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Students' perception of rural space in the Ibero-American context: a social representation approach

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ABSTRACT

Rural space has been a classical component of geography, which forms part of a number of educational innovation projects in Latin America. It is related to a social representation, and it is sometimes seen as a homogeneous space, as nature with certain idealization regarding territorial reality. The objective of this study was to explore the perception of rural areas by 600 students (from Brazil, Colombia, and Spain) via their sketch maps in order to determine their level of geographic literacy. The quantitative analysis of psychometric properties allowed us to reveal similarities and differences in the students' perceptions. The results demonstrated that there was an idealized global awareness of rural space, which hinders geographic literacy levels from understanding social problems associated with rurality. The research proposes suggestions to incorporate geographic literacy into educational projects.

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Rural space; educational projects; social representation; sketch maps; geographic literacy

Introduction

Teaching rural space encompasses the perspective of change that globalization processes have brought about in rural areas and allows us to reflect on the contrasts and inequalities in those communities worldwide (Clope et al., 2006; Macía et al., 2019). To achieve that, teachers should stimulate students' interest in the basic concepts of the subject, in this case, rural geography, and thus contribute to the geographic literacy of citizens. This means that they should teach how to think about geographical space in order to develop critical consciousness or geographical awareness (Ortega & Pagès, 2021) and how to decipher people's location, which is especially important for high school students.

On a global scale, geographic literacy is one of the prominent skills recommended by the International Geographical Union (IGU, 2016) for students to develop critical thinking. To achieve this goal, learners must be prepared to use different spatial representation tools to help them make geographical decisions and better understand the relationship between people and

territories. In terms of attitude, students would need to learn to live sustainably and contribute to future action. Geographic information, which currently can be received through various media, has become as important as school education. A number of studies, however, are not concerned with students' perception of rural space but rather focus on students' perception of the world and the development of cartographic skills (Bascom, 2011; Comenetz, 2005; Rédep et al., 2012; Vujakovic et al., 2018).

Little research has been conducted on how to teach geography in the Ibero-American context (Castellar et al., 2021). Above all, geography teaching aims to form democratic citizenship based on the interpretation of reality, helping students to think and develop alternatives that would contribute to solving social and environmental problems (García Pérez, 2021). This research promotes teaching about rural space so that high school students could receive training in values such as social justice and sustainability through geographical awareness (Ortega & Pagès, 2021). This goal has already been marked in the previous decades (Jerez, 2012; Marrón et al., 2007), and it is related to what the Organization for Economic Cooperation and Development (OECD) proclaims when it presents a critical perspective and social commitment to the problems of today's world and the search for solutions (Payá, 2024).

In social science subjects, teaching rural space is based on a paradigm of opposition between the rural and the urban (Cloke, 2006), which has been reinforced by literature, arts, and social studies (Sunderland et al., 2022). This has implications that affect learners' geographic literacy, as rural space is closely linked to the civic education of high school students (Macía et al., 2019).

In spite of some studies that were conducted in this area on an international level, more research is needed (Ruiz et al., 2017). In secondary education textbooks, the content associated with rurality appears separated from that corresponding to urban spaces, which restricts the understanding of some processes, such as urbanization towards peripheral areas, demographic aging, and foreign immigration (Esparcia, 2012). In the Ibero-American textbooks, the contents offered to memorize are conservative (Tonini et al., 2015), which, in the case of rural space, provides an economic vision that reduces it to the study of the primary sector activities (Armas et al., 2018; Morón & Morón, 2019; Sánchez, 1998).

This separation between the rural and the urban is a result of the social representation of rurality that confronts both spaces and their lifestyles, granting positive values towards the rural, despite the fact that the trend of moving from the countryside to the city continues (Entrena, 1998; Öhrn & Beach, 2019). This virtual representation contains environmental and other values associated with calm and peaceful lifestyles, which only exist in social imagination (Williams, 2001). That is to say, the naturalness, tranquillity, and isolation of rural spaces influence a symbolic perception of rural space among the younger population (Hillyard & Bagley, 2015; Pérez & Sánchez, 2007).

