight the unfair global care regime between the North and the South (Herrera, 2013), the care crisis in Northern countries (Gregorio-Gil, 2009), and the emergence of global care chains (Herrera, 2005, 2016a, 2016b; Izquierdo, 2003; Molano and García, 2012; Pérez Orozco, 2006).

Therefore, it is crucial to incorporate a gender perspective into the analysis of transnational migration, given that gender affects "all aspects of the migration experience" (Petrozzielo, 2013, p. 22), as well as the social and care relationships that are established between places of origin, destination, and transit. In this way, the analysis of transnational families allows us to understand "the consequences of divided families on family dynamics and reproduction" (Cerruti and Maguid, 2010, p.11), as well as to address adjustments in terms of the renegotiation of responsibilities and how these affect the reorganization and transfer of care, especially in complex socioeconomic contexts both in the origin and destination of migration.

In this context, using a qualitative methodology and in-depth interviews, this research was carried out with the objectives of analyzing the readjustments of care tasks and their transfer in transnational families in the parish of Victoria del Portete (Azuay, Ecuador), as well as understanding how the changes produced by 21st-century migrations affect social and gender relations. In terms of structure, the article first presents a brief theoretical discussion on transnational families, circular migration, and return, before presenting the methodology and territorial context of the study area. Second, the results of the empirical social research are presented and discussed, and finally, the conclusions of the study are presented.

2. Theoretical, methodological, and territorial context

Transnational families are families whose members, despite living physically apart, are able to build and maintain emotional and family ties between their societies of origin and destination, thus reaffirming a sense of belonging (Bryceson and Vuroela, 2002). These are family structures that increasingly interact in dynamic, return, and circular migration scenarios. From a transnational perspective, this breaks with the idea of return migration as a unidirectional and definitive event, in contrast to other historical moments that presented return as a definitive event (Cavalcanti and Parella, 2013), and a notion of complexity and dynamism is acquired that refers to "a growing intensity of multifaceted flows of people, objects, information, and symbols beyond national borders"[1](Cavalcanti and Parella, 2013, p. 10).

This vision implies accepting how transnational families reconstruct their life processes and constantly reconfigure their family and care organization between their place of origin and their destination. For this reason, the forms of social organization of this type of family increasingly follow a circular logic. Circularity, for its part, implies that these families maintain links and ties between different spaces for economic, labor, social, and emotional reasons. Thus, it implies a transnational way of life where new subjectivities are constructed (Cargua, 2016; Zapata, 2009; Cavalcanti and Parella, 2012). For Zapata (2009), these processes involve a redefinition of gender roles, as well as the consolidation of new parental and maternal figures in transnational contexts, care tasks and resource allocation, while where uncles, aunts, grandmothers, and older siblings take on the tasks of caregiving and managing new economic resources (Zapata, 2009).

Thus, transnational families involve reorganization and renegotiation of caregiving activities without questioning gender roles, which continue to be assigned to the figure of the mother, in what is known as "transnational motherhood" (Betancourt, 2016). This dynamic is based on social networks formed mainly by women who substitute for

1 Cavalcanti and Parella (2013) consider return as another stage in the migration cycle based on the logic of circularity sustained by "dual" or multiple identities that are not anchored in either the place of origin or the place of destination and that generate a constant exchange of resources (money, goods, ideas, information, and values)" (p. 16).

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other women. The existing literature focuses on the transfer of caregiving activities from mothers to grandmothers, sisters, or older daughters. However, this reassignment of tasks continues to uphold patriarchal gender inequality by continuing to assign the role of caregiver to women in the family. (Betancourt, 2016; Pedone and Gil, 2008; Oso, n.d.; Herrera, 2013), thus perpetuating the modern colonial and gender system (Lugones, 2008).

3. Methodology and territorial contextualization

The research was conducted in the rural parish of Victoria del Portete (Azuay, Ecuador). It has a population of approximately 5,251 inhabitants (54.46% women and 45.54% men) (INEC, 2010). Its economy is mainly agricultural. In addition, it is a territory with a long history of migration, between 1996 and 2010, 544 people, 10.4% of its population, emigrated to countries in the global north, and 12.6% have at least one family member residing abroad, with 85% residing in the United States and 12% in Spain (INEC 2010).[2]

The methodology used is qualitative in order to analyze the reorganization and transfer of care in transnational families in processes of return and re-emigration in Victoria del Portete, from a gender perspective. To this end, in-depth interviews were conducted with adolescents between the ages of 15 and 18, sons and daughters of migrants, who attended the parish's Millennium Educational Unit (UEM) during the 2018-2019 period. It is important to note that the interviewees remained in the parish because they never migrated or emigrated with their parents, but were settled in the area during the period when the interviews were conducted.

To conduct the interviews, a brief survey was first administered to high school students. (130) with the aim of identifying members of transnational families. The survey collected information on the number of family members abroad, their relationship, country of residence, and length of time abroad. This, in turn, made it possible to identify the number of migrant students. Based on these results, the sample was selected using three criteria: a) gender parity in the sample (50% men and 50% women women); b) direct migration experience; and c) age range between 15 and 18 years old. This resulted in a total of 15 students (8 women and 7 men) for the research.

2 Unfortunately, we do not have current information, as the last census in Ecuador was conducted in 2010. There is a Land Use and Development Plan (PDOT) for Victoria del Portete, published in 2014, but it was based on data from the 2010 census. Although a new national census was conducted at the end of 2022, the official results are not expected to be released until the end of 2023.

The in-depth interviews included questions about the migration experience as children of migrants and their experience of transnationality. Once transnational families were identified, questions were asked about the transfer of caregiving roles and the impact on their daily lives. The information was analyzed using Nvivo software. Confidentiality criteria were applied to the results, using fictitious names to accurately cite the information provided in the interviews and protect the privacy of those who participated.

Based on the results of the surveys and interviews, the information was systematized in a matrix, which identified who received the transfer of caregiving activities as a result of direct transnational migration experience. Table 1 shows relevant information on the eight young women interviewed, who are daughters of migrants and are part of transnational families, aged between 15 and 18 years. Of the total, 75% have both parents abroad and 25% have only one parent abroad. Fifty percent of the young women interviewed have parents in the United States, and 50% in Spain. Analysis of the migration projects shows that 62.5% are in a recent re-emigration process, meaning that these second emigration projects have developed in the last year prior to the interview date. In addition, it is noteworthy that most of the migration projects are long-standing, as they have been living abroad for more than 10 years or were in a situation of emigration for more than 10 years and subsequently returned to Victoria de Portete.

With regard to the transfer of care, trends are observed that coincide with other studies showing that when the father migrates, the mother assumes sole responsibility for family care (25% of interviews). There are also cases in which other women in the extended family take over caregiving (in 25% of cases, the niece or grandmother). However, it is noteworthy that in half of the interviews conducted, it is the older daughters in nuclear families who assume responsibility for caregiving in situations of re-emigration.

Table 2 presents information related to males (7). Of these, 57% had their father abroad, while in 47% of the interviews, both parents were abroad. In terms of long-term emigration, all males with parents in the United States had been abroad for more than 10 years, although no re-emigration processes were identified. With regard to the transfer of care, unlike what was observed in the case of migrant daughters, in 57% of cases, mothers were responsible for caregiving tasks, while in 14% of cases, it was the paternal aunt and in another case, the older sister.

Table 1: Migration experiences of adolescent girls
Source: Own elaboration

Name	Age	Who migrated?	Destination	Tiempo de residencia en el exterior (re-emigración)	Transfer from abroad
Natalia	18 years old	Both	Spain	6 months Second migration	Eldest daughter
Daniela	18 years old	Both	EE.UU	1 year Second migration	Eldest daughter
Estefanía	18 years old	Both	EE.UU	17 years	Eldest daughter
Carolina	17 years old	Padre	EE.UU	16 years	Mother
Andrea	17 years old	Both	Spain	1 years Second migration	Eldest daughter
Belén	17 years old	Both	Spain	1 years Second migration	Eldest daughter
Paula	17 years old	Both	Spain	1 years Second migration	Maternal niece
Angélica	16 years old	Padre	EE.UU	12 years	Mother
Total	Eight adolescents				

Table 2: Migration experiences of adolescents
Source: Own elaboration

Name	Age	Who migrated?	Destination	Tiempo de residencia en el exterior (re-emigración)	Transfer from abroad
Bryan	18 years old	Father	EE.UU	17 years old	Mother-older brother
Pablo	17 years old	Father	EE.UU	12 years old	Mother
Jonatan	17 years old	Mother	EE.UU	15 years old	Mother
Cristian	17 years old	Both	EE.UU	12 years old	Paternal aunt
Jason	16 years old	Both	EE.UU	14 years old	Older sister
Juan	15 years old	Father	EE.UU	6 years old	Mother
Joel	15 years old	Father	EE.UU	10 years old	Mother
Total	Seven teenagers surveyed				

In summary, of the 15 cases, it was found that in 33% there was a transfer of caregiving responsibilities to older adolescent daughters in the context of transnational families, when both parents migrate. Of these, in 26% this transfer of care occurred during processes of return and re-emigration to Spain. However, no situations of transfer of care to sons were observed, except in one case where the older brother shares care responsibilities with the mother, suggesting a readjustment of parental roles through the older male in the household.

Transnational migration has generated complex social processes in the southern parish. Many migrants maintain close ties with their community of origin and their families, motivated by the possibility of return, which often depends on obtaining residence permits and/or citizenship in the destination countries. Others have chosen to break family ties with their place of origin, either temporarily or permanently. There are also situations of temporary or permanent return. Return in this parish, as in other parts of the country, is linked to different causes, such as:

> the previously established migration objectives that were achieved; nostalgia for the environment; desire to be present during the growth of their children (when they remained in their place of origin), or to take them with them so that they can be educated or live in an environment that they believe is more in line with their culture and values (Mena and Cruz, 2017, p. 285).

Difficulties in adapting to the destination or marital breakdowns can be reasons for return, especially for women due to gender mandates that require them to care for children, older adults, or other dependents in their place of origin (Mena and Cruz, 2017). However, return does not always turn out as expected and, due to difficulties in readjusting to life in the community or the difficult economic situation in the country, some people decide to emigrate again.

3. Results and Discussion

Transnational migration involves adjustments in caregiving, with women, especially grandmothers and maternal aunts in extended families, being the recipients of this care (Oso, n.d.; Zapata, 2009; Parella, 2012; Betancourt, 2016). However, in current migratory movements, where return is not definitive and re-emigration is frequent, older daughters under the age of majority in nuclear families also receive this care, which deepens existing gender inequalities (Herrera, 2013).

This research observes a reconfiguration of roles in transnational families, where caregiving activities are concentrated in nuclear families and are increasingly transferred to older daughters, including adolescents, in processes of return and circular migration. However, these processes deepen gender inequalities and result in work overload and early adulthood for adolescents. Thus, the importance of analyzing second-generation migrants who experience forced return to their parents' country of origin is highlighted.

Sometimes, these second generations have different ethnic-territorial and legal-administrative statuses, which causes and deepens inequalities among members of transnational families, even among brothers and sisters (Camarero, 2010). Although these families are increasingly taking the form of nuclear families, they continue to maintain vertical power relations based on gender and age, which makes them seem like a reduced version of pre-modern extended families, even though their functionality is extensive and they are geographically dispersed (Camarero, 2010, p. 43).

In the parish studied, transnational families have formed between Ecuador and the United States and between Ecuador and Spain, reflecting changes in contemporary societies and family structures that are constantly adapting to local and global political and economic circumstances. In this sense, reciprocal interactions can be observed between cultural norms and the behaviors of families and their members, which result in family agreements and arrangements that seek to guarantee the material and emotional reproduction of their members (Herrera and Carrillo, 2009).

The global economic crisis that began in 2008 in the United States and Europe created diverse scenarios for transnational families. In some cases, entire families returned, while in others, only some members returned to their country of origin. Those who returned faced difficulties in readjusting to the local community due to a lack of job opportunities, which led many families to re-migrate. However, the family agreements established in the face of re-emigration processes are now very different.

It has been observed that in these circular migration processes, the migration of the entire family is no longer necessarily contemplated, and care arrangements take on different forms. In the parish studied, it has been found that when only the father returns to migrate in two-parent households, care tasks remain the responsibility of mothers, as was the case with re-emigration to the United States. In these cases, as it is the father who emigrates, no significant changes are observed in the allocation of care roles to women in the family, in line with the traditional division of labor. However, certain conflicts arise related to the contradiction between the father's role as provider and his lack of authority due to his absence. In some cases, this authority has been replaced by the figure of the older brother, who helps the mother in caring for the children.

> When my dad emigrated, my older brother became a father to me and my younger sister. My mom always tells us that he matured early. I saw him as a father figure, I trust him a lot, he always gives me advice and supports me (Bryan, 18).

In two-parent households that decided to return to Spain, the children were no longer involved in the decision-making process or family reorganization. The research found that older daughters were responsible for caring for their younger siblings, despite still being minors. Natalia, an 18-year-old high school student, explained how the lack of job opportunities in Ecuador motivated her parents to re-emigrate to Spain and transfer the responsibility of caring for their children to their eldest daughter, who took on this task despite her youth. As Natalia explains: "Six months ago, they decided to return to Spain because they couldn't find work here, or what they earned wasn't enough because my dad was a carpenter. My siblings and I stayed behind, and now, as the oldest, I take care of them."

In some cases, administrative issues such as the possible loss of residence permits lead parents to decide to re-emigrate without including their children in their new migration plans. As a result, the responsibility for caring for the children falls on the eldest daughter, who is also a minor.

> One day, a letter arrived from the embassy stating that if they did not return to Spain, they could lose their residence permits, so they returned (...) leaving me and my 12-year-old brother behind (...) When they left, my mother told me to take care of my brother. (Belén, 17 years old).

In this case, we can see how gender criteria carry greater weight in decision-making regarding the transfer of care, as the mother assumes that her eldest daughter, despite being a minor, has the capacity and responsibility to take care of the home and family in her absence. This reflects the persistence of traditional gender roles, where women are expected to take on the burden of caregiving and domestic tasks, even in situations of migration and re-emigration.

> My mom decided to come live here, but she couldn't find a good job and my dad told her to come back, so she did. Since we're studying, we stayed here at my parents' house (Andrea, 17).

In the case of Paula, aged 17, she, her younger sister, and her mother returned to Ecuador, while her father decided to stay in Spain. Shortly afterwards, her mother decided to return to Spain and transferred the care of her daughters to her niece, who is a little older than Paula.

> We came with my mom two years ago, but she didn't study here because she couldn't find a job and decided to go back to Spain. Since we were already enrolled in school, if we went back, we would have lost another year, so my mom told us to finish school and then she would take us back (Paula, 17).

In the cases cited, the older daughters who remain in charge of caring for their younger siblings are a second generation born in the destination country, in this case Spain, and who have Spanish nationality. However, their parents decide to re-emigrate for work reasons, maladjustment to the community of origin, or to maintain their administrative-legal status in the destination country. The decision to leave their children in Ecuador is made in order to maintain the small family assets resulting from remittances or to allow them to complete the academic year in their community of origin. However, the decision to re-emigrate is not made by consensus, but is imposed vertically by the parents, demonstrating the asymmetrical power relations within some transnational families. Minors play a passive role in decision-making and, in some cases, are forced to go against their will.

> I want to go back to Spain, but my parents don't want me to. It was much better there than here. My mom wanted to come here, I don't even know why (...). Back there, I focused on my studies, I was a good student. Now I'm not, sometimes my mind is in the clouds and I get bad grades (Paula, 17).

This second generation of migrants who return involuntarily to take care of their transnational families in their country of origin do not always manage to adapt successfully. The transfer of care often involves an overload of work, especially in a context where other members of the extended family have lost importance. As a result, many of these adolescents live with the idea of returning to their country of origin forever.

> We are living in my parents' house with my 21-year-old cousin. We get along, but we don't trust each other very much because we didn't know each other very well, since we were there (...) but we are trying (Paula, 17).

On the other hand, the different types of gender-based violence experienced by some adolescent girls in transnational families reveal their extreme vulnerability to sexual violence:

> When I was nine years old, my uncle sexually abused me. My grandmother never did anything. Until a year ago, he [the rapist] kept coming into the house. I told the school psychologist and said I didn't want to live with my grandmother anymore, I couldn't take it anymore. (...) They took me to a shelter. There they said I was a teenager at risk, and I stayed for four months. For the first two months, I didn't hear anything from my family. I thought they were angry with me. After two months, my brother came to visit me. When I left (...) I went to live with my brother (Estefanía, 18 years old).

In general, the maladjustment experienced by these adolescent women is due to the fact that they take on domestic and caregiving tasks at an early age. Although there is little literature on the transfer of caregiving to older daughters in transnational families (Zapata, 2009; Herrera and Carrillo, 2009; Herrera, 2013), this research has shown that the transfer of caregiving, productive, administrative, community, and remittance management activities falls disproportionately on older daughters compared to sons. None of the underage boys acknowledged taking on caregiving tasks, which fall on the mother when the father is abroad. These gender inequalities in the allocation of care imply a process of "early adulthood" (Pedone, 2008), where older daughters in transnational families, even as teenagers, take on new activities and responsibilities that were previously the responsibility of the mother and father.

