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"I have learned a lot of things about other neighborhoods": Secondary students as Linguistic Landscapes ethnographers

"He après moltes coses sobre altres barris": Estudiants de secundària com a etnògrafs del paisatge lingüístic

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Abstract

Linguistic Landscape (LL) has been recognized as a valuable tool by foreign language teachers that allows them to incorporate the "outside" world into the classroom (Kruszynska & Dolly, 2023). In this study, secondary school students, as ethnographers, investigated LL in their neighborhoods. Utilizing their critical thinking skills, they engaged with collected data and produced news report in which reflected on their ethnographic LL projects. The project prompted students to critically examine cultural practices from their own perspectives (Roberts et al., 2000).

This project empowered the participants to actively contribute to the construction of their own knowledge, rather than being passive observers. It also provided insights into the students' perspectives on the LL-based project. The findings indicate that LL-based tasks can serve as a powerful tool to enhance students' awareness of their surroundings' linguistic diversity and, if effectively utilized, can cultivate their critical and higher-order thinking skills.

Keywords: Linguistic landscape; Students as ethnographers; Critical thinking skills; Higher order thinking skills; Students' perspective

Resum

El paisatge lingüístic (PL) és considerat com una eina valuosa pels docents de llengües estrangeres, permetent-los integrar el món "extern" a l'aula (Kruszynska i Dolly, 2023). En aquest estudi, els estudiants de secundària van investigar el PL als seus barris. Utilitzant les seves habilitats de pensament crític, van interactuar amb les dades recopilades i van elaborar informes que reflexionaven sobre els seus projectes. El projecte va animar els estudiants a examinar críticament les pràctiques culturals des de les seves perspectives (Roberts et al., 2000).

Aquest projecte va capacitar els participants per contribuir activament a la construcció del seu coneixement, allunyant-se de ser observadors passius. També va proporcionar idees sobre les perspectives dels estudiants respecte al projecte, demostrant que les tasques basades en el PL poden millorar la consciència lingüística ambiental i, si s'utilitzen amb eficàcia, poden desenvolupar les seves habilitats de pensament crític i d'ordre superior.

Palabras clave: Paisatge lingüístic; Estudiants com a etnògrafs; Pensament crític; Habilitats de pensament d'ordre superior; Perspectiva dels estudiants

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INTRODUCTION[1]

In the twenty-first century (multimodal) text-saturated world, it is important for teachers to provide their students with reading practices that empower them to actively engage in meaning-making process that can be transferred beyond the classroom walls (Chern & Dooley, 2014). In today's multilingual world, students should not only be able to translate between languages, they should also be able to interpret cultural practices and navigate between the society's and their own norms and values, while being reflexive and critical about the process (Roberts, et al., 2000). To help achieve the above, a Linguistic Landscape (LL) project was implemented with the aim of helping secondary school students become active partners, co-researchers and ethnographers, through the construction of knowledge related to the linguistic diversity of their surroundings, based on reflection on data they collected. Furthermore, the project aimed to give students an opportunity to become responsible agents in the development of the higher order thinking skills, analyze, evaluate, and create, needed to perform the LL research project (Armstrong, 2010).

Numerous researchers have advocated for LL as a viable teaching approach, facilitating the cultivation of linguistic and intercultural sensitivity among students (Cenoz & Gorter, 2008; Elola & Prada, 2020; Gorter, 2006; Malinowski, 2015). Expanding upon this perspective, the teaching design intentionally integrated LL with the concept of students "becoming ethnographers." Drawing from Sayer's (2020) definition, which characterizes ethnography as "the study of a group's social and cultural practices from an insider's perspective [...] that utilizes observation, the ethnographer's direct engagement with the people she is studying" (p. 327), students were tasked with examining their own sociocultural practices and those of their surroundings. By instructing students to observe and document the LL of their neighbourhoods, the intention was for students to embody the role of ethnographers actively engaged in the knowledge-making process.

With these LL-pedagogical parameters in mind, this study aims to address the following research inquiries: Have the students exhibited development in critical thinking (CT) and higher order thinking skills (HOTS) through their participation in the LL project? What are the students' perceptions regarding their acquired knowledge and skills through the LL-based project?

[1] This work was carried out within the framework of the Doctorate in Education Program at the Autonomous University of Barcelona.

