

Multilingual Education

Sílvia Melo-Pfeifer *Editor*

Linguistic Landscapes in Language and Teacher Education

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Inside and Beyond the Classroom

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Editor

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Foreword: Linguistic Landscapes as a Useful Pedagogical Tool

“The language on display in public spaces is useless for language education”. Reading the statement will be rather shocking for the authors contributing to this book, but also for most linguistic landscape researchers, as well as for many teachers. Probably none of them would agree, because we are all convinced that the languages we can see and read on signs around us in public spaces can be supportive of language learning and can make us become more aware of multilingualism and language diversity.

Just a few years ago, however, an English university teacher in Japan analyzed English used in public signage, and she collected, what she called, quaint uses of English. She asked the question how this affects the way English is learned by students in Japan and her conclusion was “the English visible in their everyday environment, in shops, on clothes, on wrappings, and so forth, is ... useless, not because it is sometimes faulty, but precisely because it is so functionally unlike real English—divorced from a real speaker and a real listener and any real communicative purpose” (Hyde, 2002, p. 16). For Hyde the publicly displayed use of English is emblematic rather than communicative, which for her makes it only superficially English and thus students will not learn “real English” from the signage.

These ideas stand in stark contrast with the assumptions of the LoCALL project which are pointing 180 degrees in the opposite direction. On the project-website (<https://locallproject.eu/>) the basic premise is stated as follows: “Linguistic landscapes comprise real-world linguistic expressions and manifestations of multilingualism. By perceiving them, we can raise language awareness, which is a relevant feature and goal of language learning.” This fundamental premise is further elaborated on the same website by arguing that “linguistic landscapes ... are powerful starting points for valuing the presence of various languages and linguistic resources in (foreign, second, additional or mother) language teaching, favoring the development of multilingual, critical and plurisemiotic literacies (by actively engaging actors on discussions on language hierarchies and linguistic prestige, language comparison and language awareness, and translanguaging in public spaces) and, concomitantly, the development of skills in the languages of the school and the development of linguistic repertoires”.

Those are, of course, rather strong claims which suggest that using the linguistic landscape as a pedagogical resource can contribute to solving a whole range of issues and challenges in language education. This book is an important outcome of the LoCALL project and similar ideas about the usefulness of the linguistic landscape are echoed by Melo-Pfeifer in the Introduction. Also the contributing authors agree and in their chapters they are able to confirm these ideas, premises and claims about the potential powerful pedagogical possibilities of linguistic landscapes for language education. Their empirical studies and applications in different education contexts succeed in different ways to show how the linguistic landscape can be a powerful pedagogical tool.

How did we get here? Surely, the earliest studies of linguistic landscapes did not pay any attention to its pedagogical possibilities, even if a couple of the early contributions were projects to obtain an education degree: Tulp's (1978) chapter was based on a master thesis and Backhaus (2007) turned his Ph.D. into a frequently cited monograph. It demonstrates that then and now the linguistic landscape is a fitting topic for a thesis and can help students to fulfill their academic study requirements. Currently the topic is quite popular among students, and hundreds of theses and term papers have been written on linguistic landscapes.

It began with a few publications, just like small drops, in which the linguistic landscape was considered as a useful pedagogical tool. For example, Shohamy and Waksman (2009, p. 326) claimed that linguistic landscapes can act "as a powerful tool for ... meaningful language learning". The authors mention that an investigation into linguistic landscapes in an educational context can lead to a deeper understanding of issues of inequality and power. Around the same time, we wrote an article about the idea that language displayed in public spaces can be useful for language learners as an additional source of authentic input in second language acquisition (SLA) (Cenoz & Gorter, 2008). We suggested that the written languages on multilingual signs can be used for enhancing language awareness, developing multimodal literacy skills and acquiring pragmatic competence. It could be a coincidence, but it was another Japanese university teacher, Rowland (2013), who built on those ideas and he composed a list of benefits of the linguistic landscape for learners of English as a foreign language. He mentioned the following six benefits (Rowland, 2013, pp. 496–497):

1. Raising students' awareness of contextualized English;
2. Helping students' incidental learning;
3. Serving as an important resource for English teaching;
4. Improving students' English literacy;
5. Fostering students' critical thinking abilities;
6. Providing an authentic English environment for English learners.

Rowland applied his assumptions in a project for an English writing class, in which he asked a group of university students: "How and why is English used on signs in Japan?". He instructed the students to take photographs of, e.g. advertisements

and road signs and then afterwards those signs were discussed in the English class. The results of the project empirically confirmed the different learning benefits. Along similar lines, again at a university in Japan, Barrs (2018) continued in this line of work by asking a group of students ($N = 101$) to write a short essay about the question “What interesting things can you notice about English in the linguistic landscape around you?” He compiled the essays into a corpus and in the analysis he found that the place, form and reason for English were the most discussed issues. Through the activity, he could critically engage his students with English in the Japanese linguistic landscape. In another article Barrs (2020) describes a project based learning activity on the forms and functions of English in the linguistic landscape. He mentions again the successful outcomes of these linguistic landscape activities and argues that “one of the most appealing features of engaging learners with the linguistic landscape is that it lies immediately beyond the walls of the classroom” (Barrs, 2020, p. 15). He further argues that students researching linguistic landscapes will learn to critically reflect on how English is used in society.

The articles mentioned above were among a small, but steady stream of publications that seeped into the literature on linguistic landscapes. The publications kept flowing and gained momentum in a Special Issue on studying the visual and material dimensions of education and learning (Laihonen & Szabó, 2018). The issue contained seven new studies and we added an exhaustive overview of trends in the study of schoolscape which could refer to some 25 publications on the topic (Gorter, 2018). The contents of several of those publications were more some ideas and suggestions about how to apply the potential of linguistic landscapes, rather than empirical studies of its real application as a pedagogical tool in an educational context.

In the meantime, the field of linguistic landscape studies in general had become firmly established. In the Introduction to the current book Melo-Pfeifer presents a short synopsis of the development of the field, based on the titles of a selection of 13 books. For an extensive inventory of publications in the field, the reader is advised to consult the online Linguistic Landscape Bibliography that has some 1.150 entries (Troyer, 2022). Today, linguistic landscape studies cover a complex assemblage of divergent theoretical approaches, various analytic frameworks and several qualitative, quantitative and mixed research methods. The field is an umbrella for highly diverse studies, but at the same time there is an identifiable corpus that takes as its core the visual representation of language in a broad sense of the word. Linguistic landscape studies have developed into a unique field of studies that offers innovative insights on a large number of issues related to languages in public spaces. Taken together, the studies point to the complexity of linguistic landscapes, where signs display languages in dynamic ways and demonstrate the interconnectedness of different societal levels and institutions, including education. In a proposal for a more holistic approach, in Gorter (2021) we developed a model of Multilingual Inequality in Public Spaces (MIPS). The model wants to examine the cyclic processes which are part of the construction of linguistic landscapes and how the effects of these processes influence the experiences of people and their language practices. Research

questions have to be answered on how public display of signs comes into existence, how language on signage is patterned, how it is experienced and given meaning by its creators and perceivers and how it can influence language practices and behavior. The organization of different languages on signs is seen as fundamentally unequal because those signs are socially situated, and people perceive them differently. Application of the model can lead to an encompassing approach, including potential pedagogical applications.

The theme of linguistic landscapes in education has grown from a small stream to a richly flowing river of publications. Over the past few years several edited books have come out (Malinowski, Maxim & Dubreil, 2020; Niedt & Seals, 2021; Solmaz & Przymus, 2021; Krompák, Fernández-Mallat & Meyer, 2022). Furthermore, there are publications in other languages, such as two edited collections in German (Badstübner-Kizik & Janíková, 2018; Ziegler & Marten, 2021) and a general introduction in Italian which devotes a large part to schoolsapes (Bellinzona, 2021). Likewise, Berra (2020) published a practical guide in Latvian, and also the contributions to the special issue in Portuguese edited by Melo-Pfeifer and Lima-Hernandes (2020) demonstrate how linguistic landscapes are useful for language learning and teaching. Probably this list is incomplete, but taken together these publications and many others, show the manifold pedagogical possibilities of public signage for language acquisition and for learning about languages.

The development of the field of linguistic landscape studies has sometimes been described with a metaphor of waves. To justify the waves, Bolton, Botha and Lee (2020) undertake an elaborate effort by distinguishing between three waves, which they label in short as 1st quantitative, 2nd qualitative and 3rd critical. However, although it may sound nice, this does not fit, because as Bolton et al. (2020, p. 297) already admit there is “frequent overlap and leakage between the ... waves”. Not only that, but waves also seems to suggest that there is a chronological succession of one wave after another, which is obviously not the case. Furthermore, it is hard for the waves-metaphor to work because the analysis by Bolton and his colleagues included only a few edited books and it thus excluded approximately 90% of all linguistic landscape publications. At the same time, it is true that the rising flow of linguistic landscape publications is exponentially spreading out in a great many directions. The ever-changing field has fluid boundaries and its studies are permeated by the application of many existing theoretical ideas and research techniques. There is, as Shohamy (2019, p. 34) reminds us, an ongoing and recurring debate in the field in which some researchers think that by broadening the scope perhaps it has “gone too far beyond its ‘legitimate’ boundaries”. Obviously, the field has developed enormously and covers a wide range of topics, still for most researchers the core concern remains an effort to analyze the public display of some sort of visible language that is all around us. This includes besides language in its written form, also multimodal, semiotic, other visual, material and sometimes oral elements. In this book, for example, the chapter by Chik would probably fall outside the fuzzy boundaries of the field of linguistic landscape studies per se. Chik discusses language

diversity in Sydney, Australia from a geolinguistic perspective and presents interesting data about the geographic distribution of different groups of speakers and about where Chinese and Greek community language schools are located, but she does not include data on signage. The focus of the chapter is rather different from, for example, Xu and Wang (2021) who analyzed differences between 2009 and 2019 in the signs and scripts to describe the increase of Chinese restaurants in Hurstville, a Chinatown of Sydney. Xu and Wang conclude that the changes in the signage reflect a shift in the composition of the migrant population, whereas Chik can demonstrate that the distribution of different language groups is much more diffuse.