> On Sundays, I get up at 5 a.m. to prepare everything. By 7:30 a.m., we have everything ready and we go out to sell. I start cooking while my younger sister makes the dough for the empanadas. By 11:30 a.m., we have all the food ready. (...) Sometimes we sell everything, sometimes there is something left over, but we bring that home. At first I was afraid because I didn't know how much to invest or how to do it, but little by little we're getting there. We were afraid to prepare the food because before we only saw how it was done, but well, we were able to do it and we sell it (Natalia, 18 years old).

Older teenage daughters play a fundamental role in the dynamics of transnational families by assuming and replacing the role of fathers and/or mothers (Parella, 2012). The overload of tasks and physical, mental, and emotional exhaustion affect their life cycle, accelerating the process of assuming adult responsibilities. Narratives such as "becoming a mother or father" reveal what these processes of deepening gender roles and mandates entail:

> It's like becoming a mom or a dad, I have to take care of everything, make sure the money comes in, feed everyone, and I also take care of things that are missing in the house. Sometimes there's no food (...) my parents do send money, but since they're not financially stable there yet, they send us very little. Last time they sent us $120 for food and we have to make it last (Natalia, 18 years old).

This process of early adulthood among young women triggers a series of feelings of fear, insecurity, and uncertainty when it comes to caring for children and managing financial resources. Daniela's case illustrates this phenomenon. When she was 17, her parents emigrated to the United States a year ago, forcing her to take on the social role of "mother."

> The money is in my name, so since I'm of legal age, I manage it. I have to pay the electricity bill, put food in the freezer, buy groceries (...). It's difficult because you have to be there to take care of everything, we don't know what's going to happen, the other day my dad's car broke down and we had to pay for it out of the food money. It's a huge responsibility because I took on my mom's role. (Daniela, 18 years old).

The overload of domestic, caregiving, and productive tasks and responsibilities often forces older daughters to give up their own life plans, as their education and leisure activities are hindered. Meanwhile, this does not happen to their brothers or younger sisters. An example of this is Natalia, who, at the time of the interview, was pregnant and had to take charge of running her family home and her new family.

> Since I am the oldest sister, I am like their mother, I am in charge and I represent them at school meetings. I also have to look after my partner, cook meals, and do my laundry and my partner's laundry, as well as my brothers' uniforms (Natalia, 18 years old).

Carolina expresses it in a similar way:

> Weekends are even harder because I get up at 8 a.m. and have to look after my little brother, and I also have to do the washing, sweeping, dusting, cooking (...) My older brother just does his homework. He's finishing school this year and they give him a lot of homework, so I try to help him. I do my homework at night (Carolina, 17).

A completely different picture emerges in the case of the sons of transnational families. The younger children of migrants continue with their academic activities and life projects after their parents migrate, without having to take on reproductive, care or community tasks. They use their free time for leisure and personal development:

> On Saturdays, I come to school from 8 a.m. to 12 p.m. to fulfill my participation hours. In the afternoons, I have free time. Sometimes I go to Cuenca to buy things I need for myself or for school, for my practical training (...) (Pablo, 17 years old).

The men interviewed benefit from remittances to improve their academic training and enjoy recreational activities, free from caregiving responsibilities. This situation reflects the persistent colonial and gender system (Lugones, 2008) in which women continue to be subject to the same traditional and gender-based logic, being assigned mainly domestic and care tasks, while men remain exempt from responsibility for these activities.

> Sometimes my dad sends us $50 each, and that helps us buy clothes or whatever we need (...) Last time, I bought some soccer cleats and materials for school practice. In April, I'm going to start a pre-university program so I can take the university entrance exam (Bryan, 18).

> My sister complains about the things my mom asks her to do. She always says, 'Only me,' but it doesn't help because she has to do them. I help too, but not always because I study in the afternoons. I'm in a pre-university program to get into college (Jonatan, 17).

As Herrera (2013) points out, when gender roles converge in a single person, they cause an overload of work and, in turn, exacerbate gender inequality within families and society, which becomes normalized and perpetuated. This gender inequality is perceived by the older daughters in transnational households when they compare their situation with that which they experienced in more egalitarian contexts in their country of destination. Nostalgia sets in; the sense of belonging becomes blurred:

> In Spain, my life was different. I only had to study, but here I have to help with things, (...) make sure my brother does his homework, and I hardly have any time to do my own homework. Sometimes I do it during my free time at school and also at night (...) When I have exams, I study at night, but I fall asleep (Paula, 17 years old).

The agreements, "arrangements and disagreements surrounding care that arise as a result of migration, especially female migration, are a reflection of broader processes of social inequality" (Herrera, 2013, p. 18). Thus, migration has a significant influence on gender relations, perpetuating inequalities and traditional roles assigned to women, who are responsible for domestic, care, and production tasks, as well as community activities, simply because they are women (Solé et al., 2007). In migratory processes, especially circular ones, there is a significant transformation that involves the transfer of domestic and care roles to other women, particularly daughters, who take on an intergenerational burden of care work among women (Parella, 2007). This perpetuates and deepens existing gender inequalities.

They consider that they are designated to perform household tasks as a rule, by custom, and therefore they naturalize, internalize, and normalize caregiving activities:

> I've gotten used to doing things around the house. When my mom was here, she took care of everything (...) now it's my turn. It's hard not having my parents here, it's not the same as before, I miss them a lot (Natalia, 18 years old).

Gender roles have been perpetuated historically by key social institutions (state, family, religion), which function as agents that construct and reproduce social patterns and values that relegate women to the private sphere, crystallizing in the stereotype of the self-sacrificing mother, responsible for transmitting the same cultural values, and the stereotype of the father as the main breadwinner of the family, basing his authority on the family unit.

In short, during the migration process, which never ends, new female and male identities may be constructed (Ciurlo, 2014), but this does not imply that more equitable relationships are created within the home or society. In fact, inequalities and discrimination against younger women are widespread and intensify in many cases.

4. Conclusions

Migration in the 21st century is characterized by its circularity and the formation of transnational households in which family practices are maintained despite physical distance. In this context, adjustments and readjustments occur in terms of social reproduction and the transfer of care, especially in the context of new return and re-emigration processes that continue to perpetuate gender inequalities both within the family and in society at large. The existing literature has shown that mothers in transnational families routinely transfer direct childcare activities to other women in their family, usually women from the extended maternal family. However, in the present research, in circular migration contexts, it is the older daughters, often adolescents, who take on direct childcare.

Furthermore, transnational households reproduce family practices beyond physical distance, often aided by new technologies. information, communication, and social media. In the homes of transnational families undergoing re-emigration, direct caregiving tasks are assigned to older daughters without consultation or consensus, leading to premature adulthood and perpetuating and exacerbating the existing gender inequality system. In conclusion, these findings underscore the need to rethink gender relations and the role of women in transnational families and in societies in general, in order to achieve greater equity and shared responsibility in social reproduction and caregiving.

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Artículo científico

Socioeconomic conditions of the returned population in Santa Paula, Montería, Colombia

Condiciones socioeconómicas de la población restituida en Santa Paula, Montería-Colombia

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Abstract:
This article presents an analysis of the socioeconomic conditions that characterize the current restituted population of the emblematic hacienda Santa Paula, which belonged to Clan Castaño, the visible head of the United Self-Defense Forces of Colombia (AUC). The study was structured in two sections; the first, through a historical synthesis, shows the context of the internal armed conflict in the department of Córdoba (Colombia); where the actions of the Illegal Armed Groups (GAI) break the social order, committing all kinds of humiliation against the communities; they are forced to leave their premises by acts of dispossession and displacement. The second section, describes the process of return and post-judgment based on Law 1448 of 2011. In Santa Paula, after the post-judgment, the returnees have joined state entities to train in different socio-economic projects. Therefore, the development of the research was carried out from a scrutineering glance at the official information of the Land Restitution Unit (URT) Section Córdoba, through the review and analysis of sentences, timelines and social cartography.

Keywords: armed conflict, displacement, land dispossession, land restitution, Santa Paula.

Resumen:
Este artículo presenta un análisis de las condiciones socioeconómicas que caracterizan a la población restituida de la emblemática hacienda Santa Paula, la cual perteneció al Clan Castaño, cabeza visible de las Autodefensas Unidas de Colombia (AUC). El estudio se estructuró en dos apartados: el primero, mediante una síntesis histórica, exhibe el contexto del conflicto armado interno en el departamento de Córdoba (Colombia), donde el accionar de los Grupos Armados Ilegales (GAI), irrumpen en el orden social, cometiendo todo tipo de vejámenes contra las comunidades; estas se ven obligadas a salir de sus predios, por hechos de despojo y desplazamiento. El segundo apartado describe el proceso que contempla el retorno legal de los pobladores a sus predios, con base a lo sustentado en la Ley 1448 de 2011. En Santa Paula, luego del posfallo, los restituidos se han adherido a entidades estatales para capacitarse en distintos proyectos socioeconómicos. Por tanto, el desarrollo de la investigación se llevó a cabo a partir de una escrutadora mirada a la información oficial de la Unidad de Restitución de Tierras (URT) Seccional Córdoba, a través de la revisión y análisis de sentencias, líneas de tiempo y cartografía social.

Palabras clave: conflicto armado, desplazamiento, despojo, restitución de tierras, Santa Paula.

1. Introducción

National security is one of the goals guaranteed by the State within Colombian territory. It seeks to ensure human dignity and manage conflict resolution in order to maintain peaceful relations within the country, as well as monitor legal and social situations for the purpose of protecting the life, honor, and property of the population, as enshrined in Article 2 of the 1991 Political Constitution of Colombia.

The purposes of the State are: to serve the community, promote general prosperity, and guarantee the effectiveness of the principles, rights, and duties enshrined in the Constitution; to facilitate the participation of all in decisions that affect them and in the economic, political, administrative, and cultural life of the Nation; to defend national independence, maintain territorial integrity, and ensure peaceful coexistence and the existence of a just order. The authorities of the Republic are established to protect all persons residing in Colombia in their lives, honor, property, beliefs, and other rights and freedoms, and to ensure the fulfillment of the social duties of the State and of individuals. (Political Constitution of Colombia, 1991, para. 3).

Consequently, the Colombian State is obliged to take effective measures to protect the rights of victims of the internal armed conflict that has affected the population for decades. To this end, it enacted public policy Law 1448 of 2011 (Congress of the Republic of Colombia, 2011), known as the Victims and Land Restitution Law, through which the government made its first attempts at restitution and reparation for victims of the armed conflict.

Land restitution has been a fundamental aspect of social repair for victims of dispossession and displacement, allowing rural men and women to return to their lands and their lived world, which was interrupted by the scourge of armed conflict, a sociopolitical phenomenon that has affected Colombia for more than seventy years (Ríos, 2016), perpetrated by illegal armed groups (GAI). However, dispossession and displacement seem to be a never-ending reality, given the sluggishness of legal processes, security problems that make micro-targeting difficult, the persistence of the conflict, and the lack of conditions to move these processes forward.

In the department of Córdoba, since the 1970s, armed conflict has left a social and spatial mark on local populations located in the border areas of Antioquia and Córdoba, where the Popular Liberation Army (EPL) was based (Trejos, 2013). This group originated from the trade union and student movements of the time, achieving predominant control between 1960 and 1970 as a result of the dispossession of land suffered by peasants. In fact, the Center for Research and Popular Education (CINEP) and the Program for Peace (PPP) (2016) argue that Córdoba's geostrategic location has been one of the territorial factors that attract the attention of the GAI, who are fighting for control of the region. These disputes constantly plunge communities into a world where violence does not discriminate against social actors, creating a permanent scourge on the human rights of those living in the midst of armed conflict.

In this sense, the GAIs that have perpetuated the socio-spatial order in Córdoba, Antioquia, and surrounding areas for more than six decades have created a climate of terror. Among these organizations are the Revolutionary Armed Forces of Colombia (FARC), which established a presence in the subregions of Alto Sinú (municipalities of Tierralta and Valencia) and Alto San Jorge (Montelíbano). The FARC consolidated its power in the 1990s through fronts 18, 36, and 58. Since then, this violent armed organization has been active throughout the country (CINEP and PPP, 2016).

In particular, southern Córdoba is a favorable environment for the formation and presence of IAGs. This is due to its geopolitical characteristics, its mountainous terrain belonging to the Abibe, San Jerónimo, and Ayapel mountain ranges, the richness of the Paramillo National Natural Park, which consists of plains, rainforests, and mountains, and the source of the Sinú and San Jorge rivers (Corporación Autónoma Regional de los Valles del Sinú y San Jorge-CVS, 2018). and the source of the Sinú and San Jorge rivers (Corporación Autónoma Regional de los Valles del Sinú y San Jorge-CVS, 2018). These geophysical conditions and the absence of the State have been factors that have contributed to the intensification of the armed conflict for decades.

It is in Córdoba where paramilitary groups emerged as an organization. Since 1980, they were known as Los Tangueros, Mochacabezas, or Magníficos. They later consolidated into the Autodefensas Campesinas de Córdoba y Urabá (ACCU), responding to subversive actions and any leftist ideology (Verdadabierta.com, 2014). They then consolidated into an organization with great control over Colombian territory, known as the United Self-Defense Forces of Colombia (AUC), which implemented a nationwide paramilitary project with the aim of countering guerrilla actions and controlling income from drug trafficking (Centro de Memoria Histórica, 2018), while also committing crimes against humanity against the civilian population. at the same time, committing crimes against humanity against the civilian population.

In the years following 1990, paramilitary groups began to emerge in Córdoba, taking control of the territory and forcing peasants to abandon their lands due to their interest in owning them, given their high commercial and productive value, which led to acts of victimization. In this context, the case of the former Santa Paula hacienda, a territory that was a victim of the armed conflict, where its inhabitants were invaded and dispossessed of their land due to paramilitary actions, is brought up.

Santa Paula is located in the district of Leticia, within the jurisdiction of the municipality of Montería, the

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departmental capital of Córdoba. Its territory covers a total of 1,195 hectares (Ha), and is located 40 minutes away from the urban center of Leticia (Figure 1).

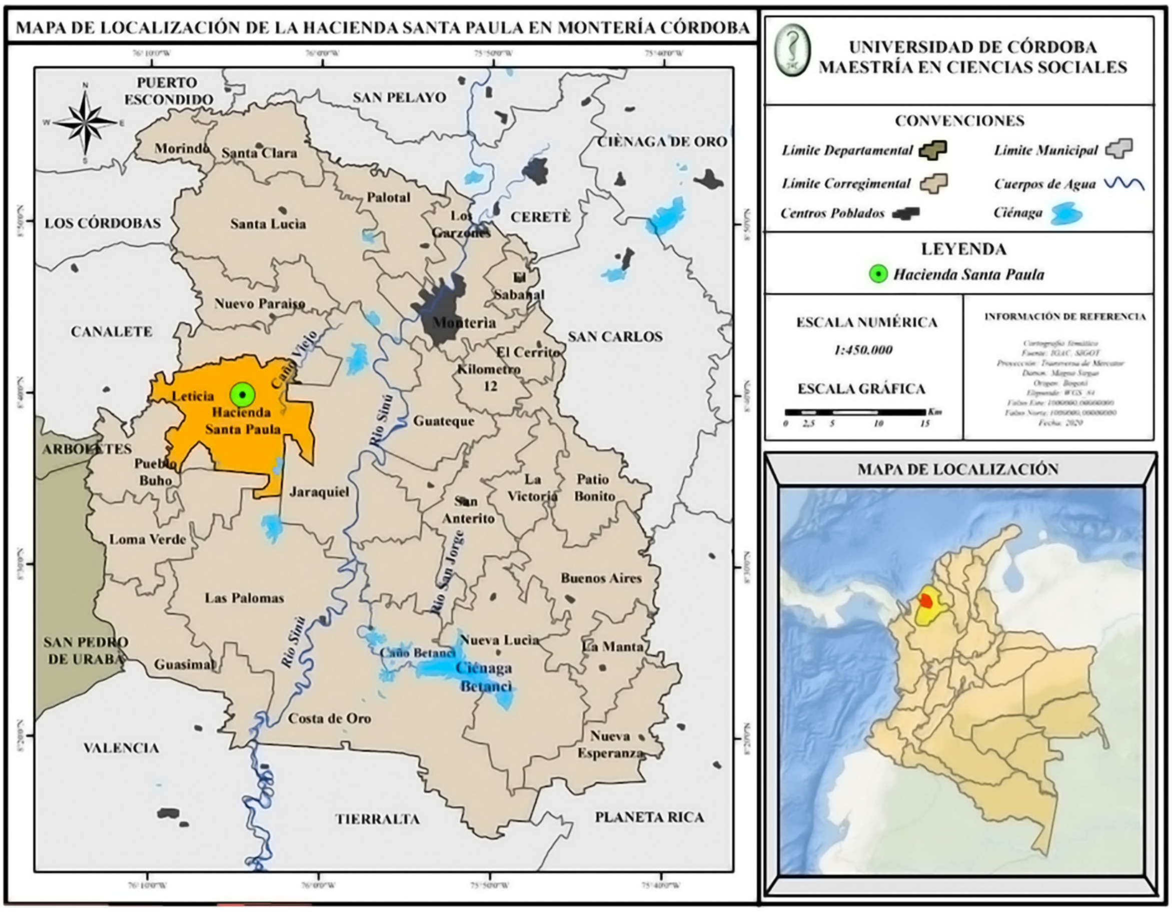

Figure 1: Geographic location of the Santa Paula estate
Source: Prepared by the author, 2022

Santa Paula has been a historically strategic territory due to its proximity to the Las Tangas estate, the center of operations for the Castaño family, known as the Magnificos or Mochacabezas. This estate is a transit point for reaching the municipalities of Valencia, Tierralta, and San Pedro de Urabá. It is located just 63 kilometers (km) from Montería, the capital of the Department of Córdoba (Electoral Observation Mission-MOE, 2017), an urban area that serves as a mobility and connectivity corridor for the GAIs, as it has a national airport, all kinds of entities (banking, administrative, educational, etc.) and greater economic dynamism. These conditions place Santa Paula in a privileged geopolitical position for the activities of the Castaño family (Forero et al., 2015).