THEORETICAL BACKGROUND

For the purpose of this study, the definition of CT provided by Beyer (1985) is adopted, which characterizes it as "the process of evaluating the authenticity, accuracy, and/or worth of claims and arguments" (p. 271). This definition draws on Dewey's (1916, in Kuhn, 1999, p. 21) early conceptualization of CT in education, describing it as "a process that begins with a problem and ends with a solution and self-interpretation" (Kuhn, 1999, p. 21). This concept is further supported by other scholars, including Kurfiss (1988), Pithers & Soden (2000), and Alsaleh (2020), who highlight student engagement with problem-solving as crucial for promoting CT. The higher-order thinking skills (HOTS) stem from Bloom's Taxonomy, as adapted and updated by Armstrong (2010), encompassing the abilities to analyze, evaluate, and create. The following definitions for each HOTS category serve as a rationale for their relevance to research projects: analyze involves drawing connections among ideas, evaluate requires justifying a stand or decision, and create involves producing new or original work. The HOTS framework is employed to operationalize CT in this study.

Figure 1. Higher thinking skills (based on Bloom's Taxonomy)

Since its initial definition by Landry & Bourhis (1997), the term Linguistic Landscape has undergone significant changes in how it is conceptualized and utilized by scholars and researchers from various interdisciplinary fields. Cenoz & Gorter (2008) are seen as pioneers who recognized the value of LL in language acquisition, and Malinowski (2015) proposed that "linguistic landscape research offers valuable tools for pedagogical application" (p. 1). In recent years, more researchers and practitioners have acknowledged LL as a beneficial tool in pedagogical applications, particularly in foreign language classrooms (Gorter 2018; Malinowski et al., 2020; Melo-Pfeifer, 2023; Solmaz et al., 2021; Ying 2019).

In EFL classrooms, LL has been used to provide students with authentic English input, as exemplified by Sayer's (2010) study in Oaxaca, Mexico, Rowland's (2013) in Chiba-shi, Japan, and Chern & Dooley's (2014) in Taipei, Taiwan. In these studies, LL-based activities were employed to investigate the prevalence of English signs in the city, allowing students to become ethnographers. As Elola & Prada (2020) point out, LL-based project offers a "toolkit" for students to augment their sociolinguistic awareness, foster a critical perspective on local and community languages in their region, and comprehend how these languages coexist with official or dominant languages (p. 223).

LL-based projects have also been employed to promote CT skills in students. Lozano et al. (2020) demonstrated that through the use of LL-based projects students were required to identify the text's purpose, interpret the perspectives and intentions of its creators, and situate the text in its sociocultural context. Arguably, these actions are related to CT and HOTS as all of them require students to analyze, evaluate collected data effectively in order to then create their own piece of work. LL projects enable individuals to engage with texts in a thoughtful and nuanced manner, promoting a deeper understanding of the content and its wider implications. Therefore, this study proposes that LL can be used to promote HOTS and CT skills, which are essential in all areas of learning, including the foreign language classroom (Kruszynska & Dooly, 2023).