We should also remember that the concept “linguistic landscape” competes with other uses of the same term in sociolinguistic and applied linguistics, where the concept has been used with different meanings. For example, Dunn, Coupe and Adams (2020) wanted to understand changes in the “linguistic landscape” during the COVID-19 pandemic. For them this meant measuring linguistic diversity based on data from Twitter in terms of the number of different languages used in a country and it had little to do with the sudden changes in signage in public spaces around the world as documented by various studies (e.g. Hopkyns & Van der Hoven, 2021; Marshall, 2021; Ogiermann & Bella, 2021). In contrast, the chapter in this book by McMonagle also presents data from Twitter, but she analyzes a small corpus of tweets on the European Day of Languages under the perspective of a virtual linguistic landscape and clearly aims to situate her work aligned with other studies of linguistic landscapes of cyberspace, which are linking online and offline worlds.

In the continuous flood of linguistic landscape publications one can distinguish the growing stream of pedagogical publications as an important current. There have already been numerous publications about successful projects about the linguistic landscape in education. Recently we carried out three case studies of how linguistic landscapes can contribute to language learning (Gorter, Cenoz & Van der Worp, 2021). First, we developed a module with learning activities around the linguistic landscape as part of an intervention based on pedagogical translanguaging. Our aim was, among others, to investigate the development of metalinguistic awareness among primary school students. Our second case study comes from the experiences of a group of master students who carried out an assignment on linguistic landscape and presented the results of their analysis and reflections in class. Third, we examined again the learning potential of public spaces, this time inside a market in Donostia-San Sebastián. Each of the three case studies shows the various possibilities of analyzing the languages on display in public spaces for language learning and teaching, as well as being a useful tool for raising language awareness. We concluded that in these cases “the linguistic landscape offers a chance to link the classroom with real language use in society” (Gorter, Cenoz & Van der Worp, 2021, p. 179). This is of course in agreement with many other studies and with most of the chapters in this book. In a recent overview of the literature on the pedagogical possibilities of linguistic landscapes we claimed that “linguistic landscapes in educational contexts harbour

considerable potential for language learning, for increased language awareness and for critical reflection” (Gorter & Cenoz, 2022, p. 287).

Obviously, this new book of the LoCALL project fits well with that growing stream of publications. The book is an important contribution to the theme of linguistic landscapes in education contexts and it has a wide geographical scope, covering 14 countries from five continents. New and exciting developments in the field of linguistic landscape studies, in particular its applications for language learning and in teacher training, are manifested in the different studies reported in this volume. For a quick orientation Melo-Pfeifer presents a succinct and informative overview of each chapter in the Introduction. Different contributions show the huge pedagogical potential of public signage for enhancing awareness about multilingualism, literacies, identities or ideologies and for language acquisition. The chapters contain enriching and captivating ideas on the possibilities of applying linguistic landscape research or materials in the context of learning about languages, and on its use in teacher training.

Perhaps here we can highlight just two issues that stand out: translanguaging and technology. Melo-Pfeifer mentions in the Introduction how students can be actively engaged in discussions, among others, about translanguaging in public spaces which then can lead to development of language skills and linguistic repertoires. Linguistic landscapes can help to propagate pedagogical translanguaging as a resource for the critical teaching and learning of or about languages. In his chapter, Prada approaches the linguistic landscape through a translanguaging lens and he moves beyond the linguistic aspect of the linguistic landscape and relates it to sense- and meaning-making aspects, which he then applied in his teaching. Similarly, Lourenço, Duarte, Silva and Batista (this volume) discuss the importance of translanguaging practices and plurilingual methodologies. They argue how translanguaging is part of language-related knowledge and skills, next to other skills such as decoding, transfer and analytical skills, multimodal literacy skills and the use of technology. Another example is provided by Brinkmann and Melo-Pfeifer who in their chapter observe how students apply translanguaging strategies, among others in a writing task. For them this demonstrates the learning potential of translanguaging strategies, and intercomprehension. The ideas in these chapters are in line with our own ideas on pedagogical translanguaging (Cenoz & Gorter, 2021).

We mentioned the use of technology, and this is a second recurring issue. It becomes obvious from some chapters that technological innovations are important for the field of linguistic landscape studies. The most obvious example from the past is that technology made data collection of large numbers of photographs of signs accessible and easy for anyone who can operate a digital camera. In the various chapters of this book we find, among others, the use of apps, a website, an e-reader platform, social media, mobile phones and tablets as examples of technology-driven studies. The LoCALL app was developed by this project. The app is available in different languages and can be used by primary and secondary students and their teachers to explore, document and reflect upon the linguistic landscapes in their

surroundings. It includes games which provide a link between the classroom and the real world. In their chapter Marques, Lourenço, Pombo, das Neves, Laranjeiro and Martins provide a report on a project among teachers who worked with the LoCALL app in their class. Another example is the description of the LoCALL training week in the chapter by Araújo e Sá, Carinhas, Melo-Pfeifer and Simões in which, among others, Google Classroom, the Padlet app and the Perusall platform are used for the construction of an online learning community.

The examples in the book sharpen the awareness and the critical skills which can be important in case a person decides to embark on an investigation on their own (or are told to do so for an assignment, as for example, students in teacher training). Taken together, the authors prove that using the linguistic landscape is a powerful pedagogical tool. The chapters provide important additions to the current arsenal of teaching languages inside or outside the classroom. The book will contribute to more researchers, teacher trainers, teachers and students to discover the pedagogical benefits of linguistic landscape materials for the teaching of and about languages. In general, the application of public signage as a pedagogical tool shows great relevance to educators and students. It can be linked to important wider issues such as Global Citizenship Education, as is shown in the chapter by Lourenço, Duarte, Silva and Batista, who report on a comparative study from five European countries. The authors emphasize in their conclusion that linguistic landscapes “are a formidable opportunity to establish connections between the school curriculum and the real world”. Or, as it is mentioned on the website of the LoCALL project, “the linguistic landscape is a free, immediate and dynamic educational resource”. However, as Chern and Dooley (2014) already warned us, learning about language while walking down the street does not come automatically, because students have to be made aware and they have to learn to critically examine the signs, otherwise they probably do not notice.

The chapters here represent a timely and significant contribution of insights concerning linguistic landscapes in education contexts. Through their texts we gain more knowledge about language-related phenomena, in particular multilingualism. It can help to make students and teachers understand that the study of the linguistic landscape is about more than what is superficially visible. Hopefully this Foreword has given sufficient reasons to pique the curiosity of the reader, who now wants to learn more about the content of the rest of the book. Of course, there is always the risk of preaching to the converted, but in any case we can conclude that Hyde (2002) was whistling in the wind because there was no real hope of succeeding to prevent students from learning from the public display of language. Perhaps the best illustration comes from the chapter by Oyama, Moore and Pearce in which they show how the Japanese six-grade student Yūki becomes a co-researcher of his own language and literacy practices. By walking and taking pictures, the child starts to make discoveries, raises questions about language and explores the diversity of his local environment. Real-life material can provide an engaging way to teach about literacy and language awareness, and educational purposes can be served by making active use of the linguistic landscape.

We all have to consider that we are submerged in the linguistic landscapes that surround us and we have to be ready to embark on bold new ventures. This book will encourage researchers, teacher trainers, teachers and students to go out and explore (but don't forget a camera). A master student once told me several years after accomplishing an assignment on linguistic landscapes, that it had changed her experience of walking down a shopping street forever. The linguistic landscapes structure our daily lives. They shape our streets, neighborhoods, cities, and also our education.

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References

- Backhaus, P. (2007). *Linguistic landscapes: A comparative study of urban multilingualism in Tokyo*. Multilingual Matters.
- Badstübner-Kizik, C., & Janíková, V. (Eds.) (2018). *Linguistic landscape und fremdsprachendidaktik. Perspektiven für die Sprach-, Kultur- und Literaturdidaktik*. Peter Lang.
- Barrs, K. (2018). English in the Japanese linguistic landscape: An awareness-raising activity examining place, form, and reason. *Studies in Humanities and Sciences*, 211–224. At: <https://core.ac.uk/download/pdf/236186431.pdf>.
- Barrs, K. (2020). Learning from the linguistic landscape: A project-based learning approach to investigating English in Japan. *Electronic Journal of Foreign Language Teaching*, 17 (Suppl. 1), 7–15. At: <https://e-flt.nus.edu.sg/wp-content/uploads/2020/09/barrs.pdf>.
- Bellinzona, M. (2021). *Linguistic Landscape: Panorami urbani e scolastici nel XXI secolo*. FrancoAngeli.
- Berra, S. (2020). *Ceļvedis pilsētu tekstu izpētē. Populārzinātnisks izdevums valodniecībā*. LU Latviešu valodas institūts. (Solvita Burr).
- Bolton, B., & Lee (2020). Linguistic Landscapes and Language Contact. In R. Hickey (Ed.), *The Handbook of Language Contact* (2nd ed., pp. 281–300). John Wiley & Sons Ltd.
- Cenoz, J., & Gorter, D. (2008). Linguistic landscape as an additional source of input in second language acquisition. *IRAL, International Review of Applied Linguistics in Language Teaching*, 46, 257–276. <https://doi.org/10.1515/IRAL.2008.012>.
- Cenoz, J., & Gorter, D. (2021). *Pedagogical Translanguaging*. Cambridge University Press. <https://doi.org/10.1017/9781009029384>.
- Chern, C. L., & Dooley, K. (2014). Learning English by walking down the street. *ELT Journal*, 68(2), 113–123. <https://doi.org/10.1093/elt/cct067>.
- Dunn, J., Coupe, T., & Adams, B. (2020). Measuring linguistic diversity during Covid-19. In *Proceedings of the 4th Workshop on NLP and Computational Social Science* <https://doi.org/10.48550/arXiv.2104.01290>.
- Gorter, D. (2018). Linguistic Landscape and trends in the study of schoolsapes, Linguistics and Education. *Linguistics and Education*, 44, 80–85. <https://doi.org/10.1016/j.linged.2017.10.001>.
- Gorter, D. (2021). Multilingual inequality in public spaces: towards an inclusive model of linguistic landscapes. In R. Blackwood & D. Dunlevy (Eds.), *Multilingualism in the public spaces: Empowering and transforming communities* (pp. 13–30). Bloomsbury.