2. Materials and methods

The study was conducted in accordance with the guidelines of the documentary analysis method, which, according to Dulzaides and Molina (2004), is a form of research based on a set of operations that seek to describe and represent the original information in the documents consulted, facilitating la unificación y sistematización de la existing information on a particular phenomenon. In this order, the documents examined were: judgments and laws enacted during and after the land restitution process in Colombia, specifically in the case of the Santa Paula estate, where the experiences of rural communities bear witness to the crimes against humanity perpetrated by the GAIs.

The documents reviewed were: context analysis, judgments, timelines, and social mapping by the Córdoba Section of the Land Restitution Unit (URT), which were the main sources of secondary information when detailing the violent acts committed in Santa Paula. These documents record the social and historical events of the rural residents and families subjected to displacement and forced land dispossession. Similarly, primary information was collected from qualitative interviews with the residents of Santa Paula, who recount the actions of the GAIs and the socioeconomic conditions in which they find themselves after the armed conflict.

In summary, the research has a qualitative approach, relying on close and detailed observation of the subject in its own context (Díaz, 2018), addressing the phenomenon in two sections that respond to the objectives set out. The first section describes the victimizing events that occurred in Santa Paula, detailed in timelines and social mapping by the

Córdoba Section of the URT. The second section focuses on the socioeconomic conditions of the communities of Santa Paula, which are set out in the judgments and minutes of the Córdoba Section of the URT, following the ruling on land restitution..

3. Results and discussion

3.1. Santa Paula: land dispossession and restitution

In terms of conflict and human rights violations, the case of the Santa Paula estate is similar to the experience of Montes de María, a subregion of the Colombian Caribbean that was severely affected by the armed conflict and characterized by the convergence and confrontation of multiple social and armed actors (Gaviria et al., 2020). Among these, large landowners, paramilitary groups, and guerrillas unleashed a series of violent acts against the civilian population of the 15 municipalities that make up the region, seven of which belong to the department of Bolívar and eight to the department of Sucre (United Nations Development Program-UNDP, 2010). Both territories (Montes de María and Santa Paula) are often described as laboratories for armed struggle and organization in contemporary Colombia.

In Córdoba, the large landholding phenomenon was associated with armed groups that sought to refound the country within the framework of regional development, pointing to the paramilitary groups that carried out an illegal agrarian reform, consummated by paramilitary leader Fidel Castaño, who handed over land to peasants and demobilized members of the EPL, who were later dispossessed by Sor Teresa Gómez, a close relative of the Castaño family, through violent demonstrations, fear, and intimidation. The term "dispossessed" refers to individuals and communities whose property and rights have been expropriated and privatized (National Commission for Reparation and Reconciliation-CNRR, 2009), associating this concept with the social and symbolic dimensions of the population of Santa Paula.

The Santa Paula estate was one of the first properties to be divided among more than 120 smallholders, each of whom was granted a plot of land by public deed signed in December 1991 and early 1992. These awards initially had certain conditions: the beneficiaries had to commit to improving the donated land, i.e., it had to be productive and used in the best possible way. This condition of improving the land later became a restriction that prevented them from selling, renting, or mortgaging the land, leading to coercion, although no major acts of violence were committed. These actions were instrumentalized by the Córdoba Peace Foundation (FUNPAZCOR), which was run by the Castaño family.

FUNPAZCOR was a device for Fidel Castaño's peace and for the agrarian reform program in the countryside (Machaco, 2000), which emerged from the demobilization of the ACCU and then the EPL, actions that originated in a context of armed conflict that was not yet over, and a peace that was slow to emerge (Sánchez and Quintero, 2020). At the time, this foundation was applauded by local and national political authorities. However, with this strategy, the Castaño family sought to realize its political project and establish a "protective fence around its properties for personal use, made up of peasant families dependent on financial, technical, and administrative support" (URT, 2012, p. 9, para. 2).

The situation described above took shape in the late 1990s, when paramilitary groups in Córdoba reorganized, partially laying down their arms and implementing the political strategy of agrarian reform developed by FUNPAZCOR (García, 2016), an entity that formalized the allocation of plots of land to the beneficiaries of Santa Paula through a call for applications in the Rancho Grande and Canta Claro neighborhoods (urban areas of the city of Montería) between 1991 and 1992.

Over time, it has become clear that between 1996 and 2006, processes of dispossession took place on the Santa Paula estate. Hundreds of families were forced to sell their land at a loss or, failing that, abandon it due to the coercive measures described above. Forero et al. (2015) maintain that the dispossession processes in Santa Paula were violent, involving threats and psychological pressure; phrases such as "if you don't sell, we'll buy from the widow" sowed terror among the inhabitants. Added to this is the abandonment and indifference of the State towards the situation of those dispossessed, a population that survived in conditions of vulnerability, poverty, displacement, and stigma.

In response to the victimizing acts of displacement, dispossession, murder, and threats, public policies were proposed, such as Law 975 of 2005 (Congress of the Republic of Colombia, 2005); a law resulting from the Santa Fe de Ralito (Córdoba) agreements between the government and the AUC; and Law 1448 of 2011, known as the Victims and Land Restitution Law. These pronouncements represented progress in the restoration of rights and, at the same time, led to reprisals directed especially at land claimants and human rights defenders.

The process of comprehensive reparation for the victims in Santa Paula began in 2013 with the handover of the first plots of land to those who had been dispossessed, leaving the properties free of conditions so that the beneficiaries could dispose of them as they wished. In this context, it should be noted that the reparations process at the Santa Paula estate has had a historic and spatial impact on the municipality of Montería, becoming a pilot project for land reparations and restitution in the territory of Cordoba. In this regard, the single registry of victims in Córdoba reports that a total of 168 smallholders have been restored to their lands as of 2021 (Table 1).

Table 1: List of published judgments in Santa Paula
Source: own elaboration, 2022, based on data from the Single Victims Registry, 2021

File number	Date of judgment	Process	Complainant	Number of applications
230013121001-2012-00004-00	12/03/2013	Special process for the formalization and restitution of forcibly dispossessed or abandoned lands	Leonidas Quirino Berrocal Segura Land formalization.	13
23001 31 21 001 2012 0003 00	15/03/2013	Special process for the formalization and restitution of dispossessed or abandoned land forcibly	Judith Margarita Zurique et al. v. through the Administrative Unit Special Restitution Management of Dispossessed Land — Córdoba Territorial Directorate Córdoba.	16
23_001_31_21_001 _2013_0017_00	24/04/2014	Special process of formalization and restitution of dispossessed or abandoned land forcibly	Judith Margarita Zurique et al. v. through the Administrative Unit Special Restitution Management of Dispossessed Land — Córdoba Territorial Directorate Córdoba.	1
23001 3121001 -2013-0001	10/05/2013	Special process for the formalization and restitution of forcibly dispossessed or abandoned lands	Special Administrative Unit for Land Restitution Management Dispossessed _Uaegrtd_Address Territorial - Córdoba	1
230013121001-2013-0002	10/05/2013	Special process for the formalization and restitution of forcibly dispossessed or abandoned lands	Special Administrative Unit for the Management of Land Restitution _ Uaegrtd_Address Territorial - Córdoba	4
23001 31 21 001 2013 0007 00	17/05/2013	Special process for the formalization and restitution of forcibly dispossessed or abandoned lands	Luís Alfonso Suárez Rodríguez and Luís Miguel Bohórquez Yanes, through the Special Administrative Unit for Land Restitution Management - Córdoba Territorial Directorate	2
230013121001 -2013|o0004-00	27/05/2013	Special formalization and restitution process of dispossessed or abandoned land by force	Miguel Bohórquez Yanes, through the Special Administrative Unit for Land Restitution Management - Territorial Directorate Córdoba-	11
23001 31 21 001 2013 0005 00	31/05/2013	Special process for formalization and restitution of dispossessed or abandoned land forcibly	Leopoldo Jaraba Pérez y otros a través de la Unidad Administrativa Especial de Gestión de Restitución de Tierras Despojadas - Dirección Territorial Córdoba-	18
23001 31 21 002 2013 00002 00 (04)	18/07/2013	Special formalization and restitution process of dispossessed or abandoned land forcibly	Hipólito León Medrano and others	3
23001 31 21 002 2013 0001 00	21/07/2013	Special formalization and restitution process of dispossessed or abandoned land compulsory	Manuel Gregorio Casarrubia Noble.	1
23001 31 21 002 2013 0004 00	2/08/2013	Special formalization and return procedure of dispossessed or abandoned land forcibly	Elías Plinio Doria Bello y Otros	59
23001 31 21 002 2013 0006 00	18/12/2013	Special formalization and restitution process of dispossessed or abandoned land forcibly	Leónidas Quirino Berrocal Segura	1
23001 31 21 002 2013 00013 00	9/04/2014	Special process of formalization and restitution of dispossessed or abandoned land forcibly	Ana Matilde Peña	1
23001 31 21 002 2013 00016 00	24/04/2014	Special process of formalization and restitution of dispossessed or abandoned land forcibly	José Francisco Nieves Serna	1
23001-31-21-002-2013-00017-00	28/04/2014	Special process of formalization and restitution of dispossessed or abandoned land forcibly	Special Administrative Unit of Land Restitution Management Dispossessed	2
23_001_31_21_001_ 2013_0015_00	30/05/2014	Special process for formalization and restitution of dispossessed or abandoned land forcibly	Special Administrative Unit of Restitution Management Dispossessed or Abandoned Land _UAEGRTD_ Territorial Directorate _ Córdoba	9
23001 31 21 002 2014 00004 00	18/12/2014	Special formalization and restitution process of forcibly dispossessed or abandoned land	Special Administrative Unit for the Management of Restitution of Dispossessed or Abandoned Land _UAEGRTD_ Territorial Directorate _ Córdoba.	1

23001 31 21 002 2014 00029 00	19/12/2014	Special process for formalization and restitution of forcibly dispossessed or abandoned land	Special Administrative Unit for Restitution Management Dispossessed or Abandoned Land _UAEGRTD_ Territorial Directorate _ Córdoba.	22
23_001_31_21_001_ 2016_0107_00	31/03/2017	Special process of formalization and restitution of forcibly dispossessed or abandoned lands	Special Administrative Unit for Restitution Management Dispossessed or Abandoned Land _UAEGRTD_ Territorial Directorate _ Córdoba.	1
23_001_31_21_002_ 2017_00002	12/03/2019	Special process for the formalization and restitution of forcibly dispossessed or abandoned lands	Francisco Miguel Martínez Solera and others	4

According to Álvarez (2014), this land restitution aimed at rural development and the organization of communities as subjects of law should focus especially on assisting those affected by the conflict, rather than on land use planning, with the aim of rebuilding the socio-territorial fabric of the population. in other words, the main objective of restitution was to rebuild the social and emotional ties that the villages of Santa Paula had before they were dispossessed. However, since 2013, Law 1448 has been condescending that the land restitution process be carried out in all areas (social, economic, territorial, cultural), although it has been hampered by adverse situations that seek to prevent the law from succeeding, including the presence of emerging armed groups, who perpetuate threats, murder social leaders, and dispossess residents of the municipalities of Valencia, Tierralta, Planeta Rica, and some townships and villages in the rural area of Montería, hindering the work of URT officials, despite the rulings issued in court orders by courts and tribunals specializing in land restitution.

It should be noted that in order to legally protect the properties returned in Santa Paula, 31 national orders and 137 regional orders were issued. The former were addressed to the Agustín Codazzi Geographic Institute (IGAC), the entity responsible for updating the country's cadastral and cartographic records. The latter were sent to the municipal Public Registry Offices to register the judgments, cancel mortgages, consult registry records on encumbrances, limitations on ownership, precautionary measures, false traditions, etc. (CINEP, 2015); in addition, to grant protection to the property for a period of two years, lift embargoes, and register the applicants' permanent partners as owners. Furthermore, other orders were sent to notaries to make marginal notes on the non-existence of sales and declare the non-existence or nullity of legal transactions.

In terms of restoring the right to property and ownership of dispossessed land, it is argued that the land restitution policy has been effective; in fact, administrative and judicial proceedings are currently underway for other claims. It is therefore expected that the land in Santa Paula will be returned to the owners who were dispossessed and forcibly displaced by the AUC.

3.2. Socioeconomic conditions of the restituted population

Before delving into the socioeconomic context of the restituted population in Santa Paula, it is necessary to highlight some key aspects, beginning with the collective reparation process itself, which began in September 2013. At the same time, it is important to focus on land restitution activities and the approval of the return plan for smallholders who were dispossessed of their land. In this regard, collective reparation in a context of justice and peace refers to the benefit conferred on a group of people (communities) to compensate for the harm caused as a direct result of human rights violations (United States Agency for International Development-USAID and International Organization for Migration-IOM, 2012).

Collective reparation in the Colombian context is protected by the 2005 Justice and Peace Law and the 2011 Victims and Land Restitution Law, which are the two legal frameworks for carrying out this process, allowing affected communities to submit applications for recognition and reparation for damages suffered during the armed conflict.

In the case of Santa Paula, following the return of the farmers to their restored land, the Córdoba Territorial Directorate of the URT, in coordination with the various entities of the National System for Comprehensive Care and Reparation for Victims (SNARIV), established a series of actions that are also multilateral benefit strategies. These actions included the improvement and adaptation of the Montería-Santa Paula road, providing better security conditions for traffic to these territories; likewise, the construction of decent housing, access to basic public services, the implementation of productive projects, the construction of a school and a health center, and the guarantee of educational places for children and adolescents in the educational institution of the township of Leticia; in addition, the ability to provide the population with complementary training programs with the support of the National Learning Service (SENA). Likewise, the implementation of health brigades and vaccination campaigns, the relocation of two community homes of the Colombian Institute of Family Welfare (ICBF), and the execution of the community kiosk and collection center revitalization project.

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Given the commitments between the public policy proposed by Law 1448 of 2011, the responsibilities of the SNARIV institutions, and other international human rights entities related to the restituted population of Santa Paula, the following are the actions aimed at improving socioeconomic conditions within the post-fall implementation.

One of the first activities carried out in Santa Paula was the strategy called Entrelazando (Intertwining), which aims to rebuild the social fabric and community ties. To implement this strategy, a workshop entitled El ser tejedor y tejedora (Being a Weaver) was held, designed by the professional team of the National Unit for Victims, with the main purpose of strengthening psychosocial skills and advancing training processes on tools for diagnosing harm.

During the psychosocial workshops, the residents of Santa Paula who had been returned to their homes were able to express the events that had marked their lives in the context of the armed conflict. For example, on June 30, 2015, the community itself, with the support of the Victims Unit, held a commemorative ceremony and paid tribute to the social leaders who had been killed for defending and demanding their rights. In particular, the name of Yolanda Izquierdo was highlighted, and other figures and victims who died as a result of the armed conflict were remembered. As part of these events, a promotion committee was formed to draw up a map of institutional participants for the community of Santa Paula and surrounding towns, who are being trained in aspects related to Law 1448 of 2011, focusing on health, education, and the right to a dignified life.

In this process of restitution and collective reparation, short-, medium-, and long-term strategies have been outlined to address the issues identified during the working sessions of the various committees that have been created in the communities of Leticia and Santa Paula. These committees mention the community's distrust of state institutions due to promises of welfare and development that have not been fulfilled.

Likewise, mention is made of the breakdown of the social fabric due to the effects of the armed conflict and other negative factors, such as the loss of cultural identity and socioeconomic practices (cultivation of corn, plantains, cassava, beans, and rice, and livestock and poultry farming), which used to meet local food needs. Similarly, the committees highlight a lack of awareness of the Victims' Law and the procedures for collective reparation, as well as the failure to address material and economic needs, which, if not resolved, will leave the community vulnerable to the IAGs.