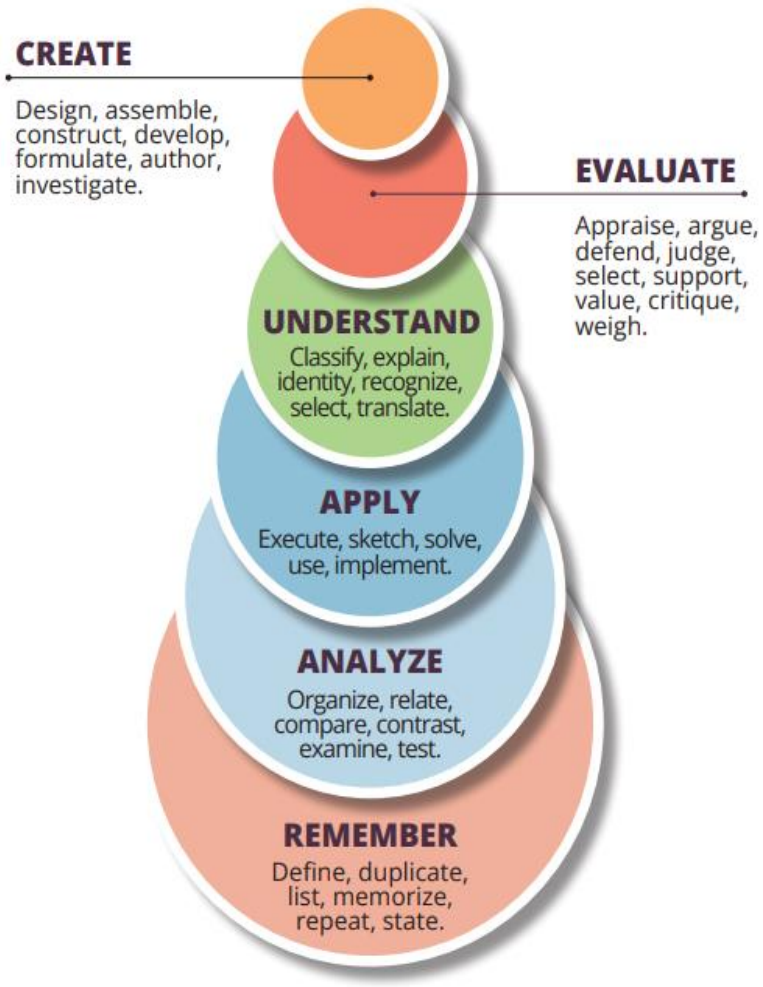
METHODOLOGY

This study is designed as a practitioner's research, which is carried out by an individual who assumes dual roles as both a practitioner and researcher with the aim of enhancing and improving the practice in question (Campbell & Groundwater-Smith, 2009). Practitioner's research can help to reduce the gap between research teams and their subjects, and between theory and practice, and ensure a more equitable and balanced research while providing answers to issues that arise in practice (Nussbaum, 2017).

For analysis, the present study employs Silbey's (2021a) adapted version of Grounded Theory, in which "the theory is built ostensibly from ground up (relying entirely on the data)". This approach involves compiling empirical evidence, such as observations, respondents' statements, and using them to make generalizations and hypothesis. This practice allows the use of documentary sources, such as students' news reports, along with using relevant concepts from the existing literature as possible codes (Silbey, 2021b). Tavory & Timmermans (2014) have suggested

that certain code categories may emerge from the data itself, while others may be imported from external sources, if relevant to the observed data. In this study, most of the codes used were derived from the students' news reports collected in March 2020. However, as the aim of this qualitative study is to examine the visibility of HOTS in the students' work, an adapted version of Bloom's Taxonomy (Armstrong, 2010) was used to provide the researcher with preliminary categories or domains that could help identify different levels of cognition in the students' output. Furthermore, Bloom's Taxonomy is a useful tool for exploring CT, as it is an integral part of both higher and lower order thinking. Applying these domains to the documentation of the students' output as they carry out LL project can help determine what HOTS the students are using while working on the LL-based activities.

Figure 2. Descriptors of imported concepts for analysis (based on Bloom's Taxonomy)



CONTEXT

Participants

The research was carried out at a private secondary school located in a medium-sized town outside Barcelona, Spain. The study included twenty-two participants, eleven male and eleven female students, who were in their third year of obligatory secondary education, aged between 14 and 15 years old. These students were selected from five different classes and assigned to the English class according to their language proficiency level, which ranged from B1 to B2 (CEFR[2]). The students attended four 50-minute English lessons per week, taught by the author who was their regular English teacher during the data collection period.

The teaching plan for the first and second terms included LL-based activities, consisting of both formative and summative tasks. These activities were diverse, ranging from oral and written tasks, including the use of technology such as voice recording and videos, as well as drawing on paper. The tasks were conducted both individually and in groups.

The students were informed at the beginning of the study that their work might be analyzed for research purposes, and written parental permission was obtained prior to the study. It was made clear to students and parents that the results of study, based on the student work, would have no impact on their final marks. Students were also informed that they could withdraw their consent to have their work included at any time (without the need to inform their parents) and that the participation or non-participation would have no effect on their final marks.