Debates in the Ibero-American Geoforum of Education, Geography, and Society have revealed that the didactic contents of rural geography were relevant to the curricular frameworks of Brazil, Colombia, and Spain (Rodríguez et al., 2019), which is why those countries were selected for this study. Moreover, this field is the one with the greatest tradition in geography, and it has experienced great transversality in territorial planning in recent decades (Lois-González et al., 2022). Added to this are the didactic possibilities of rural landscape studies, which are related to citizens' interest in community development, rural tourism, and the role of women in the development of rural areas. The didactic challenge consists of dealing with the students' critical abilities in relation to the information received through social media when the countryside is presented as a natural and serene space, not exempt from an idealized component that drifts apart the problematic social experience in those areas (García Monteagudo, 2021).

The quantitative analysis of sketch maps provided by 600 high school students from Brazil, Colombia, and Spain aimed to determine whether their perception promoted geographic literacy and supported critical learning about rural areas. The participants were selected from the Ibero-American countries most involved in the debates on rural education in the Ibero-American Geoforum on Education, Geography, and Society, taking into account their belonging to rural, peri-urban, and urban areas. Consequently, the following General Research Question (GRQ) was stated: "What influence does the representation of rural areas have on geographic literacy (based on Ibero-American students' sketch maps)?" The results on rural landscapes were divided into three categories; the similarities and differences between the sketch maps were interpreted according to the participants' geographical origin.

The significance of this research is shaped by a number of factors. The primary objective of this study is to explore the impact of social representations on the promotion of geographic literacy among students. In light of the insufficiency of international studies that have addressed the teaching of rurality from a geographic literacy perspective, this study represents a significant contribution to the field. Secondly, it offers insights into the training of students in geographic literacy competencies and skills, drawing upon guidelines from international programs such as the OECD. Thirdly, it offers guidance to educators on the integration of geographical representations within their educational projects, with the objective of reinforcing geographic literacy.

Literature review

Geographic literacy: the promotion of geographical thinking in educational projects on rurality

In order to prompt critical thinking about this idealized representation of the rural, it is essential to structure geographical thinking in cognitive skills and in

spatial knowledge, thereby producing new forms of knowledge about the world in secondary education (Araya Palacios & Cavalcanti, 2018; De Miguel, 2019). It is recommended that teachers integrate meta-concepts and procedural and attitudinal knowledge into their projects, thereby facilitating the critical teaching of the subject matter (Bouwman & Béneker, 2018; Flores et al., 2023; Maude, 2020). Among those first-order concepts, the Canadian tradition points out six: “spatial importance,” “patterns and trends,” “interrelationships,” “geographic perspective,” “evidence and interpretation,” and “geographical judgment” (Case & Wearing, 2016). Regarding geographical thinking skills in the Ibero-American context, studies on student training were collected in Portugal (Claudino & Mendes, 2021), Brazil (Callai & Cavalcanti, 2023; Duarte et al., 2021), and Chile (Araya Palacios & Cavalcanti, 2018; Llancavil & González, 2021). The contrast between the two paradigms is the spatial perspective of the Canadian standards and geo-literacy for the cases of Portugal, Brazil and Chile.

Some innovative projects on rurality were approached from the educational sector in a number of countries. The interdisciplinary project on teaching rural space by juxtaposing literary and artistic content was conducted in the United States program PACERS (San Pedro & López, 2017). In Argentina, rural employment was studied by pre-service teachers as part of projects in geography didactics at the Universidad del Litoral, Coastal University (D’Angelo & Lossío, 2011). In Chile, the focus was placed on the local community through educational projects with problem-based learning, which helped to identify controversial situations in rural schools and then develop pedagogical strategies to promote active citizenship (Mora-Olate, 2021). The European project “A Ponte” enhanced collaboration between teachers and students in rural areas in northern Portugal and Galicia by providing material and organizational resources. It addressed the specific problems of secondary education in rural areas and assessed the impact of new technologies (Macía et al., 2019).