The URT, the Córdoba Territorial Victims Unit, and other SNARIV entities involved in the collective reparation process have outlined activities consistent with the reparation and State outreach strategy, with the aim of restoring the repaired communities' trust in State institutions and supporting the legal process of land restitution. To achieve these actions, the reparation process has been explained to leaders in Leticia and in the villages of Palmito Picao, El Tronco, and Tenerife. There is clear interest in promoting collective unity within the community, improving neighborly ties, and strengthening good leadership, thereby benefiting the active and conscious participation of the populations in their own development as a means of reconciliation between the local inhabitants of Santa Paula and the State.

In the village of Leticia, a community leader acknowledges what she experienced during and after the armed conflict. In her own words, she says: "It has united us as a community; it has strengthened our desire to work for the village, its surroundings, and the surrounding communities. It is one of the positive things that has come out of this, because one thing that the violence took away from us was our trust and unity with neighboring communities. People from Palmito Picao, Tenerife, and Cocuelo are working on this project; this has brought us together as a community. Although not everything is rosy, it has been a challenge to get the mayor's office and the governor's office to join these processes and comply with the orders given by the land judges in their rulings. For example, the entrance to Santa Paula from Leticia: the road is paved up to Leticia, but the entrance is unpaved... When it rains, it is inaccessible" (Pastrana, A., personal communication, February 15, 2018).

Another community leader is hopeful and says, "I hope that after all this, peace will return; that everyone will be calm, that we will be happy, that fear will disappear, that we will remember the past, but that we will never live through it again, that there will be no repetition of all these problems. Hopefully, the government agencies will really take action and do things correctly, as stipulated, so that tomorrow the victims can say: the State kept its promise to us, we feel happy and satisfied... But things are not always as we would like them to be; there is still much to be done, and we must ask the relevant authorities to comply with the rulings of the judges and Law 1448. The fact is that Paula Paula still has problems with public services, such as water and electricity, which do not reach the entire district" (Sibaja, R., personal communication, February 21, 2018).

In terms of productive relations, the URT, in compliance with Law 1448, assigns each resettled family a productive project, providing support for two months through technical and logistical teams and NGOs, through the United Nations Development Program (UNDP) and the Food and Agriculture Organization of the United Nations (FAO). Both organizations have been essential in financing projects for different families, groups, and foundations created by the community itself. These projects become the economic support and source of income for the population of the Leticia district.

Following the failure in Santa Paula, state entities such as SENA have joined the effort, training communities in projects involving livestock, fish farming, pig and chicken breeding, with livestock being the most popular option, with each family receiving four to five head of cattle (Figure 2).

An official from the National System for Comprehensive Care and Reparation for Victims, in an interview on the land restitution process at the Santa Paula-Montería estate (García, A., Interviewer), stated that as of 2019, a total of 177 productive projects had been completed and 14 were receiving technical assistance. Some have been running for three years, while others require ongoing support from the URT.

En este orden, otro líder social, cabeza de hogar, alega que: "no ha sido un proceso fácil, al principio no tenía el conocimiento necesario para sacar adelante el proyecto de las cinco vaquitas que me dio la unidad, incluso pensé en venderlas, dejar la tierra en alquiler y devolverme para Montería, pero gracias a la asesoría de la unidad de restitución, del acompañamiento del SENA y de la ayuda que nos brindó la FAO, pudimos sacar el proyecto adelante y ahora del ganado recibimos la lechita, el queso, la mantequilla, por medio del queso uno consigue lo demás. Como uno hace el quesito va y lo vende o lo cambia por la yuca, lo cambia por la carne" (Palomo, M., comunicación personal, 18 de marzo de 2018). Lo expresado por este líder demuestra que los parceleros en Santa Paula, tienen la posibilidad de ser productivos por sí mismos, propiciando recursos de autogestión y apropiándose del predio restituido.

In this way, the URT and other institutions that make up the SNARIV closely monitor the process of the restituted residents. They also manage and establish links for the participation of entities such as SENA and NGOs, providing assistance to rural communities so that they can improve their social conditions as they begin their new lives and productive projects, with the dual purpose of ensuring that they meet the minimum standards for a decent life and enjoy their rights. This allows us to argue that the process of land restitution to peasants and smallholders in Santa Paula, in addition to being a pilot project in Córdoba and Montes de María, i.e., the first land restitution project in the Colombian Caribbean, has been one of the most successful processes, with around 90% of the provisions of Law 1448 of 2011 having been implemented. in terms of support, advice, and guidance for productive projects in communities affected by the armed conflict.

4. Conclusions

The Colombian government, in its efforts to counteract the crisis generated by the armed conflict, is implementing strategies that seek to resolve the situations arising from this phenomenon, which has been responsible for multiple crimes against humanity. One of the first mechanisms for restoring victims was the land restitution process, which is beginning to gain visibility in academia through conceptual categories that interpret the reality experienced by victims of displacement.

Thus, there is a need in the country to create legal, regulatory, and institutional conditions that allow victims of the armed conflict to be recognized by the State and to have access to comprehensive reparation mechanisms, taking into account measures of restitution, compensation, rehabilitation, and guarantees of non-repetition of the violent act, for the restoration of the material, moral, and symbolic rights of individuals and families affected by the armed conflict.

The article was structured around the case of the population returned to Santa Paula, a rural area in the district of Leticia (Montería), where the dispossession and displacement of peasants from their lands was an event that deeply marked the community. However, with the enactment of Law 1448 of 2011, the Colombian State, in terms of protection and compensation for victims of the armed conflict, is attempting to be a key tool for rebuilding the social, economic, and cultural fabric of the population. Nevertheless, the challenges and expectations are numerous. On the one hand, it strengthens, benefits, and directly compensates victims through the records that accredit them. On the other hand, there is discontent among some social leaders and local organizations that disagree with the activities and decisions taken with regard to the restitution processes, which is leading, in some way, to a rethinking of government policies on social development and agricultural support for greater effectiveness among the victims of the conflict.

The instrumentalization of the land restitution process in Santa Paula has caused tensions; for example, political participation in the context of collective reparation, framed

Figure 2: Productive projects in Santa Paula.
Source: Prepared by the authors, 2022.

by Law 1448, which led to persecution, murders, threats, and revictimization of the population, particularly targeting social leaders, many of whom were killed for being active members of land claim groups.

Therefore, land restitution, in the spatial context of Santa Paula, is considered a cornerstone of public policy for victims of the armed conflict, focused on returning land to displaced and dispossessed people, compensating for the damage caused to hundreds of peasants who were subjected to crimes against humanity, who not only lost their land but also their security, peace of mind, economic livelihood, and, in general, their living conditions.

Finally, the case of the Santa Paula farm shows the socioeconomic reality that characterizes a community that was restored after being a victim of the armed conflict in Colombia. In this way, compliance with Law 1448 has gradually allowed for the reconstruction of the social, economic, and cultural fabric of the inhabitants, where the implementation of collective reparation workshops, productive projects, social strengthening, and institutional support have become key elements and factors in the land restitution process. However, the restitution processes have led to the emergence of new problems, resulting from the entrapment and lack of control of the GAIs, the revictimization of land applicants, the insufficient action of state institutions, and the little or no solidarity of some sectors of society with the victims of the armed conflict.

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Artículo científico

Straw and lightened mud ceiling: adaptive response to extreme climate in Andean homes

Cielo raso de paja y barro aligerado: respuesta adaptativa al clima extremo en viviendas andinas

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Abstract:
The clay and lightened straw ceiling is a construction practice that Andean communities have traditionally used in their homes. Depending on its geographical location, it is called by different names such as "caruna, takta, t'atja, tacta, and in the Chipaya language "wara", p'ira, t'llli" and uses the earth and straw of its highland environment in its preparation. It is currently at risk of disappearing as a result of the sociocultural processes experienced in the territory over the last 50 years. This article describes the rescue actions and enhancement of the system through a technological research project with field and laboratory methodology in the region of Arica and Parinacota, northern Chile. The results obtained through this research have allowed the system to be mechanically and physically characterized; the findings have been contrasted with the safeguarding principles to evaluate its potential for recognition in the national Intangible Heritage safeguarding system.

Keywords: earth construction, vernacular architecture, natural fibers, Aymara roof, thermal insulation.

Resumen:
El cielo raso de barro y paja aligerado es una práctica constructiva que las comunidades andinas han empleado tradicionalmente en sus viviendas. Según su ubicación geográfica se denomina con distintos nombres como "caruna, takta, t'ajta, tacta, y en lengua chipaya "wara", p'ira, t'illi" y emplea en su elaboración la tierra y paja de su entorno altiplánico. Actualmente sufre el riesgo de desaparición, producto de los procesos socioculturales vividos en el territorio durante los últimos 50 años. Este artículo describe las acciones de rescate y puesta en valor del sistema, a través de un proyecto de investigación tecnológica con metodología de campo y laboratorio en la región de Arica y Parinacota, al norte de Chile. Los resultados obtenidos a través de esta investigación han permitido caracterizar mecánica y físicamente el sistema, los hallazgos se han contrastado con los principios de salvaguardia para evaluar su potencialidad de reconocimiento en el sistema nacional de salvaguarda de Patrimonio Inmaterial.

Palabras clave: construcción en tierra, arquitectura vernácula, fibras naturales, techumbre aymara, aislación térmica.

1. Introduction

Local building cultures have their origins in vernacular architecture. The word "vernacular" derives from the Latin "vernacŭlus" and refers to something "domestic, native, of one's own home or country." In architecture, it relates to the traditional construction of specific local communities and their relationship with sustainability. This concept has been developed since the 1950s, highlighting the importance of considering factors such as site-climate, materials, and the relationship between architecture and the natural environment. Various authors have contributed to the definition of this type of architecture, taking as their central axis the adaptation of architecture to the climate and the environment. Sibyl Moholy points out that "[...] every foot of land, every stone, brick or piece of wood, every proportion, opening and angle of a wall is coordinated to respond to particular challenges, never entirely duplicated, of place and gravity, of climate and human comfort."(Moholy, 1957, p.33). Rafael Serra, in the Spanish edition of Architecture and Climate, emphasizes that Olgyay "[...] had already delved into the interaction between a building and the natural environment that surrounds it, postulating in his writings how the relationship between 'architecture' and 'place' is and should be, between 'form' and 'climate', or between 'urbanism' and 'regionalism', drastically contradicting the implicit and apparent laws of 'official' architecture in the middle decades of our century. (Olgyay, 1998, p.1)

Rudofsky (1965) enriches the vision of the vernacular by incorporating anthropological aspects into the reflection, "[...] In contrast to the aspirations of vernacular studies from other disciplines such as anthropology, he clarifies the need to incorporate what has been learned from these anonymous architectures into contemporary architecture." (Loren-Méndez, 2018, p. 121); and in 1969, Rapoport subsequently examined the factors that influence vernacular architecture, such as economics, religion, site, materials, and climate, but considered that "[...] The element that has the most significant effect on man-made forms would be climate. (Rapoport, 1969, p. 111)

All these theorists have advocated incorporating elements of vernacular architecture into contemporary architecture, emphasizing the influence of climate on architectural forms. In addition, they have proposed terms related to sustainable architecture that share principles with vernacular architecture, such as the use of local materials and techniques and energy efficiency. More recently, Mileto and Vegas (2014) "[...] present several terms related to sustainable architecture: kilometre zero, low tech, bioclimatic architecture, passive architecture, green architecture, and bioarchitecture (or bioconstruction)" (Torres & Jaramillo, 2019, p. 49).

In Latin America, Cordero Gulá and García Navarro (2015) & Toumi et al. (2017) highlighted that sustainability focuses on the socioeconomic dimension due to inequality and poverty in the region. Finally, Santacana and Mensa (2022) proposed categories for classifying architecture according to its climate management, seeking to redefine the relationship between architecture and climate.

These construction techniques in vernacular architecture reduce the environmental impact of construction. We find examples in studies based on the use of land as a material, which have advantages over industrial construction: "[...] it does not require transportation or exploitation of geological resources through quarries or deposits, which makes construction cheaper. It also has a low ecological and sustainable environmental impact, is 100% recyclable, and therefore has low energy costs. It absorbs pollutants and, as it is considered a healthy material, allows the creation of other materials that are harmless to humans and do not generate environmental impact."(Zabala, 2023, p.20), and "[...] the use of natural materials in the country's contemporary architecture responds, first and foremost, to the social and economic needs of the population, and secondly, to environmental needs." (Torres and Jaramillo, 2019, p. 52).

The protection of intangible heritage is constantly evolving in terms of defining the scope of the concept of cultural heritage. The most recent perspective considers people and their creations, not only the physical or material aspects of heritage but also living expressions. Its management involves ethics and highlights the fundamental processes for continuity, rooted in ancestral knowledge, as pointed out by UNESCO in 2021. Intergenerational transmission is sometimes interrupted, giving rise to new actors and processes that enable lost or endangered traditions to be recovered or revisited. Strategies exist to recover knowledge, including authentic expressions of local cultures, such as traditional craft techniques (MINCAP, 2019).

In the Parinacota Commune, near the tripartite border between Chile, Peru, and Bolivia, lies the village of Tacora (see Figure 1). A roof restoration project revealed the drastic transformation that has taken place over the last 25 years in the material used to construct high Andean dwellings to protect them from the weather. A review of the Population and Housing Censuses of the Arica and Parinacota Region (INE, 1992; 2002; 2017) showed that the composition of the roofing materials of vernacular Aymara dwellings has changed substantially. These transformations may have altered the efficiency and effectiveness of the roofs in the extreme climate where they are located.

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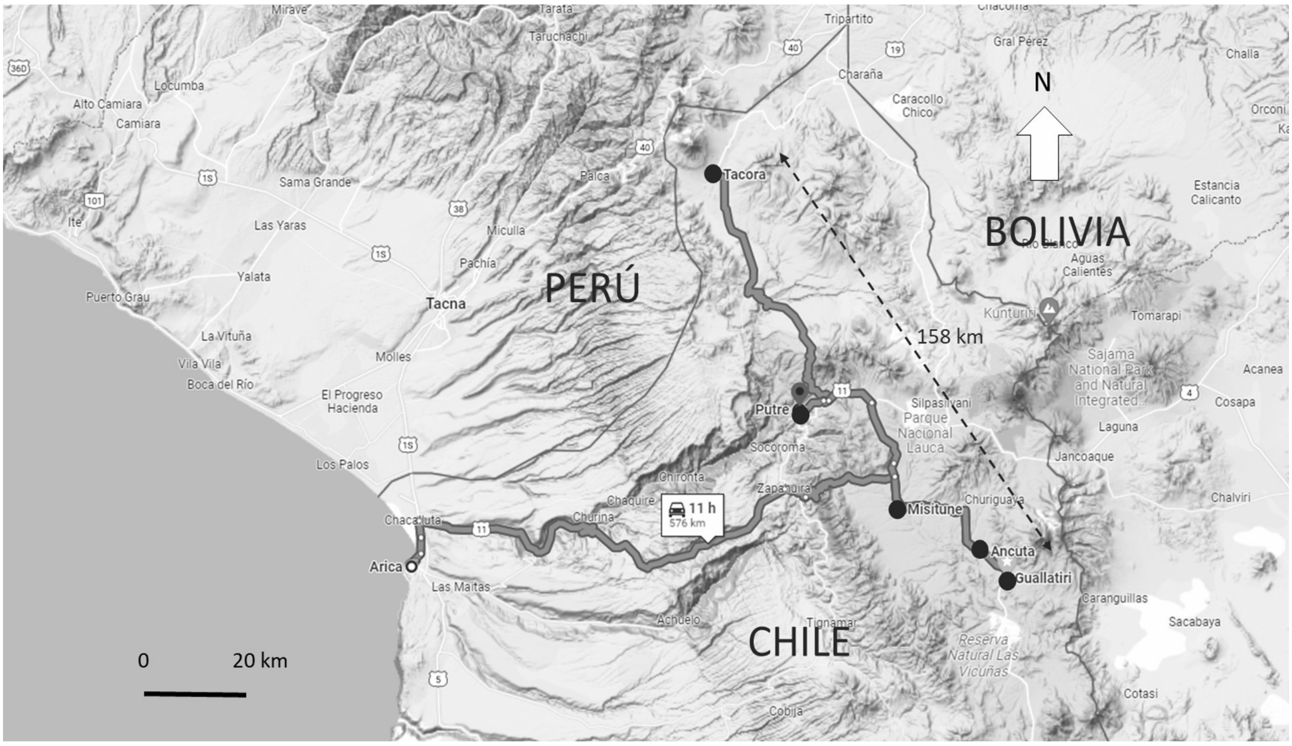

Figure 1. Route and location of the villages visited during the research in the Arica and Parinacota region
Source: Prepared by the author

Cultural anthropological research conducted between 1968 and 1969 in Enquelga, Chile, has reported the use of mud and straw in the ceilings of Aymara dwellings. This ethnographic record identified 90 dwellings, where the use of the local technique known as “p’ira,” “caruna,” or “takta” was described. This was the traditional way of covering roofs (Šolc, 2011 [1975]) in the Andean highland villages of northern Chile.