- Gorter, D., & Cenoz, J. (2022). Linguistic landscapes in educational contexts: an afterword. In E. Kropfák, V. Fernández-Mallat & S. Meyer (Eds.), *Linguistic Landscape and Educational Spaces* (pp. 277–290). Multilingual Matters.
- Gorter, D., Cenoz, J., & Van der Worp, K. (2021). The linguistic landscape as a resource for language learning and raising language awareness. *Journal of Spanish Language Teaching*, 8(2), 161–181. <https://doi.org/10.1080/23247797.2021.2014029>.
- Hopkyns, S., & Van den Hoven, M. (2021). Linguistic diversity and inclusion in Abu Dhabi's linguistic landscape during the COVID-19 period. *Multilingua*, 41(2), 201–232. <https://doi.org/10.1515/multi-2020-0187>.
- Hyde, B. (2002). Japan's emblematic English. *English Today*, 18(3), 12–16. <https://doi.org/10.1017/S0266078402003024>.
- Kropfák, E., Fernández-Mallat, V., & Meyer, S. (Eds.) (2022). *Linguistic landscape and educational spaces*. Multilingual Matters.
- Malinowski, D., Maxim, H. H., & Dubreil, S. (Eds.) (2021). *Language teaching in the linguistic landscape: Mobilizing pedagogy in public space*. Springer.
- Marshall, S. (2021). Navigating COVID-19 linguistic landscapes in Vancouver's North Shore: official signs, grassroots literacy artefacts, monolingualism, and discursive convergence. *International Journal of Multilingualism*, <https://doi.org/10.1080/14790718.2020.1849225>.
- Melo-Pfeifer, S., & Lima-Hernandes, M.C. (Eds.) (2020). Paisagens lingüísticas. In *Domínios de Linguagem*, 14(4). <https://www.seer.ufu.br/index.php/dominiosdelinguagem/article/view/57129/29835>.
- Niedt, G., & Seals, C. (2021). *Linguistic landscape beyond the classroom*. Bloomsbury.
- Ogiermann, E., & Bella, S. (2021). On the dual role of expressive speech acts: Relational work on signs announcing closures during the Covid-19 pandemic. *Journal of Pragmatics*, 184, 1–17. <https://doi.org/10.1016/j.pragma.2021.07.020>.
- Rowland, L. (2013). The pedagogical benefits of a linguistic landscape project in Japan. *International Journal of Bilingual Education and Bilingualism*, 16(4), 494–505. <https://doi.org/10.1080/13670050.2012.708319>.
- Shohamy, E. (2019). Linguistic landscape after a decade: An overview of themes, debates and future directions. In M. Putz & N. Mundt (Eds.), *Expanding the linguistic landscape: Linguistic diversity, multimodality and the use of space as a semiotic resource* (pp. 25–37). Multilingual Matters. <https://doi.org/10.21832/9781788922166>.
- Shohamy, E., & Waksman, S. (2009). Linguistic landscape as an ecological arena: Modalities, meanings, negotiations, education. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: expanding the scenery* (pp. 313–331). Routledge.
- Solmaz, O., & Przymus, S. (Eds.) (2021). *Linguistic Landscapes in English Language Teaching: A Pedagogical Guidebook*. Diyarbakir: Dicle University, Turkey & Forth Worth: Texas Christian University, US. Online available at <https://repository.tcu.edu/handle/116099117/45344>.
- Troyer, R. (2022). *Linguistic Landscape Bibliography*, online at www.zotero.org/groups/linguistic_landscape_bibliography.
- Tulp, S.M. (1978). Reklame en tweetaligheid: Een onderzoek naar de geografische verspreiding van franstalige en nederlandstalige affiches in Brussel. *Taal en sociale integratie*, 1, 261–288.
- Xu, S. Z., & Wang, W. (2021). Change and continuity in Hurstville's Chinese restaurants. *Linguistic Landscape*, 7(2), 175–203. <https://doi.org/10.1075/ll.20007.xu>.
- Ziegler, E., & Marten, H.F. (Eds.) (2021). *Linguistic Landscapes im deutschsprachigen Kontext. Forschungsperspektiven, Methoden und Anwendungsmöglichkeiten*. Peter Lang.
- Website: LoCALL project website at <https://locallproject.eu/>.

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Introduction: Linguistic Landscapes in Language (Teacher) Education: Multilingual Teaching and Learning Inside and Beyond the Classroom



Sílvia Melo-Pfeifer

Abstract In this introduction, I recall the main trends and evolutions in the conceptualisation and study of linguistic landscapes (LLs) and in language education studies that focus on the exploitation of LLs both as a pedagogical resource (especially in the language classroom) and approach in teacher training. The constituent chapters of the present book are situated at the intersection of three turns in applied language studies: the multilingual turn, the visual turn and the spatial turn. Following a detailed presentation of each section of the book and its chapters, I end with an acknowledgement of the potential of LLs for a more critical and agentic language education and teacher training.

Keywords Linguistic landscapes (LLs) · Language education · Multilingual education · Pedagogical translanguaging · Teacher education

1 Introducing Linguistic Landscapes as a Research Field in Education

The present volume, dedicated to the exploration of the linguistic landscape (LL) in educational and teacher training contexts, arises from the collaboration of the different authors within the LoCALL project—*Local Linguistic Landscapes for Global Language Education in the School Context*.¹ This project focused on the pedagogical use of LLs in formal language learning contexts in order to develop the language awareness of the target groups involved, and to open new tracks in teacher training for sustainable and structured approaches to working with linguistic diversity in society and with individual plurilingual competence. This book thus follows

¹ Erasmus + Project, developed between 2019 and 2022, with five participating universities: the University of Aveiro (Portugal), the Autonomous University of Barcelona (Spain), the University of Groningen (Netherlands), the University of Hamburg (Germany, coordinating institution), and the University of Strasbourg (France). More information at: <https://locallproject.eu/>.

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the ongoing expansion of studies about LLs in educational settings, while at the same time narrowing its scope to the field of language and teacher education.

At this point, it is important to consider the basic definition of LL. In a seminal paper from 2006, Gorter explains, “language is all around us in textual form as it is displayed on shop windows, commercial signs, posters, official notices, traffic signs, etc.” (2006a, p. 1). These everyday textual forms constitute the object of study for researchers interested in LL description and analysis. In their preface to Blommaert’s (2013) work, Pennycook et al. (2013, p. ix), indicate three driving factors in LL research:

- the growing attention to space and its subjective apprehension by those who inhabit it, reconsidering the term ‘context’ in studies in sociolinguistics;
- the development of studies in urban plurilingualism, from the perspective of linguistic ethnography, shifting the focus of observation from the mapping of linguistic diversity to the direct experience of this diversity;
- the focus on manifestations of public language policies, namely urban signage, and on signage options in different contexts.

The notion of LL has further expanded in conceptual and disciplinary terms, now embracing multiple sense-makers beyond written words and languages, in a more holistic, less logocentric understanding of individuals’ repertoires. Thus, I explain below how this notion now includes the domains of sound, and even tactile and olfactory LLs. In the same way, the study of LLs has gradually begun to integrate sign language. I then propose a review, necessarily circumscribed, of studies on plurilingual and multisemiotic LL developed within the framework of different disciplines. I will focus, given the scope of the present work, on sociolinguistics and language education. After a brief presentation of the chapters that comprise the present book, I finish with my personal reading of the advances in the field of LL research.

2 Studying Linguistic Landscapes: The Evolution of the Field as Seen Through the Lens of Language and Teacher Education²

Following Gorter’s definition (2006a, 2006b) and studies that primarily considered language “around us”, Shohamy and Gorter define the LL more ecologically, considering it to include sounds, images and graffiti (2009, p. 4). The broadening of the field is indicated by the titles of some of the most popular collections published on the subject. Table 1 presents, without any pretension of exhaustiveness, books in English published from 2006 onwards.

Although they cannot give a complete overview of the evolution of studies about LLs (see Marten et al., 2012 for a synthesis of LL research first steps), and it is not

² Sections 2 and 3 of this introduction expand the synthesis presented in Melo-Pfeifer and Lima-Hernandez (2020).

Table 1 Selected publications in English

Year of publication	Title	Editors or authors
2006	Linguistic Landscape: A new Approach to Multilingualism	D. Gorter (ed.)
2007	Linguistic Landscapes: Comparative Study of Urban Multilingualism in Tokyo	P. Backhaus
2009	Linguistic Landscape: Expanding the Scenery	E. Shohamy & D. Gorter (eds.)
2010	Linguistic Landscape in the City	Elana Shohamy, Eliezer Ben-Rafael and Monica Barni (eds.)
2010	Semiotic Landscapes. Language, Image, Space	A. Jaworski & C. Thurlow (eds.)
2012	Linguistic Landscapes, Multilingualism and Social change	Ch. Hélot, M. Barni, R. Janssens & C. Bagna (eds.)
2012	Minority Languages in the Linguistic Landscapes	D. Gorter, H. Marten & L. Van Mensel (eds.)
2013	Ethnography, Superdiversity and Linguistic Landscapes. Chronicles of Complexity	J. Blommaert
2016	Negotiating and Contesting Identities in Linguistic Landscapes	R. Blackwood, E. Lanza & H. Woldemariam (eds.)
2019	Expanding the Linguistic Landscape. Linguistic Diversity, Multimodality and the Use of Space as a Semiotic Resource	M. Pütz & N. Mundt (eds.)
2020	Linguistic Landscapes. Beyond the Language Classroom	C. A. Seals & G. Niedt (eds.)
2020	Language Teaching in the Linguistic Landscape. Mobilizing Pedagogy in Public Space	D. Malinowski, H. Maxon & S. Dubreil (eds.)
2022	Linguistic Landscapes and Educational Spaces	E. Krompák, V. Fernández-Mallat & S. Meyer (eds.)

wise to judge a book by its cover, I nevertheless advance, from the titles listed above, the following observations:

- studies of LLs seem to start around issues related to social multilingualism, especially in urban contexts characterised by linguistic hyperdiversity;
- this is followed by a phase of complexification of those studies, extending the scope of analysis to the interaction of languages with more varied semiotic elements situated in time and space, in a more multimodal and complex approach;
- authors then focus more intensively on social issues along the lines of symbolic interactionism and on the way subjects live and contest their multiple identities;

- LL studies have more recently reached education and applied linguistics, in general, and language education, in particular, thus enabling a bridge between learning in formal and informal contexts, as is the case of the present volume. Krompák, Fernández-Mallat and Meyer have called this disciplinary move the “educational turn in linguistic landscape studies” (2022, p. 1), as a growing number of studies focus on ‘linguistic and semiotic educationscapes’. The present volume follows this move and discusses LLs as resources for teaching and learning as well as for teacher education.