In those educational innovation projects, students had to learn the basic concepts of geography and achieve a good level of geographic literacy (Ortega & Pagès, 2021). In relation to rurality, that meant teaching rural space and promoting critical and social awareness (ecological, productive, and residential) about those areas nowadays (Hudault, 2011). Geographic literacy, or decoding people’s spatial reality, was taught via the use of spatial representation resources (maps, photographs, sketch maps), which benefitted geographical decision-making (Misheck et al., 2013; Rédep et al., 2012), in other words favoring critical thinking to live sustainably on a local and global scale. Those principles implied classroom techniques and experiences to work on social justice and sustainability, which would affect rural space. Thus, geographic literacy, the ability to understand, process, and use spatial information, involves two complementary skills: geographical knowledge and geo-spatial identification.

The items that decipher the representation of rurality: concepts and skills to promote geographic literacy

Geographical knowledge of rurality should be presented to secondary education students based on key concepts or meta-concepts, such as landscape, which is subject to a social representation. Confusion may be caused over the basic concepts, such as depopulation or rural exodus, or denial that rural areas experienced as the negative consequence of globalization (Lockie et al., 2006). That vision of the rural world as less developed contrasts with the problem of agrochemicals in some Latin American countries as well as the issue of tourist sites in some rural areas (Naranjo & de los Martínez, 2022).

The geo-spatial identification of rurality combines geographical concepts and skills that affect spatial reasoning. Those are related to the Canadian (Case & Wearing, 2016) or the Anglo-Saxon tradition of Gersmehl (2005). The latter is based on the principles of interaction, interconnection, and inferences as proposed by the *Global Literacy Survey* (Milner, 2011). Both models aimed to achieve a level of geographic literacy that would allow a critical understanding of geography in relation to natural resources and the development of citizenship (Hatice, 2017). To achieve geographic literacy, teachers should combine knowledge of the physical environment, map skills, and the main concepts of geography (Dikmenli, 2013). Principally, when teaching rural space, knowledge is organized in mental schemas, and information is acquired from different sources of information (Binimelis & Ordinas, 2022).

Perception is closely intertwined with social representations illustrated as traditions, experiences, and media information converge in the common-sense notion of space. A symbolic object that causes a stimulus will obtain the response in the form of social performance (Sammur et al., 2015). That behavior is reflected in space, especially because of the relationship between rural life and spatiality (Cloe, 2006). Landscape is the perceived domain of geography, but it should be understood as a filter that collects social representation and assembles different elements (experiences, values, attitudes, opinions) that can be evaluated together to approach the holistic knowledge of rural life from postulates close to the multifunctionality of rural territories.

With that preliminary information, our research was carried out in Maceió (Brazil), Bogotá (Colombia), and Valencia (Spain). It focused on the perception of rural space by high school students (15 years old) and its analysis. A multi-phase instrument was applied to understand aspects related to geographic literacy in educational projects. The specific aims were to diagnose the elements that intervene in the representation of rural areas in the process of geography teaching and, at the same time, establish guidelines to promote didactic strategies that would promote geographical thinking.

Thus, the hypothesis of this study was that the representation of rural areas as natural spaces made it difficult for students to reach an optimal level of geographic literacy (that would allow them to understand rurality and learn to

become global citizens). That hypothesis raised two Specific Research Questions (SRQs): SRQ1: What similarities and differences are there in the students' representation of rurality? SRQ2: How does the territorial context influence the perception of rurality? Overall, this work could be considered a niche approach to the representation of rurality in Ibero-America from the perspective of geographic literacy in high school. The first findings on teaching rural geography would lead to an action plan to improve citizenship training among students.

Method

Design

This study used a quantitative research approach with a nonexperimental, cross-sectional, descriptive-correlational design. In line with the method, we analyzed the psychometric properties of Ibero-American students' perception of rural space in Brazil, Colombia, and Spain. The instrument included sketch maps of the learners' perception of the rural areas.

Sample and the territorial context

The sample corresponded to non-probabilistic typology. The total number of participating students was 600, aged 15, from schools in Brazil, Colombia, and Spain. Those schools were selected taking into account the territorial distribution (200 students – in each of the three countries). We made sure that the data collected would be kept strictly confidential. Obtaining written parent or carer consent was organized by teachers in each of the schools.