The closest case referred to in the literature describing this construction technique is found in Bolivia. It corresponds to a type of traditional construction of the Uru Chipayas culture, an ethnic group that forms part of the Uru Puquina nation, “[...] The same origin must have identified the Urus and the Puquinas. The Urus settlement extended across the central highlands, that is, the department of Oruro and the entire coast to the Pacific Ocean in the west (according to Max Uhle), to the north to the northern shore of Lake Titicaca and the Arequipa Valley, to the south with the upper part of the Loa River, to Lípez and Chichas, that is, covering the entire province of Tarapacá, to the east with the Cotagaita River.” (De la Zerda, 1993, p. 94). This spatial distribution refers to the spatial expansion of this culture over the current Chilean territory of Arica and Tarapacá, where evidence of this construction technique has been found.

The most detailed study of this technique in Bolivia is the work documented by Bolivian architect Jorge de la Zerda in 1993 in his book Los Chipayas, modeladores del espacio (The Chipayas, Shapers of Space), which provides a graphic and written description of the process used to construct this sheet of The mud that is placed on the ceiling of the circular dwellings known as “Wallichi Koya,” referring to how the tacta is constructed, indicates that “[...] It is then covered with a ‘sheet’ of clay and straw, called ‘tacta’ in Aymara and ‘wara’ in Chipaya, which is made on the ground beforehand. This sheet is circular and, to facilitate its transfer to the roof, is cut into trapezoidal pieces. Rough straw is placed on top of the wara to protect it from rainwater. The straw is held in place with a “chipa” or net woven from the same material, tough straw, as a precaution against strong winds. (De la Zerda, 1993, pp. 75-78).

The technical solution of suspended ceilings made from straw and mud, although very limited to the specific southern Andean area, can be found in other similar contexts involving straw and mud roofs in cold climates, such as the traditional straw-roofed houses of northwestern Spain, where it is noted that “[...] The construction methods of the palloza, as traditional architecture based on trial and error, are currently considered valid, offering professionals criteria for designing and building dwellings using sustainable, locally sourced, and low-environmental-cost materials.” (Molina and Fernández 2013, pp. 213-214). The study of this case, together with others closer to the Andean area for rural dwellings in the Colca Valley, refers to the importance of roof insulation and provides data on the percentage reduction in energy demand: “[...] It is concluded that interior roof insulation has a greater impact on thermal performance, reducing energy demand by 23%; and by implementing all scenarios, a 29% reduction is achieved.” (Iruri et. al, 2023, p.1).

It could be argued that Aymara architecture could be considered an adaptive response to the extreme environment. Many authors have ventured to characterize

Andean housing as "[...] that which possesses common characteristics and repetitive typological patterns throughout the Andean macrozone, which have been widely described by numerous architects, anthropologists, and architectural historians." (Jorquera, 2021). This technique, which can be defined as straw-lightened mud (see figures 2, 3, and 4), refers to "[...] a sheet of mud with straw, 1 to 2 cm thick, cut into strips 50 cm wide, which are placed on a slightly overlapping cane framework, with a smooth inner surface. It is made on site with fine straw and mud tamped under a cloth to compress it" (Directorate of Architecture, Ministry of Public Works of Chile, 2016). In 2018, following the restoration of the village of Tacora, this technique was reintroduced, incorporating standardized industrialized materials combined with the vernacular technique, which is the case study discussed in this article.

Figure 2: Caruna tied with llama leather. Queñoa wood coasters and racks.
Source: Own work

Figure 3: Caruna tied with a metal wire. Gunwales and struts made of brushed pine wood.
Source: Own work

Figure 4: Caruna tied with cowhide. Gunwales and struts made of rough pine wood.
Source: Own work

The knowledge associated with this practice is currently at risk of disappearing as a result of the sociocultural processes of uprooting and internal migration experienced by the Aymara people over the last 50 years. These phenomena are undoubtedly having a substantial impact on the territorial space and the conservation and loss of the cultural heritage of the villages of the Chilean Altiplano. For this reason, and due to the optimal efficiency characteristics obtained under test conditions, it can be argued that this technique deserves to be known, replicated, and safeguarded as knowledge belonging to the Aymara people (see Figure 5), for which recognition as cultural evidence is sought.

The novelty of this research lies in the opportunity to carry out tests that had never before been applied to this material, such as its thermal characterization. These results will be valuable for the revision of sustainable construction standards in Chile and other countries in the Southern Cone that share cold climates at altitudes above 3,000 meters above sea level.

2. Materials and methods

To address this case of Andean heritage, research methods were used that combined architectural aspects related to construction and ethnographic aspects that delved deeper into the expressions of cultural knowledge behind these physical manifestations. These methods sought to understand and analyze the characteristics, contexts, and meanings of these traditional constructions in order to draw conclusions that would validate or refute the hypothesis of the continued validity of this ancestral knowledge in non-urban Andean communities. The study was divided into three stages.

First stage: collection of information ex situ. A bibliographic and census review was carried out, followed by a field survey to confirm the presence of the technique in one case. concrete and verification of different roofing materials in dwellings in the area of interest. Next, surveys

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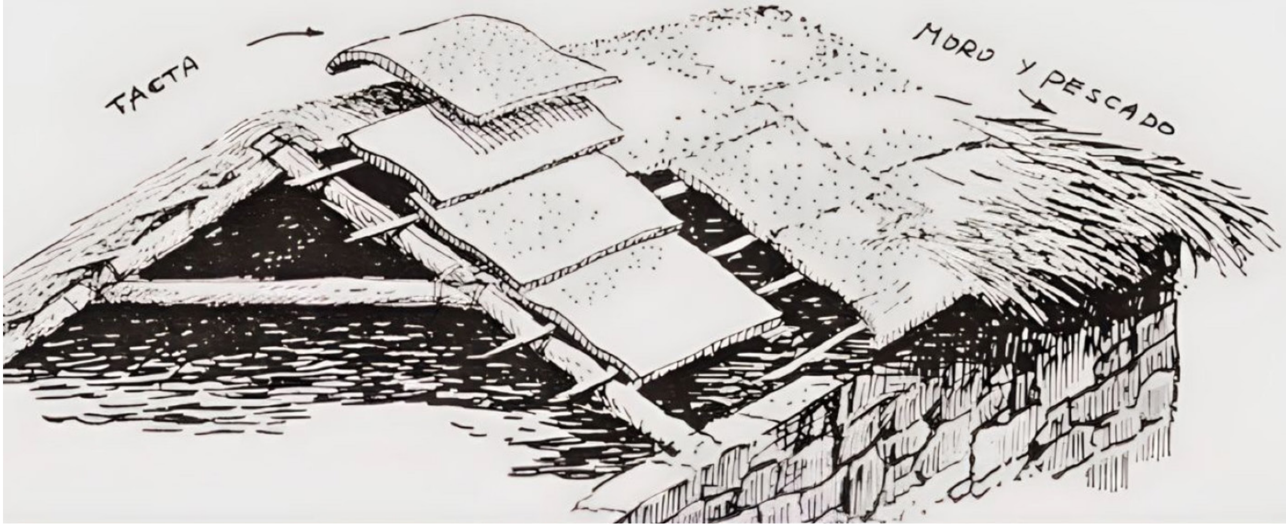

Figure 5: Sketch of the construction elements of the lightweight mud ceiling (Contreras Álvarez, 1974)

were conducted with key informants to establish the degree of knowledge about the technique under investigation.

In this phase of the research, a 25-year longitudinal study was conducted on the replacement of roofing materials in rural areas of the province of Parinacota. Data from the Chilean Population and Housing Censuses conducted by the National Institute of Statistics (INE) in 1992, 2002, and 2017 were reviewed. The data was limited to the province of Parinacota in the Arica and Parinacota Region of Chile, and two categories of information were analyzed: a) Types of housing identification used by the INE, b) Types of materials used in different parts of the dwelling. This data was analyzed for each of the intercensal periods and cross-referenced based on specific types of materials such as "straw," "coirón," "totora," and "caña."

Second stage: collection of information in situ. Test samples of material identified as "Caruna," composed of mud and lightened straw, were prepared and subjected to microscopic characterization and thermal behavior tests. Finally, studies were carried out to monitor the hygrothermal behavior and climate variables of two houses with different insulation materials located in the town of Tacora, Chile.

To obtain samples of the material used to make the "Caruna" test tubes, a farmer and bricklayer from the village of Visviri was contacted, who rescued this knowledge from his personal experience and allowed this technique to be incorporated into the restoration of the village of Tacora in 2018. This key informant provided a first-hand account of the perspective and value of this construction knowledge and also made two "caruna" test tubes, which were subsequently tested in the laboratory under NCh 850.

The soil samples obtained from the test tube preparation process were subjected to consistency limit determination (NCh 1517/1, NCh 1517/2 Of. 1979). Test (1) corresponds to the determination of the liquid limit, while test (2) corresponds to the plastic limit.

In addition, a test was carried out to obtain the sand equivalent, by the Chilean standard (NCh 1325:2010). The consistency limit was tested for both soil samples, 25313-1, which corresponded to a mixture of fine soils with a clay content to be determined, and sample 25313-2, composed mainly of sand added to the kneading process during the preparation of the "Caruna" in situ.

The third stage involved integrating the results obtained and drawing conclusions from a cultural and environmental perspective.

To clarify the effectiveness of knowledge transfer between generations, the first task was to make contact with the local school-age population to determine their level of knowledge regarding the traditional method of making "cielo de barro y paja alivianado" (lightweight mud and straw roof), as proposed by Gavilán and Vigueras (2020), as a result of strong state policies for the recognition of indigenous peoples in the last two decades, "[...] young people tend to affirm ethnic identities by valuing the past, recovering rituals and re-signifying them in urban spaces," according to Yáñez and Capella (2021). Therefore, the sample selected is intentional and corresponds to 32 students aged 16-17 from the Liceo Técnico Agrícola Granaderos de Putre.

The methodology of the meeting included a theoretical presentation of the characteristics of the material, its relevance, and a description of the research. A brief survey of 10 dichotomous qualitative questions in two dimensions was also administered. The first was aimed at identifying prior knowledge about the construction technique, which takes on different names depending on The town where it is found, and the second aimed at elucidating the motivation and interest in perpetuating the construction tradition.

In this last stage, data were obtained from monitoring the hygrothermal behavior of the case studies. The study was conducted in the town of Tacora, Chile, based on the initial considerations that there had been a recent intervention involving the use of caruna for the restoration of the town in 2018. The second reason was the possibility of having a contrasting material, also considered a good thermal insulator, in the wall covering of the houses, which was made using totora (Aza-Medina et al., 2023; Hidalgo-Cordero & Aza-Medina, 2023). To this end, four houses were initially selected, two with “mud and straw” ceilings and two with “totora” ceilings, and two of them were then monitored. The purpose of this study was to obtain environmental comfort parameters and data through indoor and outdoor temperature and humidity variables in the houses, and then compare them with environmental comfort simulations of the houses based on standardized thermal transmittance data for “mud and straw” material.

Climate data was collected through a field measurement campaign to determine the indoor and outdoor environmental performance of the homes. For indoor measurements, temperature and humidity measurement devices (Dataloggers) were installed at roof level in each of the four prototype homes mentioned above. The installed equipment consists of small recording thermographs capable of storing large amounts of data over extended periods. For this research, the equipment was configured to collect data every 15 minutes over five months (July to November).

3. Results

3.1. Cultural aspects related to the use of material resources

About the materiality of the roof in the indigenous housing category, which is similar to the concepts of ruka, pae pae, and others, the presence of plant materials in the roof showed a decline in 1990. Of the total number of cases surveyed in that year, which corresponded to 180 dwellings, it reached 134, representing 74% compared to 2002. Homes with this type of material only reached 37 homes, representing 20.5% of the total, while in 2017, only nine homes were counted, representing 5% of the total. This indicates that there was a 93.24% reduction in the proportion of homes with roofs made of plant materials.

The analysis of census data also showed the presence of substitute materials, such as metal sheets or materials such as zinc, copper, or fiber cement. This type of roof is mainly associated with the architectural typology referred to as “house” by the INE and, to a lesser extent, with “traditional indigenous housing.” However, in 25 years, the total number of dwellings with zinc and fiber cement roofs reached 929, showing a progressive increase in the presence of these materials in the highland areas.

Based on the cases observed during the field campaign, which visited the towns of Tacora, Misitune, Ancuta, and Guallatire over a distance of 150 kilometers, it was found that zinc sheets were present in 81.82% of cases, compared to mud-covered straw roofs. However, when comparing the type of ceiling in these cases, 72.73% had “mud and straw” ceilings and only 18.18% had “reed” ceilings, while 9% could not be identified.

About the material used for exterior walls, 36.36% were mud-brick houses, 27.27% were stone and mud, and the remaining 36.36% were adobe houses. Compared to data provided by the Chilean National Institute of Statistics (INE) on the material composition of roofs, this sample indicates that even though zinc sheet metal is the most common roofing material, the roofs of traditional dwellings have a high percentage of straw and mud.

Regarding knowledge transfer, our analysis of the survey data reveals that, in the first dimension, most students are unfamiliar with this construction technique, with “t’ili” being the most recognized term, at 24% of those surveyed. However, 67% say they associate some of these terms with roofs. About the second dimension, the information gathered shows that there is a lack of knowledge about both this specific technique and other typical construction techniques, since in both areas more than half of the population surveyed said they did not know of them (67% and 55%, respectively).

This situation contrasts with the 97% who find value in this knowledge and the 85% who directly express an interest in learning about this and other traditional Andean construction techniques. The term “t’ili” stands out, and they also recognize that the terms used to identify the system are part of traditional roofing.

3.2 Physical characterization of the materials used in the manufacture of the clay and lightened straw panels

The method used for the physical characterization and composition of the samples was carried out through observation and analysis with field emission scanning electron microscopy (FESEM) at the Major Equipment Unit (MAINI UCN).

“[...] The scanning electron microscope, better known by its acronym SEM, uses a beam of relatively low-energy electrons as an electron probe that is scanned regularly over the sample. (Metalinspec 2023) The action of the electron beam stimulates the emission of high-energy scattered electrons and low-energy secondary electrons from the sample surface.

The scanning electron microscope uses emitted electrons and works on the principle of applying kinetic energy to produce signals about the interaction of the electrons. These electrons are secondary electrons, backscattered, and backscattered diffracted electrons that are used to view crystallized elements and photons. Thanks to the narrow electron beam, SEM micrographs have a considerable depth of field that provides a 3D appearance, allowing for a perfect understanding of the sample’s surface structure. In summary, the signals used by a scanning electron microscope to produce an image are the result of interactions between the electron beam and atoms at different depths within the sample.

Sample preparation: Sample preparation is relatively easy since most SEM equipment only requires that samples be conductive.SEM equipment only requires that they be conductive. In other words, the sample must generally be coated with a layer of carbon or a thin layer of a metal such as gold to give it the conductive properties required by the sample, and then scanned with the accelerated electrons. (Metalinspec 2023).

The observation method consisted of extracting a small 10 x 10 mm portion from each of the material samples. The samples were placed on a support that allowed them to be exposed to the electron microscope, which is subjected to an electron bombardment process, allowing observation through the monitor, as shown in (Figure 6), which allows observation of the molecular composition of the compounds as well as the surface structure of the different materials that make up the sample. The procedure allowed portions of the sample to be observed on the lower and upper sides of the test tube, as shown in Figures 7 and 8, where it can be seen that the test tube of the material has a different distribution of straw on the upper and lower sides.

It should be noted that the technique used for these analyses effectively identifies and quantifies elements heavier than sodium (Na), so the absence of lighter elements does not indicate that they are not present, but rather that the technique did not identify them.

The soils analyzed contained rock fragments ranging in size from 60 to more than 500 microns, mostly silicate minerals, possibly quartz, feldspars, and some clay minerals. To a lesser extent, some minerals composed of Fe, Ti, and O were identified. Based on the morphology of the rock fragments, it could be assumed that they had been transported from their source, possibly volcanic, as indicated in the laboratory report.

The results corresponding to the plasticity index in the clays and the percentage limit of sand were obtained from the material used to make the “caruna” test tubes. These samples were characterized as a natural material made from soil and straw, measuring 30 cm x 30 cm x 0.5 cm and with an apparent dry density of 1252 kg m-3. This sample had only 1% sand equivalent, indicating that it was predominantly clayey, composed essentially of 99% clay. It is important to note that the sand fraction used in the soil mixture added to the base material corresponded to 0.473 liters, which was only 5% of the dry volume.

Regarding the apparent density of the tested material and its characterization as a lightweight material, the reference value obtained was 52 kg m-3, denser than the density limit established for a clay and straw matrix considered lightweight, whose density is 1200 kg m-3, as indicated by Wieser et al. (2020). Meanwhile, the interpretation of the results for the liquid limit test according to Casagrande (1932) indicates that soils with a liquid limit greater than 50% (LL>50%) are highly plastic, while soils with a liquid limit less than 50% are defined as low plasticity.