Pedagogical activities that led to data compilation

The students participated in LL activities, which are detailed below. The learning objectives (LO) were set using Bloom's Taxonomy's measurable verbs, which included: understand, evaluate, and create. These objectives were incorporated into the LL activities to enhance critical and higher order thinking skills. The measurable verbs used as LOs were as follows:

[2] The Common European Framework of Reference for Languages

1. Understand: Locate and describe LL data collected in the neighborhood.

Task: Students individually collect pictures representing different languages that they discovered in their neighborhoods. In the lesson they describe what they have found to their colleagues with whom they prepare Activity 2.

2. Create: Design a video assembling all group members' LL findings.

Task: Students, in groups, prepare videos in which they construct a LL journey, using the photographs they have taken in the previous activity, to their neighborhoods.

3. Evaluate: Judge the LL project

Task: Students, individually, write a news report in which they describe the LL project (both points 1 & 2), select the positive and negative points justifying their choices.

Description of data – news reports

Extensive data were collected, however only the written news reports (LL Activity 3), in which students described their findings related to their neighborhoods' linguistic landscape (LL Activity 1 & 2) are analyzed in this paper. In this task, although the students were not expected to adopt a fully critical perspective as professional ethnographers, they were required to reflect on their LL activities and, therefore, show their use of critical and higher-order thinking skills on different cognitive levels. This summative task was performed individually, and students were given 50 minutes to complete it. Additionally, the analysis of these data enabled the gathering of the students' personal opinions on the strengths and weaknesses of the LL project, as well as their insights into what they have learned through it.

To analyze the news reports' content, the author 1) coded each student's work following Silbey's (2021a, 2021b) adaptation of Grounded Theory, 2) created a code book in which she defined the codes used; see appendix, 3) applied measurable verbs or domains (based on adapted Bloom's Taxonomy): remember, understand, apply, analyze, evaluate, and create to the codes.

The tension between the researcher and the research subject must be acknowledged as both the research and the implementation of the project was done by the same person. The author is aware that this approach has both advantages and disadvantages. On the one hand, being a classroom teacher, the researcher

knew the students well and might have found it easier to understand their ways of expressing themselves in the target language without being affected by the typical mistakes made by foreign language learners at the B1/B2 level. On the other hand, she might have over-interpreted the data available to her by reading too much into it. To mitigate this, the author anonymized the data before analyzing it and conducted the analysis a year later when she was no longer teaching this specific group of students, thereby reducing the likelihood of being influenced by her relationship with them.

DEVELOPMENT IN CT AND HOTS: ANALYSIS AND RESULTS FROM NEWS REPORTS DATASET

Figure 3, below, demonstrates the percentage of students that have performed tasks related to adapted Bloom's Taxonomy measurable verbs (domains). Overall, students have exhibited learning in every domain except for evaluate.

Figure 3. Percentage of students performing tasks per each domain (Bloom's measurable verb)

The three domains (remember, understand, and apply), considered the lower order thinking skills within the HOTS, have been performed by 67% of the students (the total from the three domains mentioned before), while the more cognitively demanding domains (analyze and create) have been reached by 33% (again the total of both domains). Among the domains, the most frequently occurring ones in the students' texts are apply and remember (32% and 23% respectively), analyze (20%), while the least evident are understand (12%) and create (13%).

While it is not surprising that the activity within the domain (create) that is most cognitively challenging has been performed by a low number of students (12%), it is startling that the one related to the domain understand (cognitively one of the easiest) has been also performed by only 13% of the students. A plausible explanation for this occurrence might be that students focused on tasks demanding higher cognitive functions, as these constituted an integral part of the activity's instructions, necessitating students to reflect upon and analyse their personal experiences. Activities within the middle range of cognitive demand, analyze followed by apply, have been executed by the highest percentage of students (43%).

Table 1. Codes related to Bloom's Taxonomy measurable verbs (domains), the definitions and examples (quotes) from students' works