Participating students in Colombia belonged to socioeconomic strata 1, 2, and 3 (inhabited by families with low economic income who benefited from subsidies) (Gamboa et al., 2021). In two of the schools, 60% of students were in stratum 1, families with the highest levels of deprivation in terms of employment and health insurance. In the case of Brazil, the participants lived in Maceió (Alagoas) and belonged to middle-income families (172,6 minimum monthly wage in 2021). In Spain (Valencian Community), the participants proceeded from families with average income (965 minimum monthly wage in 2021) and resided in rural, peri-urban, and urban areas according to the criteria of the Territorial Strategy of the Valencian Community 2030 (Generalitat Valenciana, 2024). The majority of them belonged to the “100 territorial level,” an altitude of 100 meters above sea level for coastal and urban territories.

Instrument

We developed the Scale of Perception of Rural Space among Ibero-American Students (SPRS), which was based on a model from previous studies analyzing the perception of rural areas (Caurín et al., 2012; Öhrn & Beach, 2019), their

function according to the 1996 European Charter for Rural Areas (Hudault, 2011), and sustainable education (Granados & Medir, 2021). The final version of the instrument consisted of 13 items grouped into three correlated factors. The format was a Likert-type survey methodology (Denessen et al., 2022; Likert, 1932) with five response options tailored by our team: never, mostly no; occasionally yes-occasionally no, mostly yes, and always.

Procedure

The procedure consisted of several phases. First, we did a theoretical and methodological review to design the measuring instrument. Secondly, we proceeded to develop 60 items to evaluate three dimensions of rural space perception: ecological landscape (30 items), cultivated landscape (18 items), and residential landscape (12 items). In the third phase, the survey instrument was validated by nine university professors specialized in two areas ($n = 5$, expertise in perception and social representation; $n = 4$, expertise in rural didactics). Consequently, changes were made to some items that were incorporated in the pilot test. This pilot survey (fourth phase) was answered by 70 students, and the results led to some changes in the designed items. In the fifth phase, the scale was used with 600 students (mentioned above). In the sixth phase, a series of t-tests were performed to compare the mean scores in the groups with the lowest and highest scores (31% in both cases) obtained for each item. In the seventh phase, the instrument was validated using an exploratory factor analysis for the first half of the sample and a confirmatory factor analysis for the second half. The findings were included in the results section.

Finally, calculations such as the reliability of scales, means, and frequencies were performed. The detection of differences in perception of rural space per school year (three schools for the academic year 2021–2022) was calculated using a one-way analysis of variance (ANOVA), while the t-test was used to detect differences by gender and country. Data was analyzed by IBM SPSS Statistics, 22.0. Initial results such as $KMO = 0.772$ and Barlett's test for sphericity ($p \leq 000$) showed that the model was appropriate.

Three stages were applied for the item selection process: (a) selection of items (rotations with a saturation of at least 0.65); (b) removing items with similar content; and (c) exclusion of items with the allowed saturation but with low congruence.

Based on the above references, three categories or first-order factors with an eigenvalue of 1 or higher emerged, explaining 65% of the total variance. The resulting items were divided into three categories: "ecological landscape," "cultivated landscape," and "residential landscape." Table 1 shows the items with saturations, similarities, variances, and the eigenvalue of each of the rotated items. Next, Structural Equation Modelling Software (EQS, version 6.1.) was used to perform an analysis to confirm the factor structure. The evaluated

Table 1. Relationship of factor, correlation, and variance loadings.

Categories	Items	Saturation	Correlational factors
Ecological landscape	Natural elements	0,783	0,768
	Predominance of natural elements Presence of some anthropic elements (homes, buildings ...)	0,767	0,817
	Sketch maps have a dual structure: homes in the centre and natural elements in the periphery	0,708	0,726
	Linear elements (trees, rivers ...) are combined with surfaces (lakes)	0,695	0,724
	Human representation is peripheral and decontextualized from sketch maps	0,681	0,756
	Any mention of economic activity is idealized	0,657	0,674
Cultivated landscape	Predominance of land lots and crop fields	0,743	0,733
	Agrarian elements are combined with some mention of human presence (homes, buildings ...)	0,759	0,808
	It can be observed that the people drawn are working in agricultural activities	0,718	0,786
	Agricultural activity stands apart from elements of nature	0,664	0,774
Residential landscape	The settlements (hamlets, villages, towns ...) are represented in a generic way	0,796	0,784
	Some details of a settlement can be observed (streets, buildings, squares ...)	0,766	0,793
	Natural environment is placed around the settlement unit	0,712	0,754

Note: Own elaboration.

model contained three independent factors with 6 items in the first factor, 4 in the second factor, and 3 in the third factor. Two other models with multiple correlated factors were also tested, and it was decided to eliminate some ambiguous items because they saturated the sample with at least two factors.