This brief synopsis traces the evolution of the field in very broad terms and excludes pioneering studies in different strands. For instance, as early as 1991, Spolsky and Cooper had analysed the languages of Jerusalem, constituting a ground-breaking study in the field of urban sociolinguistics. From a language education perspective, Dagenais et al. (2009) and Clemente et al. (2012) carried out research on LLs in school settings at a relatively early stage in the evolution of such studies, demonstrating the benefits of engaging children as co-ethnographers in the discovery of the languages of their surroundings.

Whereas initial studies focused on the description and analysis of the different languages present in certain (usually urban) public spaces, often from a quantitative and synchronic perspective including an inventory of the respective languages, researchers have since highlighted the need to go beyond such an approach. Recent calls embrace more complex dynamics of languages across time and space from a diachronic and historical perspective. Also, those spaces of consideration now extend from the physical to the virtual (Androutsopoulos, 2020; see also Chik and McMonagle in this volume).

Similarly, as these developments suggest, the study of LLs no longer focuses exclusively on printed language displays, but rather on the interaction of symbols, materials, colours, shapes, sizes, fonts, materiality and agency, in a multimodal and multisemiotic (Jaworski & Thurlow, 2010; Pennycook, 2019, on LL as assemblages) or even multisensorial and synesthetic way (Paraguai, 2019; Pennycook & Otsuji, 2015; Prada in this volume). The linguistic repertoire thus meets the semiotic and sensorial repertoires in more recent studies. In these multifaceted perspectives, each element provides information that indexes each semiotic representation to a particular function in specific spaces and times. In other words, the mere counting of languages is not enough to illustrate the complexity, dynamics, tensions and dissonances present in LLs, rendering it necessary to analyse the ‘ordered indexicality’ and the ‘layered simultaneity’ of the various semiotic components observed and experienced (Blommaert, 2013).

In this sense, the LL comes to be understood as an artefact that translates the very materiality of multilingualism (Aronin & Ó Laoire, 2012), thus giving attention to a little-explored aspect: that of the ‘environment’ (as opposed to the more studied ‘subject’ and ‘language’ aspects). The authors classify the study of LL within the framework of the “multilingual material culture of places” (2012, p. 314), which will be handled in chapter “[Material Culture Inside and Beyond the Multilingual Classroom: Theoretical and Pedagogical Perspectives](#)” of this book.

In line with these advances, further studies explore the different materialities and spatialities of the LL: school LLs (schoolscapes; Androutsoupoulous & Kuhlee, 2021; Dressler, 2015; Gorter, 2017; Gorter & Cenoz, 2015; Szabó, 2015), domestic LLs (homescapes; Melo-Pfeifer, 2022) and food LLs (foodscapes, Krompák, 2018). It follows from these new designations that the current study of LLs goes beyond public spaces (see Benson, 2019 and Benson et al., 2019 for an overview) to embrace more diverse spatialities and resources (such as textbooks, Chapelle, 2020).

3 Multilingual and Plurisemiotic Linguistic Landscapes in Language Education

The first studies around LLs (e.g. Spolsky & Cooper, 1991) were developed in the context of sociolinguistics. However, in 2012, Shohamy and Waksman define this field as clearly multidisciplinary as it centres research issues around several human sciences. In sociolinguistics, studies investigate, broadly speaking, the “LL as a site of political discourses, which need to be deconstructed to make sense of the relationships between people, language(s), signs, space and power” (Hélot et al., 2012, p. 19). Or, following Shohamy and Waksman, “language in public space has become an arena of symbolic struggle and debate about participation and distribution of resources in cities, workplaces, schools, neighborhoods, national and global spaces” (2012, p. 111). This unequal distribution of languages in public spaces provides clues about the presence of different language communities, their hierarchies and respective status, their socio-economic occupations in the social fabric, their voice and, paradoxically, also their silence or silencing.

Notwithstanding this interest of sociolinguistics in LLs, Pennycook, Morgan and Kubota consider that “the benefits of LL research as an accessible pedagogical strategy should also be appreciated” (2013, p. ix), a call that was embraced by Badstübner-Kizik and Janíková (2018), Krompák et al. (2022), Krompák and Todisco (2022), Malinowski et al. (2020), Niedt and Seals (2020), among others. It is in this context that I consider the growing interest in applied linguistics, in general, and language education, more particularly, in the use of LLs in educational settings. Janíková (2018) situates the pedagogical interest in LLs in the ‘visual turn’ that the discipline is going through (see Kalaja & Melo-Pfeifer, 2019) and in the growing disciplinary interest in the development of students’ linguistic and cultural awareness, aesthetic competence and visual literacy. To this visual turn, I can add the multilingual and spatial turns (Brinkmann et al., 2022).

The use of LLs, whether in or out of the classroom, can be situated in the so-called ‘spatial turn’ (Benson, 2021; Kramsch, 2018) in language teaching/learning, where meaning is constructed and emerges in context, in a given spatial orientation, depending on individuals’ spatial repertoires. In English, the term ‘emplacement’ is used to refer to this role of space in the co-construction of meaning (Kramsch, 2018), as an index of contextualisation. Indeed, work with LLs highlights “the importance

of students' critical examination of texts and other semiotic resources within and across different spaces (e.g. classroom, home, school, communities, online) that are embodied, interactive, multimodal/multisensory, and that evolve over time" (Lozano et al., 2020, p. 19).

In the same vein, the multilingual turn in education (May, 2014) explains the growing interest in issues such as multilingualism as lived, multilingualism as embodied in personal experiences, or the implementation of multilingual pedagogies, not only in the language classroom but across the curriculum. The multilingual turn also explains a research agenda around (linguistic) justice in education (Piller, 2016), the decolonisation of the curriculum (Macedo, 2019) and the opening of applied linguistic perspectives to the Global South (Pennycook & Makoni, 2020), a metaphor to refer to the missing voices from marginalised communities around the globe. The combination of these turns entails consequences for teacher education, which have also been addressed. Hélot, Jannseens, Barni and Bagna, for example, claim that "learning to read the LL can be used as a means to understand power relationships between languages and literacies within society and to drive the attention of teachers who will necessarily operate in multilingual and multicultural schools not only to the material world of signs but also to the symbolic meaning communicated by them" (2012, p. 22).

Melo-Pfeifer and Silva (2021) categorise three uses of LL in the classroom, according to the linguistic approach (also Brinkmann et al., 2022):

- multilingual focus: the LL serves to raise learners' awareness of the linguistic and cultural diversity of their area of residence, region or country and of issues such as equity, resilience and language maintenance or language struggle; Clemente et al. (2012), for example, analyse how children develop their multilingual and symbolic competence and their ability to 'read the world' in the first year of Portuguese primary education.
- monolingual focus: the use of LLs serves to analyse the status, role or situation of a particular language in a particular socio-demographic and multilingual landscape, highlighting, for example, in which sectors of economic life that language is most present or where its vitality is most prominent; it may also serve to enhance, even incidentally, language learning at lexical and pragmatic level; this trend can be recognised in the "spot German" approach (Marten & Saagpakk, 2017) or in the pedagogical materials elaborated by Solmaz and Przymus (2021), for English as an additional language.
- mixed focus: the use of LL as a pedagogical object serves the two previous focuses.

Regarding the multilingual focus, for example, Dagenais et al. (2009) investigate how the use of LLs can contribute to the development of students' linguistic awareness through pedagogical work in the classroom. Dagenais et al. (2012) and Caillis-Bonnet (2013) propose the pedagogic use and curricularisation of LLs, analysing their potential as mirrors of societal multilingualism and leading children to reflect on their individual linguistic repertoires. More recently, in Higher Education, Elola and Prada acknowledge, in their action-research approach to the use of the LL in Spanish classes in Texas, that "LL-based pedagogies may provide students with a

toolkit to enhance their sociolinguistic awareness, develop a critical perspective on local/community languages in their area, and how these languages co-exist alongside official/majority languages” (2020, p. 223). These studies demonstrate the flexibility of LL use, with children, young people, and adults.

In addition to these uses, which can be considered within the sphere of pedagogical translanguaging (Cenoz & Gorter, 2022) and pluralistic approaches in teaching (generally from the ‘Éveil aux Langues’; see Candelier et al., 2007), as they aim to develop multilingual and intercultural competence, other studies use the LL as an additional input in the target language (Cenoz & Gorter, 2008), due to its potential as a “rich learning environment” (Ballweg, 2018). In terms of the monolingual focus, Lisek (2018) explores the use of Polish in the LL as authentic material to foster the learning of this language in academic and non-academic contexts in Germany, also by analysing teachers’ and students’ responses to the use of the LL in the classroom. Rowland (2013), focusing on English learning in Japan, maintains that pedagogical LL projects can be valuable to students in a variety of ways, particularly in the development of students’ symbolic competence and literacy skills. According to these studies, there are four spheres of pedagogical action in which the use of LLs can favour the learning of the target language: learning of linguistic elements, such as vocabulary, even if accidental; development of pragmatic skills; development of multimodal literacies; and development of competences in various languages (Cenoz & Gorter, 2008).

The use of LLs in the classroom enhances understanding of the synergies between formal and informal contexts of language learning and use (see, for specific examples, Araújo e Sá et al. 2022 and Carinhas et al. 2020), enabling a more authentic and less school-related contact with the so-called ‘target language’ or with linguistic diversity (Malinowski et al., 2020; Niedt and Seals, 2020; Tjandra, 2021). These publications allow us to postulate that it is possible to learn *with* the LL in immersion and *through* LLs by moving them into the classroom (Brinkmann et al., 2022). More specifically, Brinkmann et al. (2022) refer to the possibility of bringing the LL into the classroom through multimodal transposition, i.e., the capture of elements of the LL and its pedagogical use in the classroom, meaning a decontextualisation and recontextualisation of its elements with an educational goal. Other studies have exploited the potential of leaving space for the learner to analyse LLs outside the classroom and then discuss them in a formal context (Roos & Nicholas, 2019; Tjandra, 2021). Roos and Nicholas (2019), with a monolingual focus, studied how German primary school learners of English engage with examples of English that they were asked to identify in their local environments and describe their reflection skills in the classroom. Also in a study with children but combining a monolingual and a multilingual focus, Tjandra (2021) explores newcomer children’s perspectives and interpretations of their LL as they learn English in Canada. She examines the extent to which activities around LL influence these students’ language awareness and learning, their identity negotiations, and their sense of belonging.