Bloom's Taxonomy domain	Code	Code's description	Example, quote, from students' news reports.
remember (recall facts and basic concepts)	languages	Names of languages students recalled and mentioned in their texts. Written the way students wrote them (even if incorrect spelling/name).	In Table 2 found below.
understand (explain ideas and basic concepts)	project description	The way students describe what the project consisted of, what its objective was.	'finding languages around our neighborhoods'; 'finding languages around our town'; 'making students discover the languages that they can find in their neighborhoods and then explaining these languages in a video.';
apply (use information and skills in new settings)	data type / data organization	Type of signs students photographed to obtain their data. The way students classified their data e.g. private, public; informative, cultural, advertisement etc.	'restaurants, car signs, flower and plans - were data we collected'; 'private signs because they are from a boss, like the owner [...] STOP sign is public because all the population should follow it';
	practice / learning	Different knowledge and skills that the project allowed students to learn and/or practice.	'I have learned a lot of things about other neighborhoods.'; 'We learned more languages and we got to research.'
	be attentive	The project's outcomes; what students learned about their neighborhoods' LL. What students needed in order to fulfil the project.	'Many people could think that in their neighborhoods they could only find two or three languages, but I have to tell them that it is not true.'
analyze (draw connections among ideas)	self-question/why so many languages	Questions, related to quantity of languages found in their neighborhoods, students ask prompted by their projects' outcomes.	'So many languages in one neighborhood, why?'
	surprise	The effect the project had on students' perceptions of the neighborhoods, how they felt about the project's outcomes.	'We were all surprised that our languages were so identical because each of us took the pictures in different neighborhoods.'
	culture / language	Using the world culture as a synonym to language.	'There are lots of culture in a neighborhood [...], lots of restaurants from different cultures.'
create (formulate new questions about the reality based on the collected data)	creative thinking	Questions prompted by the collected data; observations.	Obviously most things of our day to day are in Catalan and Spanish as we live in Spain, Catalunya. It helps you realize that almost all of the public signs, cultural things are in the language that mostly spoken in our neighborhood.'; 'We need to add to our public signs different languages so that all people can understand our culture and have society without problems.'; 'The common languages of our country were on the public signs because they were directed to the local people and not to the foreigners.'

Table 1 summarizes the analysis process of students' news reports. Each code that has been assigned to different parts of students' texts is defined and then assigned to Bloom's Taxonomy domains (measurable verbs), followed by examples of students' quote from their work. The domain with the highest number of codes is analyze (4), followed by apply (2). Remember, understand, and create are each represented by one code category.

A generalized overview of the students' learning through the LL-based project in each domain is provided, along with student quotes that exemplify these categories. Organizing the data in this manner has enabled the author-researcher to examine the correlation between the students' output and the HOTS employed. Additionally, it has provided insight into the students' perspectives on the LL project which will be analyzed in point 5. In the next subsection 4.1, each code category will be explained as well as how it has been related to a specific domain in order to answer this study's first research question: Have the students exhibited development in CT and HOTS through their participation in the LL project?

Codes related to Bloom's Taxonomy domains (measurable verbs)

The code *languages* corresponds to the least cognitively demanding domain within Bloom's Taxonomy: remember which is defined by recalling facts and basic concepts. Table 2, below, provides a summary of languages and the number of students who included them in their news reports. It is important to note that the students recalled these languages from memory, and thus their inclusion in the news reports corresponds to this domain.

Table 2. Numerical overview of the languages students recalled collecting in their texts

	Language	N*		Language	N*
1.	Arabic	5	12.	Indian	2
2.	Argentino (Argentinian)	1	13.	Italian	15
3.	Basc (Basque)	3	14.	Japanese	19
4.	Braille	7	15.	Latin	1
5.	Brazilian	1	16.	Mexican	1
6.	Catalan	17	17.	Pakistani	1
7.	Chinese	16	17.	Portuguese	4
8.	Deutsch	1	18.	Romanian	2
9.	English	14	19.	Russian	7
10.	French	15	20.	Spanish	16
11.	German	13	21.	Turkish	5

* Number of students who mentioned it

Twenty-one students mentioned between three to thirteen languages in their texts, one student did not recall any. It is noteworthy that some students did not mention Catalan (five students) and Spanish (seven students) in their news reports, despite these two languages being the predominant languages in the area where the research was conducted and being mentioned by all students in their video presentations (Activity 2, point 3.2). On the other hand, all of them mentioned Japanese in their written texts. Both are interesting points for further research.

It is worth mentioning that certain languages, such as Argentinian and Mexican Spanish, were renamed by some students as "Argentinto" and "Mexican", respectively. Furthermore, one student used "Deutsch" instead of the English translation for German, and another used the Catalan "basc" instead of the English or Spanish equivalents for this language, "Basque" or "vasco," respectively. Additionally, two students used "Pakistani" and "Indian" to refer to the languages spoken in those countries, rather than using the specific names of the languages.