Several indicators were used to evaluate the goodness of fit, such as the chi-square X^2 , mean residuals (RMR), standardized residuals (RMSEA), the goodness of fit index (GFI), and the comparative fit index (CFI). Following del Carranza and Caldera (2018), the last four indices are the most commonly used and have the least sample size experience. To achieve an acceptable fit, the GFI and CFI values must exceed 0.90 (the better the fit, the higher the value), while the RMR value must be close to zero to achieve a good fit and below 0.10 to be considered acceptable. The RMSEA values must be less than 0.08 to achieve an acceptable fit (Peugh & Feldon, 2020), while the X^2 ratio has no significant meaning. The goodness-of-fit indices can be found in Table 2.

The results indicated that the model was suitable for 13 items, which was the highest possible fit of the related factors and slightly above the GFI value of 0.90. Cronbach's alpha was used to calculate the reliability of each factor in the instrument, yielding the following values: Ecological Landscape ($\alpha = 0.793$), Cultivated

Table 2. Goodness-of-fit indices for the predicted models.

Factor model	X^2 and P	CFI and GFI	RMR and RMSEA
1 factor	148.61 and 0.01	0.89 and 0.71	0.09 and 0.06
3 independent factors	419.28 and 0.02	0.78 and 0.75	0.68 and 0.12
3 correlated factors with 13 items	33.81 and 0.08	0.95 and 0.92	0.03 and 0.06

Note: Own elaboration.

Table 3. Synthesis of values related to rural perception.

Number of students (participants)	Minimum points	Maximum points	Mean	Standard deviation
600	1	5	3.78	0.815

Note: Own elaboration.

Landscape ($\alpha = 0.914$), and Residential Landscape ($\alpha = 0.887$). Overall, the results showed the optimal reliability of the measurement scale, which allowed us to proceed.

Results

Among the first results, [Table 3](#) shows the descriptive statistics (mean and standard deviation), whose values demonstrate that the perception of rural among the 600 students from the three Latin American countries corresponds to an optimal range (mean of 3.78) so it is not possible to state if there is a very positive or clearly negative opinion among those students. The parametric tests were performed for normality and homoscedasticity analyses.

Application of the Kolmogorov test showed that the perception of the rural space variable corresponded to a normal probability distribution. Levene statistics showed that there was homoscedasticity between the variances in the groups of students. Therefore, the first results of students' perception of rurality demonstrated a certain homogeneity in the contents, which led us to consider other variables to understand the factors that structure this spatial representation.

To determine differences in perception of rural areas by students' gender ([Table 4](#)), the t-test was used. The results of $t(300) = -1.646$ y $p = 0.835$ revealed that there were no significant differences in the perception of rural space between male and female students. The higher number of male students in comparison to female students did not interfere with the overall perception of rurality.

With respect to the perception of rural space during the three trimesters of the 2021–2022 school year ([Table 5](#)), the ANOVA showed that there was no noticeable gap: $F(3316) = 0.731$ y $p = 0.814$. In the second trimester the mean values were higher compared to the other two. The first trimester was the longest in terms of the teaching period and coincided with the curricular planning in the three countries, especially in Colombia and Spain. In contrast, the third trimester was the one with the greatest differences in terms of the schooling period since it marked the start of school for Brazil and the end of the school year for Spain.

Table 4. Descriptive statistics measuring perception of APS.

Gender	Students	Mean	Standard deviation
Male	330	3.43	1.117
Female	270	3.86	0.917

Note: Own elaboration.

Table 5. Descriptive statistics measuring the perception of rural space per trimester.

Trimester	Students	Mean	Standard deviation
First (September to December 2021)	200	3.64	1.017
Second (January to March 2022)	200	3.89	0.915
Third (April to June 2022)	200	3.61	0.943
Overall	600	3.78	0.815

Note: Own elaboration.