4 Volume Overview

This book draws clearly on the works cited in the review presented in the previous sections and provides an international account of the use of LLs to promote multilingual education, from primary school to university to teacher education programmes. It brings the LL to the forefront of multilingual education in school settings and teacher education, thus expanding the disciplinary domains through which it has been almost exclusively studied: sociolinguistics, (urban) multilingual studies and social change, and language policy. The empirical studies presented in this book, while drawing on such multidisciplinary research to date, locate the LL in the field of language (teacher) education. Developed on five continents (in twelve countries), they illustrate how multilingual pedagogies can be enhanced through the use of LLs in mainstream education, while at the same time being beneficial to teacher professional development.

It has been argued that LL bridges formal and informal (language) learning settings. Nevertheless, the extent to which the pedagogical use of LL resources can benefit global citizenship, intercultural learning, language awareness and competencies in target (additional) languages, as well as develop teachers' professional identities, has been ill-researched, with little empirical evidence available to support those claims. Showcasing a wide variety of methodologies, including classroom observation, teacher and student inquiries, content and discourse analysis of teacher interviews and classroom interactions and documental analysis, this book provides the reader with closer analyses of school actors' discourses and practices around the use of LLs for pedagogical purposes.

The book acknowledges that linguistic landscaping (and also 'schoolscaping' and 'homescaping') can be a powerful starting point for evaluating and valuing the presence of various languages and linguistic resources in (second, additional or heritage) language teaching. As such, pedagogical work with LLs favours the development of multilingual, critical and plurisemiotic literacies, by actively engaging actors in discussions on language hierarchies and linguistic prestige, language comparison and language awareness, and translanguaging in public spaces. Concomitantly, the development of language skills and linguistic repertoires can be understood as byproducts of contact with such resources.

All chapters included in this book share the understanding that to cultivate global language education—a cross-linguistic and interdisciplinary education that promotes an identity that is open to linguistic and cultural diversity, thereby fostering lifelong learning—it is necessary to bring students' lifeworld and the multilingualism of the school into (additional) language teaching. This may assist the development of a sense of belonging through active participation in multilingual and intercultural spaces.

In the field of teacher education, a field of inquiry explicitly addressed in this book, it has been acknowledged that teachers develop a deeper understanding of pupils' plurilingualism (following Hancock, 2012) through the joint description and interpretation of the semiotic artefacts that surround them. Various contributions in

this book address issues of professional development, showing that work with LLs is beneficial to both the students and teachers.

The book is structured in four parts, according to the focus of analysis and contexts covered. The first part, entitled “The Exploration of Linguistic Landscapes in the Classroom”, comprises 4 chapters that deal with the integration of LLs as pedagogical resources, leading to the implementation of multilingual pedagogies from primary to higher education.

Monica López and Melinda Dooly, in their chapter “Languages around us: (in)visibility matters”, outline how a LL project in a primary school in Catalonia, Spain, aimed to raise young language learners’ (ages 10–11) awareness. The authors analyse quantitative and qualitative data from student output gathered during a LL project, aimed at promoting inquiry-based learning amongst the pupils. Through a series of guiding questions, the learners engaged in discovering ‘visible but not seen’ languages in their homes and communities. The learners’ discoveries were then used to develop a school project to make all the school languages visible to all.

In the next contribution, “Walking linguistic landscapes as ways to experience plurality. A visual ethnography into plurilingualism with elementary school children in Japan”, Mayo Oyama, Danièle Moore and Daniel Roy Pearce observe the development of creative plurilingual pedagogies based on the documentation of the local LL as ways to experience and reflect on plurality. Within a perspective where knowledge is grounded in experience and movement, they explore how learners aged 8–10 years go through a series of interdisciplinary activities and visits that focus on experiential social scientific inquiry. The tasks engaged children with multilingual writing practices, art and disciplinary learning. The research and inquiry-based methodology adopted a visual and sensory ethnography of/in movement, anchored in collaborative research-action. Multimodal data sources include child-and-researcher initiated visual documentation and reflective journals, digital photographs, teachers and researchers’ field notes and video recordings of children’s interactions.

Sonia Cadi, Latisha Mary, Maria Siemushyna and Andrea Young, in their chapter “Empowering pupils and raising critical language awareness through a collaborative multidisciplinary project”, present research on a LL project with a lower secondary school class (children aged 12–13) in the east of France. The project involved teachers from a range of subjects (French, sport, geography, maths, English, Latin) who collaborated to develop a multidisciplinary project focussing on the LLs of the school and local town, and raising children’s knowledge about language(s) through a process that centred them as key actors and decision makers. Based on observations and recordings of classroom activities, interviews with teachers and other educational actors as well as student’s written contributions, the authors discuss how such an interdisciplinary project can contribute to the construction of “interpersonal spaces of reciprocal empowerment between teachers and students” (Cummins, 2021), thus maximizing their “communicative potential” (García, 2009, p. 140).

In “Thinking allowed: Linguistic landscapes-based projects for higher-order thinking skills”, Klaudia Kruszynska and Melinda Dooly present data collected ethnographically during the implementation of a LL project in Catalonia, delivered

in a hybrid format due to the Covid-19 crisis. The project aimed to make 27 middle-school students more reflective about the LL in their surroundings by exposing them to the multilingualism in which they live and then encouraging them to explore their own linguistic ecology. The project also intended to prompt students to interrogate definitions of language in the hopes of expanding their conceptualisations towards the notion of language and engaging them in a sociolinguistic discussion on language hierarchies and linguistic prestige. The data for the analysis were gathered from a video recording of an English as a Foreign Language lesson and teacher's observations completed after LL project lessons. Taking an emic, qualitative approach, the authors address the principal question: Did LL projects help to connect foreign-language learning and language awareness through sociolinguistic discussions on language presence, hierarchies and dynamics in broader social contexts?

The second part of the book is called "Linguistic landscapes in multilingual learning and teaching environments" and includes three chapters exploring the use of LL as pedagogical resources connecting 'indoor' and 'outdoor' language learning environments. The authors explore analogue and virtual multilingualism in their 'visuality' and materiality, and address issues related to global citizenship, post-colonialism, and gamification.

Mónica Lourenço, Joana Duarte, Francisco P. Silva and Bruna Batista, in their chapter "Is there a place for global citizenship education in the exploration of linguistic landscapes? An analysis of educational practices in five European countries", address the potential of LL in contributing to global citizenship education, an educational perspective that aims to prepare students to fully embrace the opportunities and challenges of a globalised world. The study investigates whether, to what extent and how the activities designed and staged by the teachers in the different partner cities of the LoCALL project (see footnote 1) address topics, learning goals and methodological approaches aligned with global citizenship education. To do this, a qualitative methodology was adopted and a taxonomy for deductive content analysis was created drawing on key global citizenship education literature.

Perpétua Gonçalves and Manuel Guissemo, in "Linguistic landscape of Maputo: A space for a didactic exploration of multilingualism", investigate the multilingualism of Maputo's LL, taking into account linguistic and socio-cultural dimensions. Maputo, the capital city of Mozambique, represents a complex multilingual region of the Global South where, in addition to Portuguese as official language, several Bantu languages, English and, more recently, Chinese, play an important role in economic activities. Although Portuguese is the dominant language, all these languages are present in Maputo's LL. In this study, through a random collection of photos of the LL in urban scenarios, the authors show how the elements of 'grassroots literacy' (Blommaert, 2010) and the symbolic value of the languages in Maputo's LL can be taken into account as pedagogical resources for language teaching and teacher education.

In "The LoCALL app: a mobile tool to promote learning from and about linguistic landscapes", Margarida M. Marques, Mónica Lourenço, Lúcia Pombo, Alexandra das Neves, Dionísia Laranjeito and Filomena Martins explore how an app can create a bridge between pupils' plurilingual experiences and their multilingual learning

pathways at school. Firstly, the authors describe the app and the interface of game creation. Secondly, they analyse how a class of pupils of low secondary education (aged 11–13) explored this tool in the streets of Aveiro (Portugal), and collaboratively discovered and discussed the local LL. Interviews with participating teachers show that they perceive multiple benefits from working with LLs, ranging from enhanced language awareness, critical thinking, and activation of curricular and non-curricular knowledge.

The third part of the book, focusing on “Teachers and students’ voices on linguistic landscapes”, explicitly addresses the benefits of using LLs as a resource for learning and in teacher education programmes. The four chapters in this section predominantly focus on pre-service teacher education.

The chapter “Mediation of language attitudes through linguistic landscapes in minority language education”, by Joana Duarte, Sibrecht Veenstra and Nelly van Dijk, addresses the role of LL in the context of minority-language education, in Fryslân (the Netherlands). The authors explore how the integration of LL in Frisian-language education may lead to emancipatory ways of addressing minority/majority language representations and tensions among adolescents in urban areas of the province of Fryslân. In a multiple case-study design, the authors investigate how secondary school pupils (aged 15–17) in two schools engaged in inquiry-based research, analysing the LL in their school surroundings, and formulated language policy advice for their regional government.

In a chapter called “Teachers and students’ perspectives on the use of linguistic landscapes as pedagogic resources for enhancing language awareness: a focus on the development of cognitive and affective dimensions”, Lisa Marie Brinkmann and Sílvia Melo-Pfeifer crisscross teachers’ and students’ perspectives on the use of LLs as resources for language education. The authors observe how two teachers of French in German secondary schools integrate LL modules. Teacher and student perspectives on those implementations are then compared. This study highlights convergences and divergences between teachers, and between teachers and students, illustrating the pedagogical potential of a sociolinguistic object in formal language education settings, both for students and teachers, in urban and non-urban areas, for the development of their language awareness.

The chapter by Ana Isabel Andrade, Filomena Martins, Susana Pinto and Ana Raquel Simões focusses on the “Educational possibilities of linguistic landscapes exploration in a context of pre-service teacher education”. The authors claim the importance of developing teacher education programmes that privilege understanding of the (in)visibility of linguistic and cultural diversity and its valuation in educational contexts. Following this belief, the authors reflect on the potential of LLs as pedagogical context and pedagogical resource for initial teacher education. Trainee teachers’ representations are analysed around two categories: educational relevance of LLs and educational possibilities for the exploration of LLs. Data was collected through trainees’ written reflections regarding LL pedagogical projects for educational exploration. The analysis allows us to understand the pedagogical and didactic knowledge developed by trainee teachers when focusing on the concept of LL.