The code *project description* is linked to the domain of understand as it denotes those parts of the students' news reports where they elucidated the objectives and implementation of the project in their own words. It is surprising to note that only eight students (12%) included a description of the project in their news reports, considering that all learners participated in the LL activities that culminated in the production of the written text. One possible explanation for this is that the intended audience for the news reports was the school community, and students may have assumed that the readers had a general understanding of the project.

There were two codes in the apply domain: *data type / data organization*, which pertain to the various types of signs that students photographed in order to obtain their data, or the manner in which they organized their data, such as classifying them as private, public, informative, cultural, advertisement, etc. The other code is *practice / learning*, which pertains to the diverse knowledge and skills that the project enabled students to learn and/or practice. These domains have been accomplished by 23% of students, with fifteen students delineating their data or the way in which they organized it, while four students highlighted the knowledge and/or skills they had gained as a result of the LL project.

The domain of analyze is denoted by the highest number of codes (4): 1. *self-question/why so many languages; 2. be attentive; 3. surprise*; and 4. *culture language*. 1. Three students questioned, and/or referred to quantity of languages

found in their neighborhoods, due to their projects' outcomes. 2. Nine mentioned what they had learned about their neighborhoods' LL and/or they needed to do in order to fulfil the project. 3. Four shared the impact the project had on their perceptions of the neighborhoods, and/or how they felt about the project's outcomes. 4. Five students used the world culture in their texts as a synonym to language. It is worth noting that this domain belongs to the more cognitively demanding HOTS therefore may be seen as an example of LL-based activities promoting CT.

There are nine students (13%) who asked questions or made observations prompted by the collected LL data in their neighborhoods, this has been classified as *critical thinking* code and assigned to create domain (the most challenging within Bloom's Taxonomy). In order to formulate some of the observations, students needed to use CT - "evaluating the authenticity, accuracy, and/or worth of claims and arguments" (Beyer, 1985, p. 271). Students who generated questions based on the data they had collected needed to utilize critical thinking skills.

STUDENTS' PERSPECTIVES ON THE LL-BASED PROJECT

In this section, quotes from students' texts will be analyzed to try to find answer to the paper's second research question: What are the students' perceptions regarding their acquired knowledge and skills through the LL-based project?

Table 3 presents practiced and/or developed skills that students implicitly or explicitly identified in their news reports.

According to the students, the LL-based project facilitated both explicit and implicit skill development. Explicitly, students engaged in oral communication practice (Student 1), research (Students 7, 8, 9, 10, and 11), and technology use in explaining findings through video presentations (Student 9).

Implicitly, critical thinking was evident as students (2, 3, and 4) questioned and analyzed linguistic diversity, justifying the project's significance. Organizing and classifying information emerged through observations (Student 5), and students displayed analytical skills in discerning linguistic features (Student 6).

In essence, the LL project provided a comprehensive learning experience, explicitly emphasizing oral communication, research and technology skills, while fostering critical thinking, justification, and linguistic analysis implicitly.

Table 3. Students' practiced/developed skills during LL-based project

Student	Quote	Skill	Explicit/ implicit
1	'it is a good way to **practise speaking**'	oral communication	explicit
2	"why are they so many languages in a street?"	critical thinking	implicit
3	'So many languages in one neighborhood, why?'	critical thinking	implicit
4	'The question is why there are so many languages in our neighbourhoods? Due to connectivity between countries and the advanced technology, this causes the explosion and exchange or cultures. This is causing unemployment, economic, social problems, environmental problems, but especially cultural problems because there are cultures that are disappearing. Will we live in a world without cultural variety? Will we be able to live again in a world full of cultures?'	justify critical thinking	implicit implicit
5	'Spanish flag - one of the most representative things of a country, kebab for Turkish, pizza for Italian, sushi place for Japanese - food being also a very representative thing of a country or culture.' 'Most of the languages are from Europe which makes sense because we live in Europe, if we lived in another country it would have been quite different.'	organize/ classify justify	implicit implicit
6	'Häagen-Dazs doesn't belong to any language but it has the ä in German'	analyzing	implicit
7	'**finding** languages around our neighborhood'	research	explicit
8	'**finding** languages around our town'	research	explicit
9	'[this project] makes students discover the languages that they can **find** in their neighborhoods and then **explaining** these languages in a **video**.'	research explaining technology use	explicit explicit explicit
10	'**research** about language and cultural variety in our town'	research	explicit
11	'We learned **more languages** and we got to **research**.'	language use research	explicit explicit