Table 6. Descriptive statistics measuring the perception of rural space by country.

Countries	Students	Mean	Standard deviation
Brazil	200	3.86	0.914
Colombia	200	3.61	0.935
Spain	200	3.74	0.903

Note: Own elaboration.

Finally, the perception of rural space in different countries (Brazil, Colombia, and Spain) was determined using t Student (Table 6). That test showed that there were significant differences, $t(600) = -2315$ y $p = 0.041$. The mean value was higher for Brazil, which produced a gap compared to Colombia, whose number was the lowest among the three countries. In the case of Spain, the standard deviation was higher than in the other two countries, although there was greater congruence between both statistics (mean and standard deviation).

With reference to the contents of sketch maps, the pictures were classified by category, taking into account the geographical origin of students (Figure 1: Classification of sketch maps according to the geographical origin of the students).

Fifty-three percent (53%) of sketch maps belonged to the ecological landscape category, with high participation among students from Brazil (49.5% of the total sketch maps in this category). In the cultivated landscape category, students from Bogota represented almost 53% of the participants in that category, which

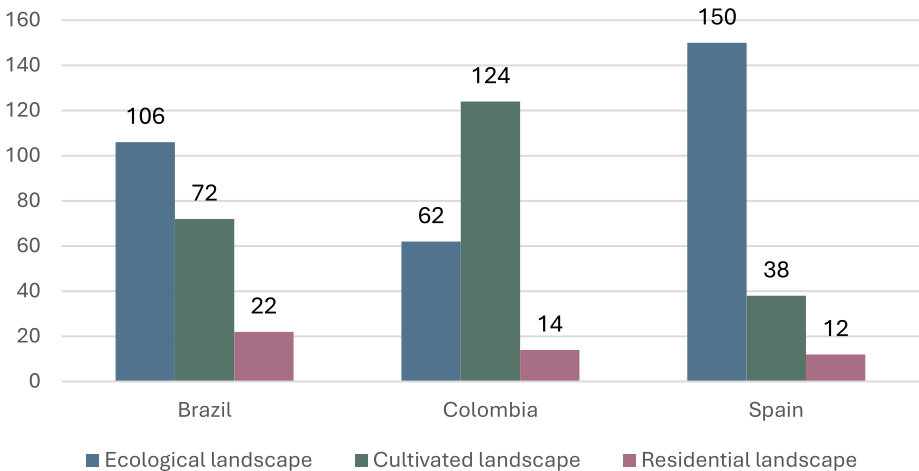


Figure 1. Classification of sketch maps according to the geographical origin of the students.

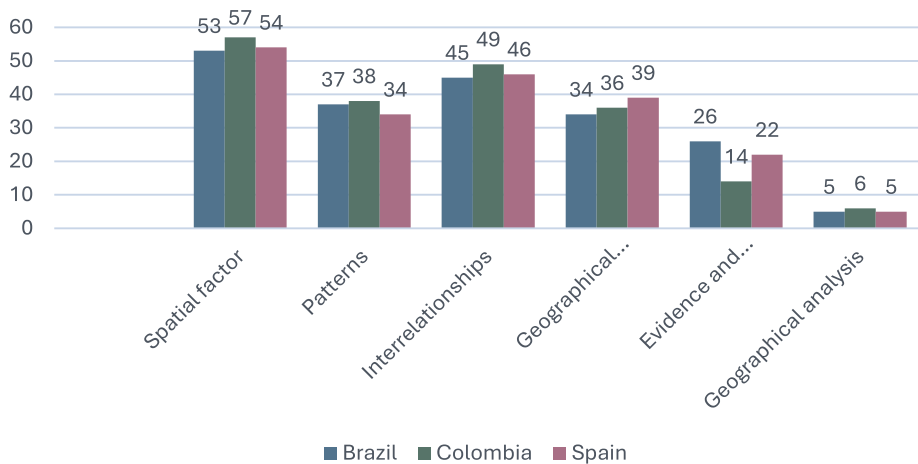


Figure 2. Classification of sketch maps according to geographic literacy among students.

represented 39% of those sketch maps in the three countries. With a greater difference from the first two categories, rural areas as residential landscapes represented only 8%, with slight differences between Spain and Colombia (sketch maps from Spanish students represented 25% of the total in that category).