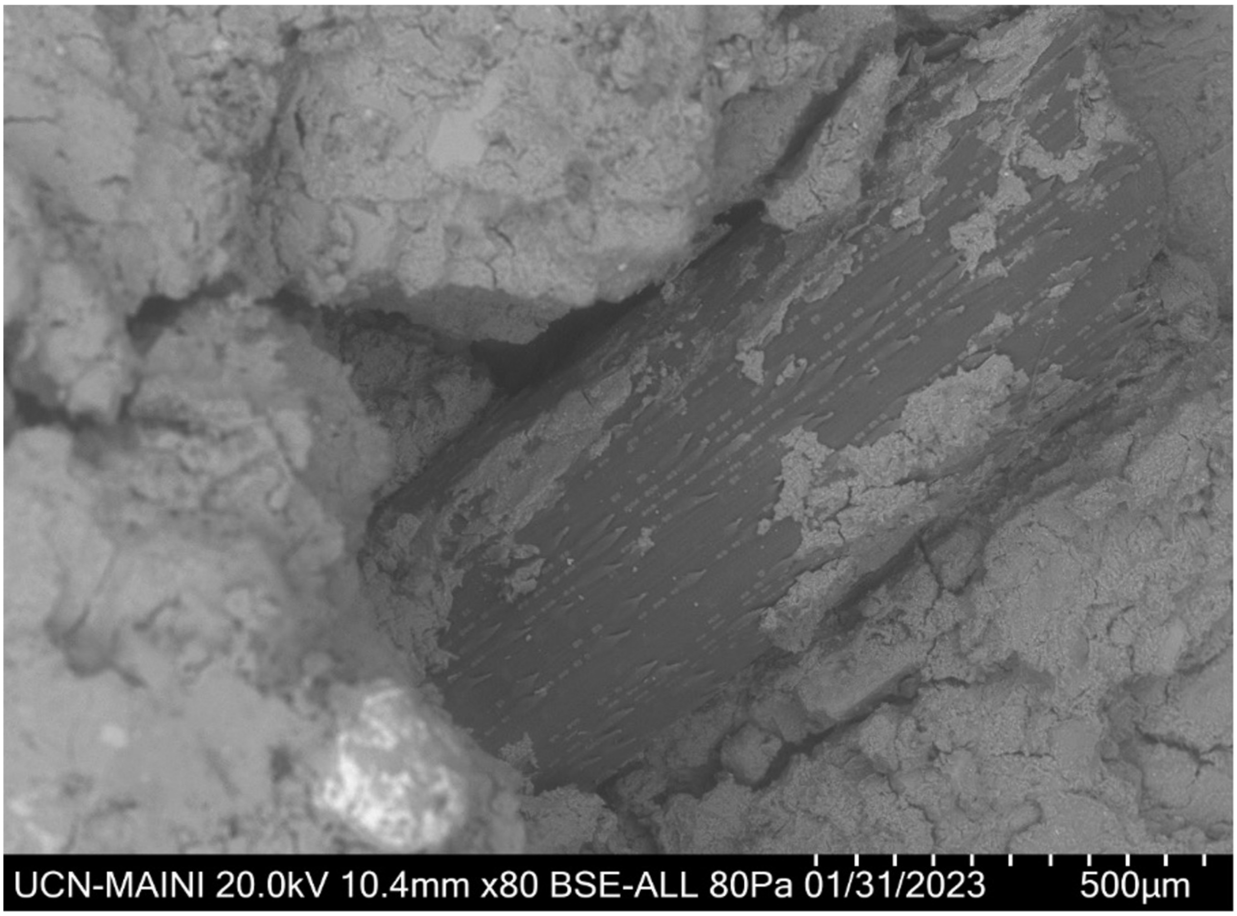

Figure 6: Image of the monitor showing the mud matrix next to the “Ichu” straw fiber. The reading indicates that the fiber is 100% carbon. (MAINI, 2023)

The results obtained place the material used to make the "caruna" close to the high plasticity limit.

The plasticity of the samples tested refers to their ability to deform without breaking when subjected to changes in pressure or humidity. A soil with high plasticity can withstand considerable deformation without cracking, which can be beneficial in conditions of environmental or load changes. The plasticity index obtained from the tests reached 21%, indicating that the tested material exhibited high plasticity and medium compressibility, which could influence cracking, as shown in Figures 7 and 8.

3.3. Results of the visual analysis of the fibers

This allowed the orientation and distribution of the straw to be identified by observing the front and back surfaces of the test piece. This examination established, using the counting method, that: on the lower face, 79 fibers were identified, which, compared to the upper face, represent 59% of the total fibers on both surfaces. In this count, 47 fibers were identified, representing 40.5%, which run from the edges to the interior of the test piece and are much longer than the interior fibers, while the short fibers that do not touch the edges of the test piece numbered 32. The fibers on the upper side are much finer and longer.

Figura 7: Comparativa de agrietamiento en la cara inferior
Fuente: Elaboración propia

Figura 8: Comparativa de agrietamiento en la cara superior.
Fuente: Elaboración propia

A total of 54 fibers were identified on the upper face (Figure 8), which, compared to the lower face (Figure 9), represent 41% of the total for both surfaces. Twenty-three fibers, representing 42.59%, run from the edges to the interior, while the short fibers that do not touch the edges of the test piece accounted for 31 fibers, representing 57.40%. Compared to the lower surface, the fibers on this surface are wider and fewer in number than on the lower surface.

There are notable differences between the lower and upper sides of the test tube in terms of the quantity and characteristics of the straw fibers. The lower side has more fibers than the upper side, and these represent a significantly higher percentage of the total fibers. About fiber lengths, it was found that the longest fibers are located on the outside of the probe, extending from the edges to the interior. The shortest fibers are found in the center and do not touch the edges of the test tube. This could indicate a specific stratified arrangement of the fibers based on their length and alignment.

These counts would have implications when considering the flexural strength factors of the sheet once it is deposited on the roof structure and the sheet begins the drying process, and thus analyze the cracking factor about the effects of clay shrinkage when water is removed from the mixture and the drying and consolidation process of the material begins.

By depositing the fibers in successive layers in multiple directions, combined with the compression exerted by the foot to allow the mud matrix to penetrate between the fiber layers, the fibers are concentrated in the lower part of the board, thus achieving better performance under tensile and flexural stresses in the caruncle blanket.

The concentration of fibers in the lower part of the plate can have several implications for its structural behavior, improving tensile and flexural strength: when aligned and evenly distributed, fibers can provide considerable tensile and flexural strength. This property is accentuated when the fibers are concentrated in the lower part of the sheet, where tensile stresses are usually higher in a cantilevered structure. In this case, the bending moment generates tensile stresses in the upper fibers, such as the ceiling of a house.

The higher concentration of fibers at the bottom of the board would help prevent or limit the formation of cracks, providing additional protection against them. The fibers act as a reinforcement, distributing stresses and helping to maintain the integrity of the board even when movements or loads occur.

3.4 Resistivity and monitoring test results

In the case of the material known as "caruna," the sample tested in the laboratory by NCh 851 achieveda linear thermal conductivity value of 0.1477 W m-1 K-1. The guard ring method was used in the procedure described in NCh 850 Of . 2008.

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The apparatus used consisted of a central metal plate (hot plate) equipped with electric heating. This plate is surrounded by a frame (guard ring) that can be heated independently. On both sides of the plates, test tubes (2) of equal size and with flat parallel faces are arranged. Water-cooled metal plates (cold plates) are placed against the test tubes. The entire assembly thus formed constitutes a sandwich in close contact. (Figure 9).

Comparing this result with others obtained from the specialized literature (Ashour et al., 2015; Zeghari et al., 2021) indicates that the higher the transmittance values, the lower the insulating capacity of the material. An enclosure with good insulating material (5-8 cm) achieves transmittance values of around 0.6-0.4 W m-2 K-1.

The roof enclosures commonly used in contemporary Andean villages are lightweight zinc roofs, mud cake roofs, or wooden roofs. In some cases, concrete slabs are used in recently constructed dwellings.

The lightweight roof used in the system, known as "caruna," achieves better thermal performance than uninsulated slabs and is comparable to mud or wooden roofs. Compared to metal sheet roofs, the advantage is even greater, also improving the heat wave delay value, an indicator of the thermal inertia of the roof.

This result is in line with the results obtained by other studies (Palme et al., 2014; Palme et al., 2012). By increasing the thickness of the caruna, thermal performance can improve proportionally, reaching and exceeding the thermal resistance values typically offered by wooden roofs or other natural insulators such as cork.

3.5. Thermal characterization

About thermal properties, several studies have established a baseline for understanding the properties of mixed construction systems that use soil and lightened straw as insulation, cladding, or infill in wall partitions or roofs. In this regard, it is important to highlight the previous research by Weiser et al. (2020), Volhard (2016), and Vinceslas et al. (2019).

Monitoring results were obtained for a typical day in July, with indoor temperature fluctuations between 1°C and 22°C, both for the caruna roof and the totora roof. Although this result shows a certain degree of nighttime cooling below levels considered acceptable for comfort, it demonstrates that the thermal insulation provided by caruna is similar to that provided by other materials traditionally used in housing roofs in the high Andean regions.

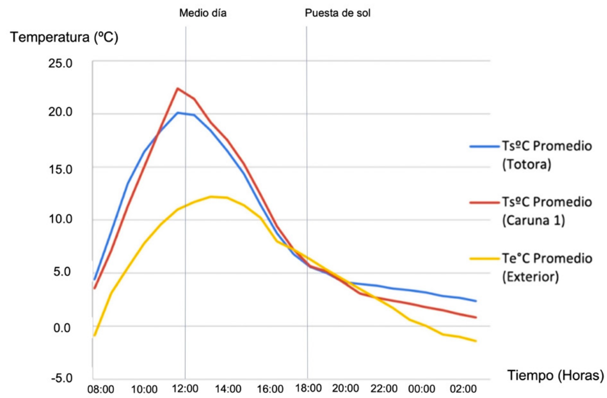

Figure 10: Performance monitoring on a typical day in July.
Source: Own elaboration

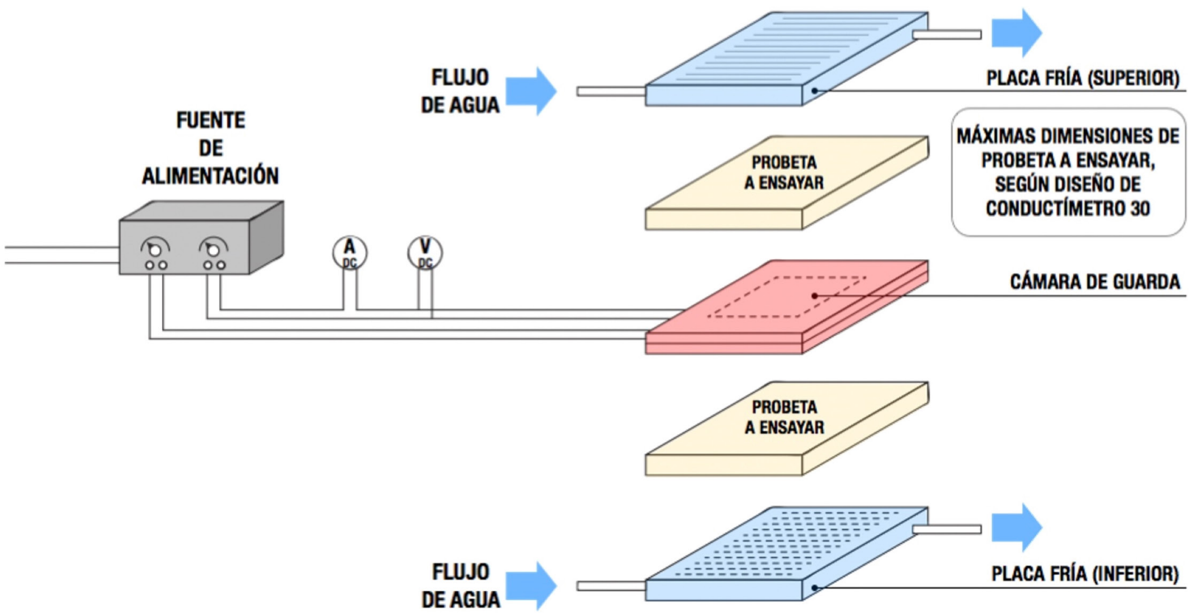

Figure 9: Thermal conductivity test method NCh 851 test (CITEC UBB 2022)

According to the data obtained from the monitoring measurements carried out from July to November in Tacora, the data corresponding to the most unfavorable winter situation, which corresponded to July 2022, were isolated. The graph (see Figure 10) shows the average temperature values reached by the different materials tested in the field, compared with the maximum and minimum outdoor temperatures for that month. It can be seen that the average highest outdoor temperature reached 12°C, while the average minimum outdoor temperature reached -2°C. The highest indoor temperature reached by the caruna was around 23°C, while the highest average temperature reached by the totora ceiling was 20°C, and the lowest minimum temperature was reached by
The totora at around 3°C, while the minimum indoor temperature reached by the caruna ranged between 1°C and 2°C.

4. Discussion

Lightweight earth has usually been associated with mixed systems of load-bearing timber structures, which “[...] use a mixture of mud and fibers to fill the walls [...]. In some European countries (Germany, France), they have been used for some time in a modern way and by national regulations, achieving good thermal and acoustic performance [...], but this should also be evaluated from the point of view of seismic performance” (Meli et al., 2019, p.605).

In the Leicht Lehmbau (lightweight earth) construction system, made from a high proportion of fibers bonded together with clay, the density is essentially between 500 and 800 kg m-2. This density is achieved by adding a larger amount of plant stabilizer; in some cases, wheat straw (Pereira, 2003). The results obtained from the test specimens showed an apparent density of 6.5% above the reference value, as indicated by Wieser et al. (2020). In this sense, despite this slight variation, the mud and straw ceiling could be considered a lightweight system as it is close to the above range.

About thermal properties, several studies have established a baseline for understanding the properties of mixed construction systems that use “soil and lightened straw” as insulation, cladding, or infill in wall partitions or roofs. In this regard, it is necessary to highlight the previous research by Weiser et al. (2020), Volhard (2016), and Vinceslas et al. (2019). Thermal performance depends mainly on the density of the clay and straw matrix; however, it is possible to argue that at densities above 1200 kg m-3, thermal performance close to the values of 0.150 W m-1 K-1 (Meli et al., 2019).

Research conducted on the effect of artificial and natural fibers on soil behavior has reported that these are efficient and low-cost soil stabilizing materials. It has also been proven that the tensile strength and elongation of fibers are greater when wet (Charca et al., 2015). In terms of mechanical resistance properties, there is also evidence indicating improved performance of this combination of materials about the selection of fiber sections and their arrangement within the clay matrix. In this regard, Noaman et al. (2020) provide data that allow the combination of variables to be parameterized and adjusted to obtain better mechanical performance from the material.

Regarding the distribution and density of the fibers present in the test tube analyzed, it can be concluded that, concerning the tensile stresses to which a flexible blanket-shaped insulation is subjected, it is possible to argue that, according to the data obtained, in general, a notable variation was observed between the lower and upper sides of the sample in terms of fiber density and characteristics, aspects that prove that the non-oriented distribution of the fiber and the compression action when stepping on the fibers against the ground would cause a distribution that helps improve the mechanical properties of the material against tensile stresses.

From a more ecological perspective, the manufacture of mud and straw boards for wattle and daub is related to the cycle of Andean grasses, the construction of house roofs before flowering, as pointed out by researchers Villagrán and Castro (2004), who identified the Andean grass species used to make the mud and straw boards: “[...] Generic categories were recorded according to growth forms (such as champeal grasses, straws or wichu, t’olas, montes, rain grasses, and others), as well as nomenclatures by species that refer to vernacular names that, in most cases, had already been recorded in other Andean communities.” (García et al., 2018)

5. Conclusions

By the guidelines established by UNESCO and the Chilean Ministry of Culture, Arts, and Heritage (MINCAP 2019), the recognition of intangible heritage is based on a series of criteria that a cultural expression must meet in order to be included in the national catalog of cultural expressions through a safeguarding process.

About intangible heritage, these criteria refer to validity, nature and collective identity, relevance, and responsibility. In this context, this article seeks to demonstrate how, in light of the research evidence to date, lightweight straw and mud roofs constitute a valid case for recognition as intangible heritage belonging to the Aymara world.

“Validity” corresponds to ancestral traditions, including the contemporary uses of various cultural groups. According to this principle, the system of lightweight mud and straw roofing, known as “Caruna,” “Tacta,” “T’ajta,” Tacta, and in the Chipaya language “wara,” “Píra,” or “T’íli,” has proven to be a technique used in the recent past in the Andean highlands, with documentary evidence from research carried out in the town of Enquelga since the 1970s. Its use continues today, as documented in the restoration of the roofs of the village of Tacora in 2018, located in the Arica and Parinacota region of Chile. Audiovisual records from 2018 show its community and family use in the town of Chua, a cattle ranch, and in Ancuta, both locations near the town of Guallatire, where there is also evidence of the existence of this construction system in old houses.