In the realm of knowledge acquisition, fifteen participants exhibited proficiency in categorizing signs according to various classifications, including public and private, informative, commercial, and advertising, among others. Thirteen students cultivated an enhanced awareness of the linguistic and cultural diversity present in their respective neighborhoods. Table 4 provides a detailed depiction of the knowledge acquired by students through the Linguistic Landscape (LL)-based project, as outlined in their news reports.

Table 4. Students' acquired knowledge during LL-based project

Student	Quote	Knowledge
1	*'Doing this project has helped me to realize how culture is always around us and how important it is.'*	*awareness (languages, cultures)*
2	*'I have learned a lot of things about other neighbourhoods.'* 'poster, advertisements, shops, restaurants'	*awareness (languages, cultures)* data type
3	*'if you pay attention to look, you will know that there are many languages on the different posters'*	*awareness (languages, cultures)*
4	*'in this project we learned there are many different cultures and people don't know about it'* *'there are lots of culture in a neighborhood […], lots of restaurants from different cultures'* 'restaurants, car signs, flower and plans - were data we collected'	*awareness (languages, cultures)* data type
5	*'it let us learn how important it is to be international'*	*awareness (languages, cultures)*
6	*'when I and a group of friends started to investigate and pay more attention, we discovered all the variety of culture that our neighbourhoods had to offer.'* 'shops, restaurants, information signs'	*awareness (languages, cultures)* data type
7	*'Students said that it was a pretty experience to find and learn which languages were around our community.'* *'a project to invite students to learn more about the different cultures that they have around them.'*	*awareness (languages, cultures)*
8	*'By taking these photos we realized that our neighbourhoods were more international than we had thought.'* *'[there are] different cultures and languages'* 'cultural, informative, public like a stop sign, private like restaurants.'	*awareness (languages, cultures)* data type
9	*'Many people could think that in their neighbourhoods they could only find two or three languages, but I have to tell them that it is not true.'* 'the posters were from foreign private entities'	*awareness (languages, cultures)* data type
10	*'Walk through the streets and see influences from other cultures that is caused by explosion of cultures.'*	*awareness (languages, cultures)*
11	*'it was interesting to find languages that were from the other parts of the world near our house'* 'bars, restaurants, language schools adds or public signs'	*awareness (languages, cultures)* data type
12	*'there is a lot of languages and cultural representations here in our neighbourhood and it's really included in daily life of the residents'* 'restaurants, clothing stores, public signs or information spots'	*awareness (languages, cultures)* data type
13	*'It was really impressive to see how much language diversity we have around us.'* 'public signs, cultural things, private things such as banks, shops, restaurants.'	*awareness (languages, cultures)* data type
14	'car brand logos, restaurants, flags'	data type
15	'private signs because they are from a boss, like the owner […] STOP sign is public because all the population should follow it'	data type
16	'publicity of a private company or a street signal that is public'	data type
17	'public and private'	data type
18	'They were created by the government and they are used to indicate things to people.'	data type
19	'restaurants, sings of the street, some books we had at our houses.'	data type
20	'public and private signs'	data type

DISCUSSION

The analysis reveals that, overall, students engaged in this LL-based project actively participated as members of a learning community, adhering to the fundamental steps of ethnographic research outlined by Sayer (2020): "go out and collect data, analyse the data by organizing into themes, and then interpret by connecting back" to the task description (p. 342). Similarly, in alignment with Elola & Prada's (2020) study, learners involved in these LL activities developed heightened critical awareness towards the value of languages (p. 223). The analysis also corroborates Craig's (1995) argument that LL engagement can help students "become more socially aware," (p. 20) and in the words of Hernández-Martín & Skrandies (2020), they "get an opportunity to discover the unknown" through ethnographic activities (p. 315). Specifically, the students became more aware of the linguistic and cultural diversity of their neighbourhood while they gained research skills.