The final chapter of this section, by Maria Helena Araújo e Sá, Raquel Carinhas, Sílvia Melo-Pfeifer and Ana Raquel Simões, is called “The co-construction of the concept ‘linguistic landscape’ by language educators in an online course”. This contribution analyses teachers’ and mentors’ participation in an online teacher training event (one-week duration) about the use of LLs in language education. The authors examine how the participants collaboratively construct the meaning of ‘linguistic landscape’ in multilingual discussions around specific literature using the social e-reader Perusall. More specifically, the authors analyse how the participants dialogically expand or reduce the scope of the concept LL and appropriate it for pedagogical purposes.

The fourth part of the book, called “Expanding linguistic landscapes in education”, covers emergent perspectives on LL and beyond, such as sensescapes, the materiality of multilingualism, geolinguistic approaches to LL, and virtual LL.

Josh Prada, in the chapter “Sensescapes and what it means for language education”, lays out the groundwork to understand LLs from a perspective that encompasses multisensoriality. Based on the presentation of two *proyectos*, he discusses what the studies of LLs in language education have to benefit from integrating a sense-making viewpoint, understood in a cognitive and a sensorial way. The author ends with a reflection about the complementarity between studies focusing on the languages of LLs and those focusing on the sensory apprehension of LLs.

In “Theory and pedagogical perspectives on the use of material culture in the classroom: experiences in multilingual contexts of Israel and Russian Federation”, Larissa Aronin, Daria Bylieva and Victoria Lobatyuk address the material culture of the contemporary and highly multilingual world. Material culture includes LL as an important constituent but goes beyond it. According to the authors, material culture encompasses private and in-between spaces and possesses dynamic, portable and tangible dimensions. This chapter discusses the significance of material culture for acknowledging the benefit of superdiversity in education, in particular in additional-language classroom. Based on the theoretical postulates of the material culture of multilingualism and experiential data from Israel and the Russian Federation, the authors propose new methods and collaborative learning tools to be brought to the classroom. Among them, creating and manipulating external representations of individual dominant language constellations and the use of materialities in language classrooms of Saint Petersburg are described and their pedagogical implications discussed.

Alice Chik, in her chapter “The visibility of languages—connecting schools to communities”, proposes an alternate geolinguistics approach to the use of census and online public access information to map the new urban diversities of multilingualism. Following historical migration patterns, earlier multilingualism studies in Australia tended to focus on European language speech communities in specific locales. These studies created a public impression linking specific languages to certain neighbourhoods or ‘ethnoburbs’. This chapter acts first to demystify ‘ethnoburbs’ or homogeneity of speech communities, showing multiple scales of multilingual heterogeneity. Second, while census data reveal multilingual heterogeneity, the author shows the absence of online visibility of multilingualism on local institutional and

business websites. The chapter concludes with new directions for using a critical geolinguistic approach to make the school-community LL connection.

Sarah McMonagle explores (potentially) multilingual practices on social media in “Virtual linguistic landscapes from below: A hashtag analysis of the European Day of Languages”. The author aims to identify the diversity of languages used in Tweets about the European Day of Languages (EDL)—an annual event inaugurated by the Council of Europe to highlight and promote linguistic diversity in Europe as well as the importance of language learning. A corpus of tweets, compiled from the official EDL hashtag, is both quantitatively and qualitatively examined using a coding scheme for hashtag analysis. While it can be argued that virtual LLs (VLLs) present opportunities for language display not usually possible in physical LLs, not least as social media users co-construct the VLL in which they are active, tech company algorithms seem to determine the VLLs to which those same users are exposed.

The book ends with a contribution by Mónica Lourenço and Sílvia Melo-Pfeifer, titled “Conclusion: Linguistic Landscapes in Education—Where do we go now?”, in which they recall the main contribution of the present volume to the studies on LL and address LL as both a theoretical and an ethical lens for promoting multilingual education and translanguaging. They call for an understanding of LL attached to individuals’ material, sensorial, spatial, multimodal, and linguistic repertoires, issues that emerge from this volume and deserve a further conceptual expansion. Following from this holistic and integrated understanding, they propose future perspectives for research and practice on and about LL, focusing on epistemological, pedagogical and teacher education issues.

5 Synthesis and Acknowledgements

This book advances the field of LLs in language education and teacher education in many ways by underlining the value of interdisciplinarity, both in research and educational contexts. It shows the potential of LLs for multilingual education, both in language education across the curriculum and in teacher education programmes. It shows how LLs can help to promote and implement multilingual pedagogies in mainstream classrooms and thus to propagate pedagogical translanguaging as a resource for the critical teaching and learning of/about languages. A common strand in these studies is the acknowledgement that other—less logocentric and writing-oriented pedagogies—ways of teaching and learning languages are possible, based on discovery and creativity, on intervening, inventive and engaging pedagogies.

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References

- Androutopoulos, J. (2020). Linguistic Landscape-Forschung mit dem Smartphone: Möglichkeiten und Grenzen der Webapplikation LinguaSnappHamburg. In E. Ziegler & H. F. Marten (Eds.), *Linguistic Landscapes im deutschsprachigen Kontext* (pp. 39–63). Peter Lang.
- Androutopoulos, J., & Kuhlee, F. (2021). Die Sprachlandschaft des schulischen Raums. Ein diskursfunktionaler Ansatz für linguistische Schoolscape-Forschung am Beispiel eines Hamburger Gymnasiums. *Zeitschrift für Angewandte Linguistik*, 75(1), 195–243.
- Araújo e Sá, M. H., Carinhas, R., & Melo-Pfeifer, S. (2022). De la rue aux pupitres: L'éducation au plurilinguisme à travers les paysages linguistiques vue par les enseignants de langues. *Les Cahiers de l'ACEDLE*. <https://doi.org/10.4000/rdlc.11637>.
- Aronin, L., & Ó Laoire, M. (2012). The material culture of multilingualism. In D. Gorter, H. Marten & L. Van Mensel (Eds.), *Minority languages in the linguistic landscape* (pp. 299–318). Palgrave.
- Backhaus, P. (2007). *Linguistic landscapes. A comparative study of urban multilingualism in Tokyo*. Multilingual Matters.
- Badstüber-Kizik, C., & Janíková, V. (2018) (Eds.). *Linguistic Landscape und Fremdsprachen-didaktik. Perspektiven für die Sprach-, Kultur- und Literaturdidaktik*. Peter Lang.
- Ballweg, S. (2018). Alltagsstrategien zur Rezeption einer Linguistic Landscape und erste Überlegungen zur Förderung im Unterricht. In C. Badstübner-Kizik & V. Janíková (Eds.), *Linguistic Landscape und Fremdsprachendidaktik* (pp. 297–324). Peter Lang.
- Benson, P. (2021). *Language learning environments. Spatial perspectives on SLA*. Multilingual Matters.
- Benson, P. (2019). *Linguistic landscapes 1: Theory and methods. Multilingual Sydney working papers 2*. Macquarie University. <https://www.multilingualsydney.org/>.
- Benson, P., Clarke, N., Hisamuddin, H., & McIntyre, A. (2019). *Linguistic landscapes 2: The linguistic landscapes of suburban Sydney. Multilingual Sydney working papers 3*. Macquarie University. <https://www.multilingualsydney.org/>.
- Blommaert, J. (2010). *The sociolinguistics of globalization*. Cambridge University Press.
- Blommaert, J. (2013). *Ethnography, superdiversity and linguistic landscapes. Chronicles of complexity*. Multilingual Matters.
- Brinkmann, L. M., Duarte, J., & Melo-Pfeifer, S. (2022). Promoting plurilingualism through linguistic landscapes: A multi-method and multi-site study in Germany and the Netherlands. *TESL Canada Journal*, 38(2), 88–112. <https://doi.org/10.18806/tesl.v38i2.1358>.
- Caillis-Bonnet, F. (2013). Exploiter le paysage linguistique dans le cadre des programmes scolaires: Exemple d'une école bilingue de Perpignan (Catalogne-Nord/Roussillon). In C. Cortier & M. Cavalli (Eds.), *Langues régionales/minoritaires dans l'éducation bi-/plurilingue* (pp. 29–33). Langues d'ici, langues d'ailleurs.
- Candelier, M. (Coord.), Camilleri-Grima, A., Castellotti, V., De Pietro, J.-F., Lörincz, I., Meissner, F.-J., Schröder-Sura, A., & Noguerol, A. (2007). *Framework of reference for pluralistic approaches to languages and cultures*. Conseil de l'Europe.