This cultural heritage is widely distributed across the region and is associated not only with Aymara communities in Arica and Parinacota, but is also recognized in Bolivian border towns such as Cosapa, near Putre, and Santiago de Machaca, near the border with Visviri. These references were obtained through interviews with young students at the Granaderos Agricultural Technical High School in Putre. There is also evidence of its use in transregional locations within Chile.

“Nature and collective identity” is a principle that states that “intangible heritage” must be linked to specific social groups and transmitted in a participatory and inclusive manner. Its recognition and validity depend on the consent of the communities, groups, and individuals involved, without allowing exclusive appropriation or decision-making without their consent. The mud slab with lightened straw is part of the building practices passed down from generation to generation in traditional Aymara dwellings. This building practice is associated with family formation rites and the construction of the roof as a constructive and symbolic act. In the area near the border with Peru and Bolivia, this technique is known as “caruna” or “karuna,” which means “blanket” in Quechua (David et al., 1998, p. 126) and (Aninat et al., 2019, p. 133). Towards the south of the Altiplano, it is called “takta” or “torta” (Villagrán & Castro, 2004), (DA.MOP., 2016, p. 156), and (García et al., 2018, p. 529). In the Tarapacá region, it is called “pira” or “tili” (Šolc, 2011 [1975]; Contreras, 1974).

The construction is carried out collectively and is associated with a symbolic and social dimension of mutual aid called Ayni, which represents community collaboration to help build homes when a member of the community needs it. Both men and women participate in this work, each with specific roles.

“Relevance” must reflect the cultural and historical processes of a community and reveal a sense of belonging and identity among its members. Its value does not lie in its exclusivity or rarity, but in its ability to promote social cohesion, intergenerational dialogue, and be an expression of human creativity. The practice of roofing houses is not merely functional. However, it reveals itself as a deeply rooted ritual in the communities of the central-southern Andean highlands, covering regions of Peru, Bolivia, Argentina, and Chile. This ritual has been meticulously documented through research on regional architecture. Among the key figures who have delved into this subject, the Argentine researcher and architect Ramón Gutiérrez stands out. In his work Aspects of Popular Architecture in the Peruvian Altiplano (1978), Gutiérrez breaks down the rituals associated with house building in the 1970s in the Peruvian Altiplano.

In this web of symbols and actions, a deep link emerges between the roofing ceremony and cultural cosmogony. Over time, these traditions have persisted as a living testimony to the connection between architecture, spirituality, and the identity of communities in the highlands. The continuity of these rituals underscores the capacity of cultural practices to transcend time, transmitting deeply rooted meanings and keeping alive the interrelationship between the individual, the community, and their environment.

“Responsibility,” the expression of intangible heritage, must fulfill the responsibility of not violating “human rights,” fundamental or collective rights, especially those of women, children, indigenous peoples, and Afro-descendants. Furthermore, it must not compromise the health of people, the integrity of the environment, or animals, among others. About the integrity of the environment or animals: “[...] the Andean perception defines the Altiplano landscape according to its forage and ecological attributes, given that livestock management is structured around different vegetation formations; however, the concentric and altitudinal conception is constantly maintained (Villagrán and Castro 1997, Gundermann and González, 1986, p. 20).

The production of mud and straw boards contributes to collective rights of solidarity and mutual aid. About women and children, “Traditionally, any work involving the use of force or greater physical skills is considered to be the domain of adult men, while women and children are assigned to auxiliary tasks and the preparation and procurement of materials.” (Carrasco Gutiérrez and Gavilán Vega, 2014, p. 45)

Women and children collect and sort the fibers, while men participate playfully in the compaction process. Men collect clay and sand, sift, supply water, prepare mixtures, measure, roll, transport, and arrange the material on the roof.

Recognized by indigenous peoples, it has ritual value through its formation in the Aymara family, promotes good health, due to the natural materials it is made of, it is a better alternative to plasterboard ceilings or other industrialized materials, it acoustically dampens rain and hail, and the lightweight mud and straw sheets can be used to combat the effects of climate change on people and camelids.

Based on the research carried out in this article, new lines of research are proposed to continue promoting this traditional technique. On the one hand, it would be possible to continue analyzing the life cycle of the technique and its contribution to the sustainability of vernacular architecture. On the other hand, it is proposed to continue the registry of traditional roofs beyond the study area in the village of Tacora and its relationship with the cultural territory shared with Peru and Bolivia.

It is estimated that the manufacturing processes of the sky-lighted roof can be gradually transformed into more consolidated processes, incorporating ancestral knowledge into more contemporary craft techniques, without becoming a highly industrialized product, which would considerably increase the environmental impact. Appropriate knowledge management and transfer between generations, as well as the eventual presence of a small local enterprise that respects the fragile ecosystem of the Andean desert, could contribute to consolidating the manufacture, distribution, and use of this important material as a natural thermal insulator in homes and buildings located in the studied localities and, more generally, throughout the high plateau macro-region.

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Artículo científico

WebQuest as a formative assessment method for higher education

WebQuest as a formative assessment method for higher education

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Abstract:
Assessment has become a frequent topic of didactic debate and concern among the various bodies that make up academic life. Meanwhile, WebQuests have emerged as an active learning tool that fosters competencies in autonomous, collaborative, and digital learning. The objective of this research was to establish the effectiveness of WebQuests as a formative assessment tool in higher education. A field study was conducted with a sample of 104 students from the National University of Chimborazo (UNACH). The approach was mixed, with a descriptive scope and cross-sectional design. The results demonstrated that the WebQuest is an effective method for assessing the ability to address both conceptual content and practical skills, as well as students' attitudes. This provides comprehensive formative assessment that not only measures theoretical knowledge but also its applicability in real-world situations.

Keywords: WebQuest, formative assessment, theoretical knowledge, procedural knowledge, attitudinal knowledge.

Resumen:
La evaluación se ha convertido en un tema frecuente de debate didáctico y de preocupación de los distintos estamentos que integran la vida académica. Mientras tanto, la WebQuest se presenta como una herramienta de aprendizaje activo que desarrolla competencias de aprendizaje autónomo, colaborativo y digital. El objetivo de esta investigación fue establecer la efectividad de la WebQuest como herramienta de evaluación formativa en la educación superior. Se llevó a cabo una investigación de campo con una muestra de 104 estudiantes de la Universidad Nacional de Chimborazo (UNACH). El enfoque fue mixto, el alcance descriptivo y el corte transversal. Los resultados demostraron que la WebQuest es un método eficaz para evaluar la capacidad de abordar tanto el contenido conceptual como las habilidades prácticas y la actitud de los estudiantes. Esto proporciona una evaluación formativa integral que no solo mide el conocimiento teórico, sino también su aplicabilidad en situaciones del mundo real.

Palabras clave: WebQuest, evaluación formativa, conocimiento teórico, conocimiento procedimental, conocimiento actitudinal.

1. Introduction

The use of WebQuest in higher education is becoming increasingly important as a structured and autonomous approach to learning. WebQuest is a teaching strategy designed to promote active and meaningful learning through the use of online resources. The concept was created by Bernie Dodge in 1995 and developed by Tom March in 1998 (Abuín, 2007), to harness the educational potential of the Internet in the educational environment.

Soto Santiesteban et al. (2022) define WebQuest as "a straightforward and rich learning resource for promoting the educational use of the Internet, based on cooperative learning and research processes" (p. 1). When teachers use WebQuest as a teaching strategy, they present students with authentic challenges or problems that they must solve using resources available on the web. This encourages collaborative work and places the student at the center of the knowledge-building process (Ebadi & Rahimi, 2018). It also contributes to the development of critical thinking skills by teaching students how to think rather than what to think. This involves paying attention to context and cultivating the ability to make critical and evaluative judgments (Alberca Latorre, 2021).

The main objective of WebQuest is to engage students in a process of research and knowledge construction using online resources, thereby encouraging critical thinking, research, and collaboration.

The benefits provided by WebQuest are evident in the research by Katayama Cruz and Rojas Montero (2021), where they conclude that WebQuest presents a series of organized and sequential steps that are designed to encourage critical thinking, creativity, and team collaboration, to facilitate reflective learning.

Similarly, Villegas Dianta et al. (2022), in their study on how WebQuests support university education, state that WebQuests meet contemporary demands by addressing aspects such as collaboration, problem solving, and information management skills, along with the development of digital skills.

On the other hand, educational assessment has been a topic of debate in teaching. It has raised concerns at different levels of academic life to improve teaching and learning processes and, consequently, the quality of the educational system. Assessment is defined as "an educational practice consistent with an education that seeks to raise critical-collective awareness, transform society, and liberate the individual through the full realization of their capabilities" (Remolina-Caviedes, 2020, p. 3). Assessment regulates learning.

When it is carried out with the explicit intention of guiding students toward the development of the strategic thinking necessary to achieve autonomous learning, in this context, it is considered that "assessment for learning is an alternative for transforming university academic life, empowering students, and generating meaningful learning" (Rodríguez Gómez & Salinas Salazar, 2020, p. 2).

In this sense, Morales López et al. (2020) have summarized the dimensions addressed in the assessment process, answering fundamental questions such as what?
how?, who?, with what?, when?, and why? These dimensions are closely related to different aspects of learning, including theoretical knowledge, practical skills, professional competencies, and attitudes. The goal is to evaluate students' overall development in a balanced and comprehensive manner.

Regarding the dimension related to the timing of the assessment, Morales López et al. (2020) clarify that this refers to the time at which the assessment is carried out, which can be of three types: initial, continuous, and final. The primary purpose of the initial assessment is to diagnose students' prior knowledge. Continuous assessment, on the other hand, focuses on evaluating formative activity, which is the primary focus of this study. Finally, the final assessment is closely linked to summative assessment, its objective being to establish a grade, whether quantitative or qualitative.

In higher education, formative assessment focuses on the learning process, providing timely and meaningful feedback to improve student performance. In this context, Hidalgo Apunte (2021) argues that formative assessment plays a crucial role in enabling students to become aware of their learning process, while also giving teachers the ability to reorient their teaching strategies in order to obtain more effective results.

Similarly, Bazán et al. (2022) emphasize the importance of developing formative assessment models that include criteria that encourage active student participation, critical reflection on the products of their learning, and a critical attitude toward how they produce and present their evidence (p. 7).

In today's global environment, educational demands aimed at providing high-quality education are focused on the implementation of formative assessment, which is considered essential for evaluating learning processes linked to the acquisition of skills and abilities (Fraile et al., 2019). Sometimes, formative assessment tends to focus more on assigning grades and results than on truly understanding the learning process. This tendency can reduce its effectiveness in terms of providing meaningful feedback and enriching student learning.

According to Pérez-Pueyo et al. (2019), in the Latin American context, the difficulty in applying formative assessment lies in the limited use and mastery of formative assessment resources by teachers. This is mainly attributed to a lack of resources and time, factors that can hinder the effective implementation of formative assessment, leading to less effective or even negligent assessment practices.

Relating the concepts and importance of WebQuests to assessment models, Rivera Patrón (2010) highlights the need to train university teachers in the creation, application, and evaluation of WebQuests as an educational tool. The specific objectives focused on evaluating a training strategy for acquiring skills in the use of WebQuest and on evaluating how they are implemented in university teaching, linking this to student achievement and satisfaction. In addition to exploring the characteristics and relevance of technological tools in higher education, it focused on the structure of a WebQuest and shared experiences on its application in university settings. The research considers the students' perspective, their satisfaction with the tool, and the teachers' perception, offering a comprehensive view of the effectiveness of WebQuest in higher education.

Similarly, Caro and Guardiola (2012) state in their research that WebQuest, used as a teaching guide, proved to be a novel and stimulating methodological and assessment strategy, as it not only managed to arouse students' interest but also successfully met the learning objectives; improved results compared to the previous year, as more students showed progress in their assessments upon completing the proposed tasks.

In this context, WebQuest emerges as an ideal tool for formative assessment, as it allows teachers to monitor students' progress as they complete activities. This provides continuous feedback and opportunities to improve research skills, thus preparing students to face the challenges of today's digital world. In addition, WebQuests can be adapted to meet the specific needs and interests of students (Silva Porras, 2020). Teachers can design tasks that suit different learning styles and skill levels, thus fostering a more personalized educational experience.

WebQuests are also aligned with today's reality, where access to online information is becoming increasingly important. This tool trains students in the critical and efficient management of the overwhelming amount of information available on the Internet. Students acquire fundamental digital skills, such as searching for and evaluating information online, using technological tools, and the ability to synthesize and communicate information through digital media.

2. Materials and methods

The research was conducted using a mixed approach, combining the analysis of data from assessment reports on the conceptual, procedural, and attitudinal dimensions of students' knowledge during their training process, as they completed each stage of the WebQuest. The data collected in the assessment of conceptual and procedural knowledge are categorized as quantitative, since numerical and measurable data were obtained through an assessment rubric and a questionnaire, which were then converted into statistical information. In contrast, the assessment of attitudinal knowledge was carried out qualitatively using a checklist that provided valuable information based on a reflective analysis of the situations and experiences during the execution of the WebQuest. These data allowed for meaningful inferences about the relevance of the WebQuest in the context of formative assessment.

The study population consisted of 104 students enrolled in teacher training at UNACH during the academic periods from October to February 2022 and from April to August 2023, aged between 18 and 22 years. A non-probabilistic and intentional sample was used, including the entire population in the class schedule corresponding to the Infopedagogy course.

To carry out the study, the analytical method was applied to investigate the phases of the WebQuest, in order to understand its structure and functioning about the learning objectives, online resources, and evaluation criteria. At the same time, the synthetic method was used to integrate the various components of the WebQuest, allowing for a more complete understanding of its functionality as a formative assessment strategy.

The study was framed within the category of action research, exploring how university students can effectively design a WebQuest as a formative assessment method and how this experience impacts their learning process and development of pedagogical skills. The research involved close collaboration between the students and the teacher.

The process began with identifying the problem, recognizing the need to improve understanding and application of formative assessment through the use of WebQuest in the educational process. Next, work teams were formed and guided by the teacher in planning and designing WebQuests on topics related to their professional profile. The structure and foundation of the WebQuest were based on the comprehensive design of the activity, where students, in their training as future teachers, applied their knowledge of the structure and purpose of WebQuest. In addition, as students in teacher training, they were allowed to develop their teaching materials, which were integrated as a key input in the construction of the WebQuest. This approach not only enhanced their teaching skills but also provided them with the experience of designing and applying teaching tools independently.

By establishing tasks and assessment rubrics as an integral part of the process, students not only developed assessment skills but also gained a deeper understanding of quality criteria in teaching. Now, as a fundamental activity, it allows the research teacher to evaluate gradually and comprehensively, providing feedback throughout the various stages of development. This made it possible to identify and correct errors, guiding students toward continuous improvement by encouraging reflection on learning objectives, online resources, and assessment criteria.

In a third stage, students presented their WebQuests online and in the classroom to receive constructive feedback, which provided them with valuable information about their strengths and areas for improvement in terms of content, resource design skills, and their attitude toward collaborative work. This allowed students to learn from their mistakes, deepen their understanding of the subject, identify conceptual errors, and reflect on their process. work and decisions. In addition, quality work was recognized and reinforced to increase students' motivation and confidence in their academic abilities. Figures 1 and 2 present examples of the WebQuests designed by the two groups of students as part of the formative assessment of the Infopedagogy course at UNACH.

At the end of each group presentation, conclusions were drawn based on the evidence gathered, and recommendations were made for future developments of WebQuest and training in the field of teaching.

This comprehensive approach, from the formation of work teams to the presentation of the WebQuests, provided data that was collected using observation techniques with a checklist as a data collection tool. This methodology allowed us to obtain qualitative information on a dichotomous scale regarding the presence or absence of certain behaviors or attitudes of students toward collaborative work in the design of WebQuests. The assessment criteria are presented in Table 1.

Another data collection resource was used, the assessment rubric, which played a fundamental role in evaluating the design of the WebQuest in all its stages and resources. This tool was characterized by the definition of clear criteria and specific standards for each phase of the WebQuest, which resulted in a precise guide for students in terms of quality and content at each stage and resource. The assessment rubric proved to be an effective tool for establishing measurable criteria and performance levels, thus helping to mitigate subjectivity and promote a fairer and more consistent evaluation.

The indicators included in the assessment rubric covered a wide range of skills and competencies, including aspects such as clarity of instructions, appropriate selection of resources, effective integration of technology, and demonstration of creativity, as illustrated in Table 2. These assessment rubrics were applied in mid-term evaluations and were used to monitor progress toward previously established objectives, thus ensuring continuous and constructive evaluation of the WebQuest design and development process.

To assess conceptual knowledge related to the WebQuest, a survey technique was implemented, using a standardized test as the primary data collection instrument. This test was meticulously designed, incorporating precise and uniform questions and criteria focused on the objectives, components, methodology, and benefits inherent to the WebQuest. The fundamental purpose of this test was to assess the students' deep and solid understanding of the key concepts associated with the WebQuest.

Figure 1: WebQuest designed in the Infopedagogy course, Physical Activity and Sports Education degree program – UNACH.
Source: Gaona et al. (2023).