Regarding the promotion of geographic literacy (Figure 2. Classification of sketch maps according to geographic literacy among students), the sketch maps showed that students expressed geographical thinking based on lower cognitive levels. A total of 68.8% of the sketch maps manifested competences related to spatiality, patterns, and interrelationships. Evidence, interpretation, and geographical analysis reached only 13%. The distribution by category in every country was roughly similar, although there were some distinctive features. Students from Brazil obtained better results in evidence and interpretation than learners in the other two countries, while Spain obtained higher values for geographic perspective. Colombian students experienced more difficulties in evidence – and interpretation competence compared to participants in Brazil or Spain.

Summarily, the results demonstrated rural spaces as natural areas with a low number of people who built and remodeled those territories. That was a collective representation, which was similar between the three countries. For that reason, it is necessary to continue comparing these findings with other studies dealing with students' geographic literacy.

Discussion

The study explored six hundred students' appreciation of rural space through their sketch maps in order to reveal their level of geographic literacy. The statistical calculations indicated some similarities and differences among the participants from Brazil, Colombia, and Spain.

First, the statistical analysis confirmed that the students' outcome was the product of a social representation of rurality. The global interpretation of results with an average that exceeded 3.5 points in a range of 5 confirmed the tendency towards a fairly homogeneous representation. The sketch maps collected coincided with other studies that analyzed rurality among high school students (García Monteagudo, 2021; Hillyard & Bagley, 2015; Pérez & Sánchez, 2007), evidencing a symbolic and natural image of those spaces. Landscape interpretation in this study reflected on the complexity in the representation of rurality, evidencing experiences, and cultural values established by Cloke (2006) and proclaimed by Morón and Morón (2019).

This homogeneous and naturalistic representation of rurality makes it difficult to reach sustainable citizenship since, as pointed out by Macía et al. (2019), it is necessary for learners to perceive rural space from a holistic and comprehensive perspective. In this study, the aspects that make up the representation are the natural elements and the predominance of values associated with tranquillity. Therefore, this static and stagnant perception of rurality differs from the necessary understanding of the diverse processes (social, economic, cultural ...) that are taking place in rural communities (Esparcia, 2012).

The uniformity of results achieved did not allow for marking differences among genders, which were demonstrated in research by Caurín et al. (2012). Sketch map categories obtained were compared to that study in terms of students' responsibility for the environment, which is an ascending process, from ideas collection to prevention and finally to action based on sustainability parameters. We confirmed that by our research, given that the sketch maps of Ibero-American students oscillated between a worldview of nature, economic activity, and residential functions. In terms of result interpretation, the responsibility was practically zero in the first category (ecological landscape) and higher in the third (residential landscape).

If we look at the categories outlined in this study separately, the sketch maps that represented ecological landscape were those that lacked a systemic approach to the territories and had no function beyond the contemplation of some natural values that are non-existent in the reality of rural space. This idealized worldview of rurality also appeared in the first phases of research by San Pedro and López (2017), where teaching staff managed to change the students' perception by promoting didactic environmental projects in the local communities. Therefore, environmental responsibility can be increased in order to achieve geographic literacy based on rurality.

In the category of cultivated landscape, sketch maps manifested an agrarian worldview of rurality. It was found that their representation did not contemplate the economic diversification of rural space since there was no industry or any mention of tourism. Interpretation of collected sketch maps reported similar content to stories and images in school textbooks about rurality, especially in the subject of social sciences. In those books, both sketch maps and

photographs identify agricultural production in rural areas as a distinctive element with respect to the activities in the cities (Tonini et al., 2015). That representation is concurrent with the primary sector and with other studies on teaching rural space in high school (Armas et al., 2018; Morón & Morón, 2019; Sánchez, 1998). D'Angelo and Lossío (2011), however, suggest reducing this economic representation of rurality in order to focus on the problems of people who work in rural areas.

In relation to the residential landscape category, there was a variable that was consistent with research conducted by Hillyard and Bagley (2015) that pointed to the difficulties in involving local communities in educational projects. Predominantly, sketch maps in our study did not demonstrate social problems in rural areas, as some other international studies did (Öhrn & Beach, 2019).