- Carinhas, R., Araújo e Sá, M. H., & Moore, D. (2020). Mi calle favorita. A reconstrução multimodal da paisagem da Ciudad Vieja de Montevideo num projeto plurilíngue entre a escola, os museus e as famílias. *Domínios de Linguagem*, 14(4), 1059–1086. <https://doi.org/10.14393/DL44-v14n4a2020-2>.
- Cenoz, J., & Gorter, D. (2022). *Pedagogical translanguaging*. Cambridge University Press.
- Cenoz, J., & Gorter, D. (2008). The linguistic landscape as an additional source of input in second language acquisition. *IRAL*, 46, 267–287.
- Chapelle, C. (2020). Linguistic landscape images and Québec’s cultural narrative in French textbooks. In D. Malinowski, H. Maxim & S. Dubreil (Eds.), *Language teaching in the linguistic landscape. Mobilizing pedagogy in public space* (pp. 43–67). Springer.
- Clemente, M., Andrade, A. I., & Martins, F. (2012). Learning to read the world, learning to look at the linguistic landscape: A study in the first years of formal education. In C. Hélot, M. Barni, R. Janssens & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 267–285). Peter Lang.
- Cummins, J. (2021). Pedagogies of powerful communication: Enabling minoritized students to express, expand, and project identities of competence. In L. Mary, A-B. Krüger & A. S. Young (Eds.), *Migration, multilingualism and education: Critical perspectives on inclusion* (pp. 284–297). Multilingual Matters.
- Dagenais, D., Moore, D., & Sabatier, C. (2012). Lire la ville. Exploiter le paysage linguistique pour une approche plurilingue intégrée. In C. Cortier, C. & M. Cavalli (Eds.), *Langues régionales/minoritaires dans l’éducation bi-/plurilingue. Langues d’ici, langues d’ailleurs* (pp. 25–28). ECML.
- Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F. (2009). Linguistic landscapes and language awareness. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 253–269). Routledge.
- Dressler, R. (2015). *Signgeist*: Promoting bilingualism through the linguistic landscape of school signage. *International Journal of Multilingualism*, 12(1), 128–145.
- Elola, I., & Prada, J. (2020). Developing critical sociolinguistic awareness through linguistic landscapes in a mixed classroom: the case of Spanish in Texas. In D. Malinowski, H. Maxim & S. Dubreil (Eds.), *Language teaching in the linguistic landscape. Mobilizing pedagogy in public space* (pp. 223–250). Springer.
- García, O. (2009). Education, multilingualism and translanguaging in the 21st century. In O. García (Ed.), *Bilingual education in the 21st century: A global perspective* (pp. 140–158). Basil/Blackwell.
- Gorter, D. (2006a). Introduction: The study of the linguistic landscape as a new approach to multilingualism. *International Journal of Multilingualism*, 3(1), 1–6.
- Gorter, D. (Ed.). (2006b). *Linguistic landscape: A new approach to multilingualism*. Multilingual Matters.
- Gorter, D. (2017). Linguistic landscapes and trends in the study of schoolsapes. *Linguistics and Education*, 1–6.
- Gorter, D., & Cenoz, J. (2015). The linguistic landscapes inside multilingual schools. In B. Spolsky, M. Tannenbaum, & O. Inbar (Eds.), *Challenges for language education and policy: Making space for people* (pp. 151–169). Routledge.
- Hancock, A. (2012). Capturing the linguistic landscape of Edinburgh: A pedagogical tool to investigate student teachers’ understanding of cultural and linguistic diversity. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 249–266). Peter Lang.
- Hélot, C., Barni, M., Janssens, R., & Bagna, C. (2012a). Introduction. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 17–24). Peter Lang.
- Janíková, V. (2018). *Linguistic Landscapes* aus fremdsprachendidaktischer Perspektive. In C. Badstübner-Kizik & V. Janíková (Eds.), *Linguistic Landscape und Fremdsprachendidaktik* (pp. 137–172). Peter Lang.

- Jaworski, A. & Thurlow, C. (Eds.) (2010). *Semiotic Landscapes. Language, image, space*. Continuum International Pub. Group.
- Kalaja, P., & Melo-Pfeifer, S. (Eds.). (2019). *Visualising multilingual lives*. Multilingual Matters.
- Kramsch, C. (2018). Trans-spatial utopias. *Applied Linguistics*, 39(1), 108–115.
- Krompák, E. (2018). Linguistic landscape im unterricht. Das didaktische Potenzial eines soziolinguistischen Forschungsfelds. *Beiträge zur Lehrerinnen- und Lehrerbildung*, 36(2), 246–261.
- Krompák, E., Fernández-Mallat, V., & Meyer, S. (2022) (Eds.). *Linguistic landscapes and educational spaces*. Routledge.
- Krompák, E., & Todisco, V. (Eds.) (2022). *Sprache und Raum. Mehrsprachigkeit in der bildungsforschung und in der Schule. Language and space. multilingualism in educational research and in school*. hep.
- Lisek, G. (2018). Linguistic landscapes und Fremdsprachendidaktik? Bestandsaufnahme zum universitären und außeruniversitären Polnischunterricht in Deutschland. In C. Badstübner-Kizik & V. Janíková (Eds.), *Linguistic Landscape und Fremdsprachendidaktik* (pp. 243–296). Peter Lang.
- Lozano, M. E., Jiménez-Caicedo, J., & Abraham, L. (2020). Linguistic landscape projects in language teaching: Opportunities for critical language learning beyond the classroom. In D. Malinowski, H. Maxim & S. Dubreil (Eds.), *Language teaching in the linguistic landscape. Mobilizing pedagogy in public space* (pp. 17–42). Springer.
- Macedo, D. (2019). *Decolonizing foreign language education. The misteaching of English and other colonial languages*. Routledge.
- Malinowski, D., Maxon, H., & Dubreil, S. (2020) (Eds.). *Language teaching in the linguistic landscape. Mobilizing pedagogy in public space*. Springer.
- Marten, H., & Saagpak, M. (Eds.). (2017). *Linguistic landscapes und spot German and der Schittstelle von Sprachwissenschaft Und Deutschdidaktik*. IUDICIUM Verlag.
- Marten, H., Van Mensel, L., & Gorter, D. (2012). Studying minority languages in the linguistic landscape. In D. Gorter, H. Marten, & L. Van Mensel (Eds.), *Minority languages in the linguistic landscapes* (pp. 1–15). Palgrave Macmillan.
- May, S. (2014). *The multilingual turn. Implications for SLA, TESOL and bilingual education*. Routledge.
- Melo-Pfeifer, S. (2022). Linguistic landscapes in the home: multilingual children's toys, books and games. In S. Stavans & U. Jessner (Eds.), *The Cambridge handbook of childhood multilingualism* (pp. 605–622). Cambridge University Press.
- Melo-Pfeifer, S., & Lima-Hernandez, M. C. (2020). Apresentação. Paisagens Linguísticas: ideologias, discursos e práticas multilíngues nos espaços sociais. *Domínios de Lingu@gem*, 14(4), 1024–1058.
- Melo-Pfeifer, S., & Silva, F. (2021). Potencial didático da paisagem linguística no ensino-aprendizagem do português: Um estudo da paisagem linguística do “Portugiesenviertel” de Hamburgo. In N. Dominique & M. Souza Neto (Eds.), *Microgeopolítica da língua portuguesa: Ações, desafios e perspectivas* (pp. 85–107). Boavista Press.
- Niedt, G., & Seals, C. (Eds.). (2020). *Linguistic landscapes beyond the language classroom*. Bloomsbury.
- Paraguaí, L. (2019). *Sensescape-narrativas flutuantes*. Dossiê Membranas: Intersecções Entre Arte, Ciência e Tecnologia. *ARS*, 17(35), 2019. <https://doi.org/10.11606/issn.2178-0447.ars.2019.152455>.
- Pennycook, A. (2019). Linguistic landscapes and semiotic assemblages. In M. Pütz & N. Mundt (Eds.), *Expanding the linguistic landscape* (pp. 75–88). Multilingual Matters.
- Pennycook, A., & Makoni, S. (2020). *Innovations and challenges in applied linguistics from the global south*. Routledge.
- Pennycook, A., & Otsuji, E. (2015). Making scents of the landscape. *Linguistic Landscape*, 1(3), 191–212.

- Pennycook, A., Morgan, B., & Kubota, R. (2013). Series Editors' Preface. In J. Blommaert (Ed.), *Ethnography, superdiversity and linguistic landscapes. Chronicles of complexity* (pp. ix–xii). Multilingual Matters.
- Piller, I. (2016). *Linguistic diversity and social justice. An introduction to applied sociolinguistics*. Oxford University Press.
- Pütz, M., & Mundt, N. (Eds.). (2019). *Expanding the linguistic landscape*. Multilingual Matters.
- Roos, J., & Nicholas, H. (2019). Using young learners' language environments for EFL learning. Ways of working with linguistic landscapes. *AILA Review*, 32, 91–111.
- Rowland, L. (2013). The pedagogical benefits of a linguistic landscape project in Japan. *International Journal of Bilingual Education and Bilingualism*, 16(4), 494–505. <https://doi.org/10.1080/13670050.2012.708319>
- Shohamy, E., & Gorter, D. (2009a). Introduction. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 1–10). Routledge.
- Shohamy, E., & Waksman, S. (2012). Talking back to the Tel Aviv Centennial: LL responses to top-down agendas. In C. Hélot, M. Barni, R. Janssens & C. Bagna, C. (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 109–125). Peter Lang.
- Solmaz, O., & Przymus, S. (Eds.) (2021). *Linguistic landscapes in English language teaching: A pedagogical guidebook*. Dicle University, Turkey & Texas Christian University, US. <https://repository.tcu.edu/handle/116099117/45344>.
- Spolsky, B., & Cooper, R. (1991). *The languages of Jerusalem*. Clarendon Press.
- Szabó, T. (2015). The management of diversity in Schoolscape: An analysis of Hungarian practices. *Journal of Applied Language Studies*, 9(1), 23–51.
- Tjandra, C. (2021). Supporting newcomer children's language awareness, incidental language learning, and identity negotiation through the multilingual linguistic landscape: An exploratory case study. *The Canadian Modern Language Review/la Revue Canadienne Des Langues Vivantes*, 77(1), 1–22.

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The Exploration of Linguistic Landscapes in the Classroom

Languages Around Us: (In)visibility Matters



Mónica López Vera and Melinda Dooly

Abstract This chapter addresses the question of how students in primary education might gain awareness of the languages in their immediate environment as well as critical skills for reflecting on the value of multiple languages in their lives through the pedagogical use of Linguistic Landscapes. To consider this issue, the chapter describes and analyses the implementation of a project based on the discovery of linguistic landscapes and the adaptation of this approach for *Homescapes* with students in 5th and 6th grade in a primary school in Catalonia. This adjustment to the project was necessary due to the school closing during the global pandemic. During the online implementation the authors collected data sets in different formats (collages, individual and collectively authored language lists, surveys) and then analyzed them both qualitatively and quantitatively, according to the nature of the data collected. The data analysis corroborates previous studies on linguistic landscapes within the pedagogical field which show that young learners, even in asynchronous, digitalized instruction, can gain critical skills and reflect on the value of multiple languages in their lives.

Keywords Linguistic landscapes · Homescapes · Asynchronous teaching · Critical skills · Multicultural diversity

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1 Introduction: Raising Young Learners' Awareness of Linguistic Diversity

Increasingly over the years, there have been calls from educators and applied linguists regarding the need for critical pedagogy and transformative praxis that will help raise students' awareness of their social context and enhance critical thinking (Crookes & Ziegler, 2021; Ortega, 2017; Piller, 2016). In a world where globalization (and subsequent diversity) is increasingly associated with a negative impact on local life while international commerce and opening of borders are seen as beneficial only for the wealthy and elite, we are consequently seeing "serious deterioration of solidarity and respect for human diversity" (Ortega, 2017, p. 1). With these issues in mind, this chapter outlines how a linguistic landscape project in a primary school in Catalonia, Spain, aimed to raise young language learners' awareness and appreciation of social, cultural and linguistic diversity by guiding them to think about the following questions: Why are some languages more (in)visible than others for primary school learners? How can we make our schoolmates' invisible languages visible to all? As will be outlined below, the project, which was initially designed in 2019 to be carried out in-person, had to be quickly changed to adapt to the crisis of the Covid 19 pandemic and subsequent shutting of public schools.