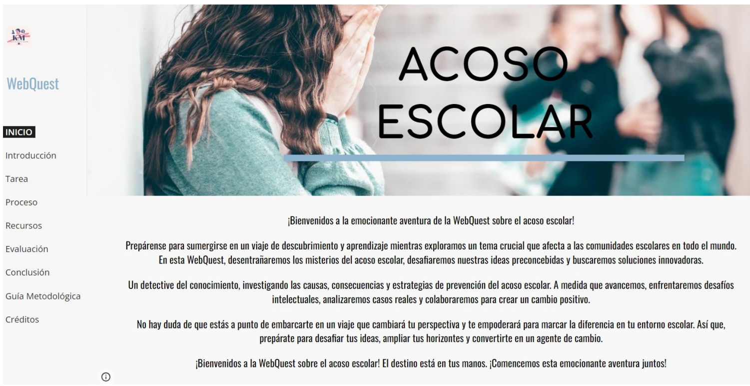

Figura 2: WebQuest diseñada en la asignatura de Infopedagogía, carrera de Psicopedagogía – UNACH.
Fuente: León y Ledesma (2023).

Table 1: Assessment of the attitudinal dimension in the WebQuest design and development process
Source: Own elaboration

Checklist for assessing student attitudes in the WebQuest design and development process		
Assessment criteria	**Assessment**	
1. Active participation		
Did the student actively participate in group discussions and activities?	Yes ( )	No ( )
2. Collaboration and communication		
Did the student collaborate effectively with classmates, sharing ideas and supporting each other?	Yes ( )	No ( )
3. Respect for opinions		
Did the student show respect for the opinions and perspectives of other team members?	Yes ( )	No ( )
4. Fair distribution of tasks		
Did the student contribute to the fair distribution of responsibilities and tasks within the group?	Yes ( )	No ( )
5. Individual contribution		
Did the student contribute their ideas and efforts to the design of the WebQuest?	Yes ( )	No ( )
6. Conflict resolution		
Did the student address disagreements or conflicts constructively and find solutions?	Yes ( )	No ( )
7. Motivation and commitment		
Did the student show a high level of enthusiasm, commitment, and dedication to the task?	Yes ( )	No ( )
8. Creativity and originality		
Did the student demonstrate creativity in proposing novel ideas and innovative solutions?	Yes ( )	No ( )

Table 2: Assessment criteria for the procedural dimension in the WebQuest design and development process
Source: Own elaboration

Rubric for evaluating the procedural dimension in the elaboration of the WebQuest					
	Valuation scales				
Evaluation Criteria	**1**	**2**	**3**	**4**	**5**
Task and resource design	The tasks and resources are not related or are ineffective.	Some tasks and resources are related to the topic, but lack coherence.	The tasks and resources are aligned with the topic and are appropriate.	The tasks and resources are adequate, varied, and enhance learning.	The tasks and resources demonstrate creativity and enrich the learning experience.
Structure and organization	The structure lacks fluency and cohesion.	The structure is evident, but some sections could be better organized.	The structure is clear and guides the student through the WebQuest.	The structure improves comprehension and facilitates navigation.	The structure is exceptionally organized and facilitates a smooth learning experience.
Instructions and guidance	The instructions are confusing or difficult to follow.	The instructions are understandable, but could be clearer.	The instructions are clear and guide the student through the tasks.	The instructions are concise, precise, and promote success.	The instructions are exceptionally clear, support learning, and avoid confusion.
Technology integration	Technology integration is minimal or unrelated to the topic.	Some technological elements are included, but could be more relevant.	Technology is appropriately integrated to improve the WebQuest.	Technology is effectively used to enrich the design and learning.	Technology integration is exceptional and transforms the WebQuest experience.
Creativity	The design lacks creative elements.	Attempts at creativity are evident, but could be more innovative.	Creative elements are incorporated that enrich the experience.	Creativity stands out and adds originality to the design of the WebQuest.	Creativity is exceptional and demonstrates a unique and innovative approach.
WebQuest presentation	The presentation lacks clarity and coherence.	The presentation is understandable but could be more fluent.	The presentation is clear and guides through the key aspects of the WebQuest.	The presentation is effective, engaging, and supports the success of the WebQuest design.	The presentation is exceptional, captivating, and highlights the quality of the WebQuest design.

The careful design of this test provided an effective means of identifying areas where students demonstrated solid knowledge and areas where they required further attention and pedagogical focus. Thanks to these results, an accurate and meaningful assessment of students' conceptual understanding of the WebQuest was achieved, which in turn informed specific training and skill development needs.

3. Results

The assessments carried out throughout the training phase during the design and development of the WebQuest provided a constant and regular source of information on student progress and learning. These data, collected using data collection instruments, were tabulated and statistically analyzed using SPSS V. 27 statistical software.

The information relating to the formative assessment of procedural knowledge in the design and implementation of the WebQuest is detailed in Table 3 and represented by a scatter plot in Figure 3.

The range of scores for procedural knowledge ranged from a minimum of 5.79 points to a maximum of 10 points. The mean, which was 9.16, indicates that, on average, students achieved a high level of competence in this dimension. The standard deviation, with a value of 0.66527, reflects a moderate dispersion of scores from the mean. This suggests that the scores tend to cluster around the mean value. The average score is 9.16 points, and the scores are closer to the mean than widely dispersed around it. This pattern is confirmed by the variance, which reaches a value of 0.443.

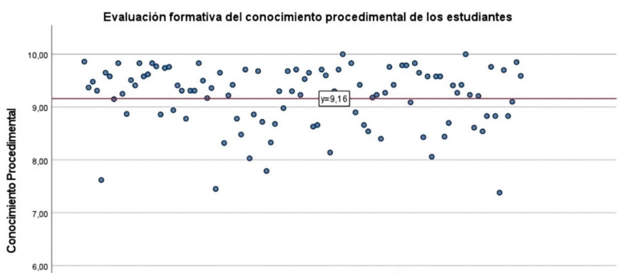

Figure 3: Scatter plot of the assessment of procedural knowledge in the design and development of the WebQuest
Source: Prepared by the authors

The skewness coefficient, which has a negative value of -1.869, indicates that the distribution of scores shows a longer left tail than the right. In other words, the distribution is skewed to the left.

This left skew implies that most values are on the right side of the distribution, while lower values are less frequent and are on the left side. This implies that the lower scores are farther from the mean than the higher values.

The kurtosis value, which reaches a significant 5.772, indicates that the data distribution has denser or more extended tails compared to a normal distribution, particularly toward the left side. This characteristic reveals the presence of outliers in the data set. This finding is consistent with the existence of a score below 7 points and the presence of four scores ranging between 7 and 8 points. These data are noteworthy, as most scores are concentrated in the 8 to 10 point range.

On the other hand, about the formative assessment of conceptual knowledge related to WebQuest, the specific details are recorded in Table 4 and presented visually through a scatter plot in Figure 4.

In the formative assessment of conceptual knowledge, a minimum score of 5.17 points was recorded, while the maximum score reached 9.62 points. The average of 8.21 points reflects that, on average, students performed well in this dimension. However, the standard deviation of 0.89164 indicates that the scores are more widely dispersed around the mean. The asymmetry, with a value of -1.119, and the kurtosis of 1.283, denote a non-normal distribution with a longer left tail and a slight flattening in the central part of the distribution.

These data allow for a comparative analysis between the formative assessments of procedural and conceptual knowledge. Although the minimum and maximum values vary in both dimensions, the total range is similar, suggesting that both forms of knowledge are comparable. show variation within a similar range of scores. However, procedural knowledge shows a slightly higher average compared to conceptual knowledge, indicating that, on average, students have achieved a higher level of understanding in the procedural dimension. On the other hand, conceptual knowledge exhibits a higher standard deviation than procedural knowledge, suggesting that scores in conceptual knowledge are more dispersed around the mean than in procedural knowledge. In addition, both dimensions of knowledge show negative asymmetry,

Table 3: Statistical data from formative assessment of students' procedural knowledge in the design and development of WebQuests
Source: Prepared by the author

Descriptive statistics on students' procedural knowledge										
	N	Minimum	Max	Mean	Standard deviation	Variance	Skewness		Kurtosis	
							Statistic	Standard error	Statistical	Standard error
Procedural knowledge	104	5.79	10.00	9.1602	0.66527	0.443	-1.869	0.237	5.772	0.469

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doi: 10.18537/mskn.14.02.07

Table 4: Statistical data from formative assessment of students' conceptual knowledge of aspects related to WebQuest
Source: Prepared by the authors

Descriptive statistics on students' conceptual knowledge										
	N	Mini-mum	Maxi-mum	Mean	Standard deviation	Variance	Skewness		Kurtosis	
							Statistic	Standard error	Statistic	Standard error
Conceptual knowledge	104	5.17	9.62	8.2134	0.89164	0.95	-1.119	0.237	1.283	0.469

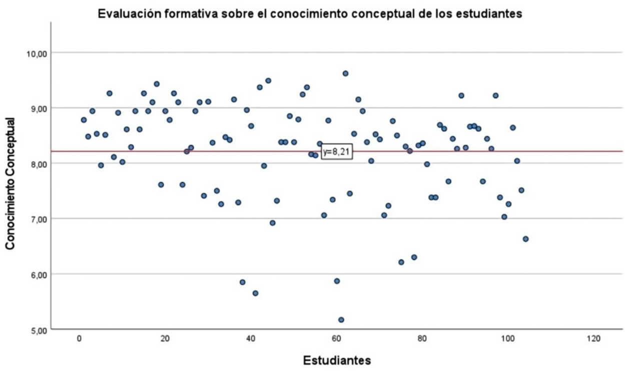

Figure 4: Scatter diagram of the assessment of conceptual knowledge on aspects related to WebQuest
Source: Own elaboration

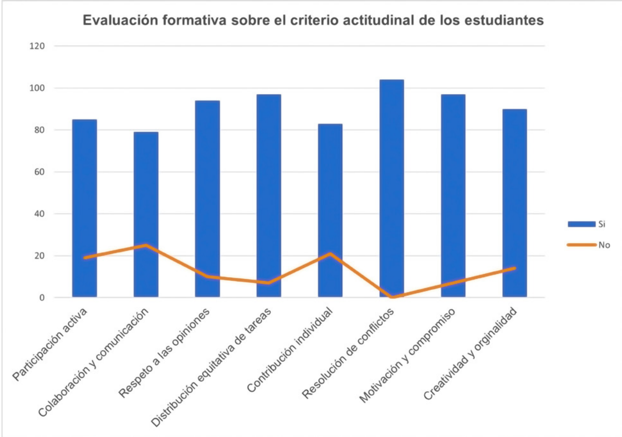

Figure 5: Representation of the assessment of attitudinal knowledge in the process of designing and developing the WebQuest
Source: Prepared by the author

indicating a long tail in the distribution of scores. However, this asymmetry is more pronounced in procedural knowledge than in conceptual knowledge.

In addition, data were collected using a checklist to assess the students' attitudinal component. These data are represented in a combined statistical graph using grouped bars and lines, created with Microsoft Excel software. This graph is presented in Figure 5 and provides a compelling visualization of the formative assessment results regarding the attitudinal dimension.

The data collected through the checklist reveal that a total of 89 students demonstrated a positive and participatory attitude in various aspects during the WebQuest design and development process. This finding suggests that students were engaged and enthusiastic about the WebQuest creation process. Notably, it was observed and documented that students participated actively in the process. In addition, 79 of them exhibited effective collaboration and communication among team members, underscoring the importance of interaction among group members in achieving shared goals.

In terms of teamwork dynamics, 94 students showed genuine respect for their peers' opinions, reflecting a harmonious and receptive work environment. In addition, 97 students contributed to ensuring an equitable distribution of tasks, demonstrating a solid understanding of the importance of fairness in the assignment of responsibilities and distribution of workload.

It is also noteworthy that 83 students contributed individually to the development of the final product, emphasizing the individual involvement of each team member in the project. Furthermore, 90 students proposed creative and original ideas for the design and development of the WebQuest, indicating the diversity of approaches and perspectives in the process.

In terms of motivation and commitment, 97 of the students were highly motivated and committed to achieving the objectives of the collaborative work. This suggests that they had a solid understanding of the objectives and were willing to work together to achieve them. Furthermore, it is important to note that when conflicts arose, all students were able to address them constructively, demonstrating conflict resolution skills within the group.

4. Discussion

The data collected sheds light on the difference in the level of knowledge between the procedural and conceptual dimensions. It is observed that students have more robust knowledge in the procedural dimension, while scores in the conceptual dimension tend to show greater variability around the mean. Although both dimensions show a similar distribution in terms of asymmetry, it is clear that WebQuest favors the development of procedural knowledge to a greater extent than conceptual knowledge. Students obtain higher and more consistent average scores in the procedural domain, suggesting that they are acquiring a solid understanding of how to carry out WebQuest-related procedures through the "learning by doing" approach. On the other hand, in conceptual knowledge, a lower average value and variability in scores are observed, indicating a wider range of responses and levels of understanding in this dimension.

About conceptual knowledge, the data show that students have achieved an adequate level of understanding in terms of the concepts and theory related to WebQuest. However, it is important to note that there may be variability in the depth of this understanding. WebQuest provides a framework conducive to compelling exploration and understanding of concepts, while also allowing students to apply their perspective and approach to certain conceptual aspects.

Regarding the formative assessment of attitudinal knowledge, the data reveal that students demonstrate a positive attitude toward teamwork, effective communication, and collaboration during the completion of the WebQuest. These results indicate effective group work dynamics and an active disposition toward the learning process. Students exhibit positive attitudes toward collaboration, communication, and constructive conflict resolution, which is essential given that the WebQuest involves team tasks. This encourages the adoption of participatory attitudes, respect, individual contribution, and problem-solving skills.

The results presented underscore the relevance of WebQuest in formative assessment in higher education. These findings are supported by previous research by various authors in the field, who have also documented the positive impact of WebQuest on the learning process of students and the development of essential skills. The data support the assertion by Sánchez Allende et al. (2019) regarding the positive impact of WebQuest on learning and skills development, highlighting its contribution to improving the learning process and developing skills that might otherwise be lacking.

In addition, the data indicate that WebQuest has expanded students' cognitive abilities by fostering analytical thinking and learning through the creation of digital tools, in line with the findings of Delgado et al. (2020). This simplifies pedagogical options and enhances cognitive abilities by stimulating analytical thinking and promoting relevant learning through the creation of digital tools.

On the other hand, the data underscore the importance of communication between teachers and students, as well as the development of cognitive skills in the digital environment, by the observations of Veloz et al. (2017). WebQuest offers a platform that allows for the cultivation of various skills through the web environment as a learning platform, facilitating communication between teachers and students, and promoting the development of cognitive skills.

In short, this research supports the notion that WebQuest empowers students to play an active role in their learning process, in line with the findings of Cacierra Jiménez (2020), who argues that WebQuest is a highly beneficial pedagogical tool that enables students to play an active role in constructing their knowledge. The use of this digital tool, both in collaborative and individual work, has a positive impact on students' attitudes and performance.

5. Conclusions

The combination of the clear structure of the WebQuest and its focus on self-directed research has proven to be a highly effective method for assessing students' ability to address both conceptual content and practical skills, as well as their participation in collaboration and effective communication among peers. This provides a comprehensive formative assessment that not only measures theoretical knowledge but also its applicability in real-world situations. WebQuest engages students in decision-making, problem-solving, and presenting results, which reinforces their autonomy and responsibility in the learning process.

The effectiveness of WebQuest as a formative assessment method is supported by positive indicators found in the evaluation of the three dimensions of knowledge: procedural, conceptual, and attitudinal. In higher education, WebQuest has emerged as a versatile and valuable tool for assessing students in multiple dimensions of learning. Its design and development highlight its ability to foster deep and active learning, as well as to measure the level of understanding and applicability of the concepts taught.

The positive results obtained in the formative assessment of procedural, conceptual, and attitudinal knowledge in the design and development of the WebQuest indicate that students understood the steps and workflow necessary to conduct a WebQuest effectively. They acquired a solid understanding of key concepts related to WebQuest, such as its definition, essential elements, and educational objectives. Furthermore, it shows that students adopted favorable attitudes toward the design and development of WebQuests as a teaching and learning method. This includes their appreciation of its usefulness, motivation to use it, and understanding of its potential impact on education as a formative assessment method.

This set of findings demonstrates that WebQuest has established itself as a highly effective formative assessment method that combines solid pedagogical elements with digital technology. Its focus on active exploration, application of concepts, and promotion of collaborative skills makes it a valuable tool for assessing students' comprehensive learning in a wide variety of disciplines and educational contexts. WebQuest allows students to work independently or in collaborative teams and makes it easier for teachers to collect data on student progress, level of understanding, and information search and synthesis skills. The constant feedback provided by formative assessment allows participants to receive specific and constructive comments on their performance, making it easier for them to adjust their approach and improve their learning. The assessment data obtained in the process encourages a holistic approach to student development, allowing multiple dimensions of learning to be addressed and evaluated at the same time, from the acquisition of practical and theoretical skills to the promotion of positive and collaborative attitudes. This contributes to a process of continuous improvement in the creation of an educational environment in which each student can reach their full potential.

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