The RQ1 of this study was supported by RQ2, which sought to answer how the territorial context influenced the perception of rurality. Initially, sketch maps in the three countries showed a rural-urban drift with a representation that differed from the rural and the urban, with mostly idealized concepts that formed a social representation of rurality (Entrena, 1998; Williams, 2001). The descriptive statistics showed that sketch maps did not reveal differences in the representation of rurality by students' geographical origin. However, the differences were more significant in terms of geographic literacy acquired by students.

The influence of rurality representation on the learners' geographic literacy confirmed the hypothesis: the students did not reach optimal citizenship skills according to the requirements established by Ortega and Pagès (2021). This was one of the first relevant discoveries if we take into account that there was not enough research on teaching rural space in the Ibero-American area (Ruiz et al., 2017). The complexity of rural areas was evaluated by categories based on their trilogy of functions, i.e., ecological, productive, and residential (Hudault, 2011). Sketch maps represented mental schemas with information about rurality that had to be decoded to assess geographic literacy (Binimelis & Ordinas, 2022). Hardly any differences were found between the countries in the representation of rural areas, with the exception of the greater number of cultivated landscapes in the case of Colombian students compared to the ecological landscape in the case of Brazil and Spain. This was due to geographical competences, as Colombian students showed a greater understanding of context when interpreting evidence. However, we cannot affirm that an ability to understand natural resources and the development of citizenship was acquired by criteria established in Hatice's study (2017).

Even though a complex interpretation of geographical skills revealed similar trends between the three countries, showing that almost 60% of students had lower-level cognitive abilities. That skill deficit should be taught through a critical approach since the acquisition of higher-level cognitive skills (such as geographical analysis) favors geographical awareness and stimulates students'

thinking, as demonstrated in other studies on geographic literacy (Misheck et al., 2013; Rédep et al., 2012; Shobe & Banis, 2010).

Conclusion

This research contributes to the geographic literacy among Ibero-American students with regard to rural areas. It is, therefore, essential to align the postulates of geography as defined by the International Geographic Union (IGU, 2016) with the specific context of the Ibero-American region. Moreover, the objective is to encourage critical teaching about rural areas, which would facilitate students' geographical thinking and adhere to the guidelines set forth by international organizations such as the OECD. Given the aforementioned factors, the designed model aims to integrate the defining characteristics of geographic literacy within the Anglo-Saxon tradition with an interpretative approach to geographical meta-concepts, competences, and the associated case study. This integration is situated within the domain of spatiality and rurality. The model also examines the role of schools in the interpretation of rural spatiality, supplying the existing academic literature with new insights for educational practice.

This study offers recommendations for the teaching of rurality based on an understanding of its spatial dimensions. It contributes to the perspective of social commitment to the problems of today's world and promotes the search for solutions in accordance with the recent OECD guidelines (Payá, 2024). It was demonstrated that geographical knowledge about rurality is structured in mental schemas that reflect a social representation. Nevertheless, the study by Sammut et al. (2015) did not provide evidence that this has an impact on students' performance. Notwithstanding, teachers should pay attention to those representations and help students process the information that comes from the media, as it may compromise their degree of geographic literacy. The results of this study offer recommendations for geographic literacy education, consistent with the model put forth by Dikmenli (2013), which advocates a direct approach to teaching about rural areas. Consequently, an understanding of the environment can facilitate the reduction of simplistic representations of ecological landscapes. At the same time, the ability to interpret cartographic materials is essential for comprehending the complex characteristics of rural space. Finally, a critical approach to geography is fundamental. In essence, we identified the key elements of critical thinking that would enable learners to adopt a more sustainable lifestyle while preserving the distinctive character of rural territories, as proposed by Granados and Medir (2021).

To summarise, it is necessary to conduct further research in Ibero-American countries. More evidence on students' perception of rurality will reveal a multifaceted social representation that shapes the formation of global citizenship. Future research must illustrate the challenges and opportunities inherent to

educational initiatives. Finally, the interdisciplinary nature of geography and geographic literacy must provide a unified framework for addressing these challenges.

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