Furthermore, the students' news reports show that learners employed various cognitive abilities to meet the task's requirements, integrating lower-level and higher-level thinking skills, which are fundamental to CT development. Similar to D'warte's study (2015) "students were asked to consider what the data revealed about their class, what surprised or interested them and what may have been missed in relation to their practices and experiences" (p. 42). The domain of analyze includes codes: *self-question/why so many languages and surprise* which are directly related to D'warte words. It is also worth mentioning that this domain is represented by the highest percentage (20%) of students performing these types of activities that belong to the more cognitively demanding HOTS therefore again may be seen as an example of LL-based activities promoting CT.

Finally, Chern & Dooley posit that instructing students in text analysis of signs empowers them to "participate in meaning-making processes" (p. 122). Approximately nine students (13%) posed questions or made observations prompted by the LL data collected in their neighbourhoods; this has been categorized under the critical thinking code and assigned to the create domain, considered the most challenging within Bloom's Taxonomy. To articulate certain observations, students had to apply CT skills, defined by Beyer (1985) as "evaluating the authenticity, accuracy, and/or worth of claims and arguments" (p. 271). Moreover, students who formulated questions based on their collected data also had to employ CT skills.

CONCLUSION

The LL activities presented students with the challenge of articulating cultural practices observed in a given society in relation to their own experiences, fostering reflexivity and critical analysis simultaneously (Roberts et al., 2000). Participation in this project empowered students to actively contribute to the construction of knowledge, transcending the role of passive observers.

This study demonstrates that LL-based projects can serve as a tool to empower students to actively participate in their own knowledge creation by conducting ethnographic research on the LL of their neighborhoods. This finding supports existing research that suggests that building on students' prior knowledge and skills helps them develop a growing awareness of their linguistic competence, which, in turn, may have a profound impact on their achievement, self-efficacy, identity, and cultural competence (Bucholtz et al., 2014; D'warte, 2015; Leander et al., 2010). Although these were not evaluated here, this study provides a foundation for further study linking CT and HOTS to these learner attributes.

By assuming the role of their neighborhoods' LL ethnographers, students develop a range of HOTS domains that enable them to collect, organize, interpret, compare and present their data to others. As demonstrated in this paper the middle range cognitively demanding domains (apply and analyze) have been especially present in students' productions. "We have seen that through LL-based projects students can learn to critically interrogate and probe the sociocultural environment in which they live" (Kruszynska & Dooly, 2023, p. 88).

Additionally, the LL project offered insight into students' viewpoints regarding the LL-based pedagogy. It is important to point out that the majority of students consider LL-based project as a useful tool to acquire knowledge and skills.

The findings from this LL-based project have significant implications for foreign language education, curriculum development, and teaching practices. The active participation of students in a learning community, as demonstrated in their engagement with the LL project, aligns with the principles of ethnographic research and fosters a deeper understanding of language and cultural diversity. This has the potential to reshape foreign language education in several ways. Firstly, we see that LL can help promote CT in language education. The study shows that students developed heightened critical awareness towards the value of languages. This aligns with the idea that LL engagement can make students more socially aware. Moreover, integrating LL activities into language education can contribute to the

development of critical thinking skills by encouraging students to question, analyze, and interpret linguistic and cultural phenomena in their surroundings.

Secondly, the analysis implies that LL-based projects that are integrated into the curriculum can help enhance cultural and linguistic awareness. These aspects were mentioned explicitly by several of the students in the study. This awareness is crucial for foreign language learners as it goes beyond language proficiency and includes an understanding of cultural nuances. LL-based projects can be integrated into curricula to enhance students' cultural and linguistic sensitivity.

Next, there is evidence that integrating ethnographic approaches into foreign language education allows students to actively engage with the language in real-life contexts, fostering a deeper connection to the language and its cultural implications while ensuring opportunities to discover the unknown through experiential learning. This in turn can provide a platform for students to practice critical thinking through tasks that involve data analysis, reflection, and interpretation. It also encourages students to engage with real-world language use.

Finally, this study demonstrates that the application of Bloom's Taxonomy for both task design and research approach can be used to structure learning processes to promote higher order thinking skills, contributing to a more comprehensive language education experience.

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