In this chapter we analyze student output which was gathered during the linguistic landscape project carried out between March and June of 2020 to explore (1) whether the project had any impact on young learners' awareness of lesser noticed languages in their immediate environment; (2) did they gain critical skills for reflecting on the value of multiple languages in their lives? The project, entitled 'What languages are living in our homes?' aimed to promote inquiry-based learning amongst the pupils, supported through a series of guiding questions. Working through detailed instructions, the learners engaged in discovering 'visible but not seen' languages in their homes and communities in order to first make the young pupils aware of the multiple languages in their quotidian contexts. Following this phase, the learners' initial discoveries were used to develop a school project to make all the school languages visible to everyone. We will briefly describe how the project was originally envisioned and then how it was actually implemented, taking into consideration the changes made due to the Covid 19 shut-in. We then discuss the challenges that emerged from the enforced modality of online delivery and how these were resolved. Finally, we explore and analyze key learner output in order to determine whether the project aims were fulfilled.

2 Situating Our Project Within Recent Linguistic Landscape Theory and Praxis

A seminal definition of linguistic landscapes was proposed by Landry and Bourhis who described them as the "visibility and salience of languages on public and commercial signs in a given territory or region" (Landry & Bourhis, 1997, p. 23). In a

nutshell, linguistic landscapes are the displayed semiotic resources in public spaces; these might be text, images or a combination of both. Linguistic landscape research has many branches of foci, ranging from sociolinguistics to architecture. While this research covers many (non-education) areas, including semiotic resources such as images and even to a lesser extent auditory cues (e.g. recording languages heard in a community, cf. Dagenais et al., 2009), most linguistic landscape research tends to focus on textual aspects of multilingual contexts such as signage, street art, and commercial products or propaganda.

Interest in the application of linguistic landscape in education has grown over the past few decades, in particular in language learning. The aim is to raise learners' awareness of the rich linguistic complexity around them. As Malinowski et al. (2020) point out, the pedagogical applications of linguistic landscapes (in particular for language learning) can help teachers "Capitalize on this wealth of language and literacy opportunities in the discursive world of public texts and textual practices" (p. 1) that their pupils have around them in their daily lives.

Applications of linguistic landscape can cover multiple educational domains (linguistic, social sciences, citizenship education, arts, geography, tourism studies, etc.). In our case, we aimed to train the learners to be ethnographers (Antoniadou & Dooly, 2017; Bucknall, 2012; Campbell & Lassiter, 2010; Prasad, 2013), thereby raising their awareness of the linguistic and social dynamics of their communities. By promoting the learning of skills necessary for students to become ethnographers of their own neighbourhoods, it was hoped, too, that the young language learners could explore more deeply the sociocultural and socioeconomic context in which they live (Bucknall, 2012). Following the lines of more recent work with linguistic landscapes in pedagogy, the inquiry-based project aimed to prompt reflection on why are some languages in their communities are more visible than others and what this says about the implicit values of languages and cultures where the learners live (Li & Marshall, 2020).

3 The Project Context: How It Began

The first author of this chapter became familiar with the term linguistic landscape after being invited to join the Erasmus+ KA2 Project LoCall. As an English teacher in primary education, she had not been introduced to this teaching approach before but found it immediately appealing because she could readily see the potential benefits of using linguistic landscape activities in primary education in the core subjects of English and Arts and Crafts lessons. In her school, Arts and Crafts is offered through a CLIL approach (Content and Language Integrated Learning) in the third cycle (5th and 6th graders). Given that this approach consists of providing a learning context and materials wherein the students learn about a subject and a second language at the same time, through an integrated approach, she perceived an opportunity to introduce English as the principal (foreign) target language, along with an introduction to other languages, while at the same time fomenting research skills that will be necessary

for these students in the near future as they move into higher grades. As Moore and Llompart (2019) highlight, educators should aim to promote competence-based methodologies through multilingual projects that connect classroom activities with the students' linguistically diverse world that exists outside of the classroom.

Moreover, the first author recognized that, additionally, exploring the linguistic landscape of a given context and implementing this teaching approach promised to be a rich experience for her. As a teacher who cares deeply for linguistic and cultural diversity and wishes to transmit these values to her students, this opportunity was welcomed as a chance to innovate and continue developing professionally. The second author, while familiar with the approach, had not had the possibility of collaborating on the implementation of linguistic landscape with young language learners but her experience and knowledge were crucial to help the former author with the design and plan of her first linguistic landscape teaching project. This chapter outlines their experience together as researchers in its implementation.

3.1 From 'Go Outside' to 'Go Online': Original Plans and Reformulations of the Project

The project was initially thought to be carried out in face to face sessions (March–May 2020) with the main goal of discovering the school linguistic landscape (or 'schoolscape', referring to the school-based material environments that comprises audio and written text, images and other language or communication-related artifacts, cf. Brown, 2012; Szabó, 2015). The intended final output was to create artistic output, to be placed around the school to help make the school's 'invisible' languages more prevalent and visible. However, the Covid lockdown forced a switch of lessons to asynchronous sessions that students carried out from home, because the public schools in Catalonia were closed by the government in March of 2020. The intention to teach students to become ethnographers was maintained, but different plans were developed to help them gather and present that data in a way that could help them reflect upon their findings. This implied significant challenges inherent to the transitioning from the face-to-face 'schoolscape' plans to a linguistic 'homescape' project design and implementation. Haque (2012) defines homescapes as "the presence of various languages visible in the home environment on books, calendars, newspapers, cassettes, kitchen products, religious items, etc." in the "home setting" (p. 225).

Three major difficulties were identified. Firstly, the teacher was uncertain whether the fact that schools were not assessing students during the third term (per government orders) would lower their motivation and participation in the project. There was also an unknown factor regarding students' (and family members') digital competence and access to digital devices (before the shut-down this was not a relevant issue for completion of school work therefore no overall information had been gathered). Finally, there was the question of whether some students and support members of

the family would be able to handle the academic demands of the semi-autonomous, inquiry-based work as planned in the linguistic homescape project.

The project was initially addressed to 100 potential participants. Percentages of participation were obtained via the number of tasks completed and submitted online as well as numerical checking of answers submitted to the surveys (e.g. lists of languages). The average participation of all the groups of students in doing the tasks was 60% and, at some points, depending on the group of students, participation increased up to 70%. These percentages were of interest because it provided some insight into the motivation of the participants in the project. Because the project was implemented during the strict Covid lockdown, the Department of Education in Catalonia had made the decision that students were not to be assessed during this time. This implied that both students and their families were aware that their work and output would not affect their final grades. The connection between motivation and learning is well documented; both intrinsic and extrinsic motivation are key to learner's overall motivation (Gardner, 1985; Ng & Ng, 2015). Given the circumstances, it can be assumed that the students' in this study lacked the immediate extrinsic motivation that is commonplace in school contexts wherein evaluation forms a part in the day-to-day teaching and learning process. Consequently, we argue that 60%, and at some points 70%, of participation of young learners without the normal extrinsic motivation of school attendance and assessment, was a success.

It was decided that the 'schoolscape' project would need to be simplified since the learning had to be asynchronous and non-compulsory. The new planning of the project now consisted of three tasks, all of which were presented to the students as 'challenges'. These challenges were introduced through a question that had to be answered individually, through ethnographic research of their immediate environments or 'homescapes'.

The students' research of their linguistic homescapes resulted in the second task: the compilation of 'data' (documentation gathered by the students) into collages. A prior model was provided by the teacher. Documented responses to the scaffolded process of creating the homescapes were then used as springboards for reflection later in the course. The underlying notion was to set up a 'joint venture' between teacher, students, and family members that helped them begin to develop as ethnographic researchers (Szabó & Troyer, 2017).

3.2 Output and Approach to the Data Sources

Table 1 shows the questions that were presented to the students, a brief description of the task/challenge and the students' output which served as data sources for analysis.

In the 'joint venture' (Szabó & Troyer, 2017) in which the students acted as researchers, the data collection was indispensable for multilayered purposes: (1) For the teacher, student data allowed her to guide them through their learning process, to raise students' linguistic awareness and critical thinking; in particular by providing

Table 1 Linguistic landscape planning brief description

Task 1 Question	Brief description	Output
How many languages live in your house? <i>(At this stage, students were confined to their homes with their families)</i>	The teacher presents a question: <i>How many languages live in your home?</i> Students look for the languages that live in their homes and create a collage showing them. To do this, students are guided with models and tutorials. Students write the languages that live in their homes in a collaborative document	Collage with pictures representing the languages that live in their homes Collaborative document with the list of languages discovered
Task 2 Question	Brief description	Output
How many languages live in your city? <i>(At this stage, the Covid restrictions were less stringent and students could go out to open spaces such as parks with their families an hour a day)</i>	The teacher presents the question and then directs the students to find the languages that live in their cities (using the time allocated to them to go out with their families during lockdown) in order to create a collage showing the languages they have discovered. Models and tutorials are provided for guidance. Students write the languages that live in their neighbourhoods in a collaborative document	Collage with pictures representing the languages that live in their cities Collaborative document with the list of languages discovered
Task 3 Question	Brief description	Output
What language intrigues you the most?	After discovering the linguistic landscapes at home and in the city where the students lived, the teacher proposed to the students to reflect on the languages discovered by answering a survey and to create a word cloud with the language(s) that intrigued them the most. To create the word cloud, the students had to think of five words they would like to know in that language, write them first in English (as this was carried out as part of their English class), and then record themselves saying the words in that language. Finally, they were ready to create the word cloud and share their output online (in google classroom)	List of five words written in English and translated into the language that most intrigued them, from their previous discoveries Word clouds showing the words Answers to the questionnaire

the material means for them to analyse the evidence they had collected as ethnographers. At a later stage, analysis of the data provided evidence of the impact (learning gains) of the use of linguistic landscape with young learners. (2) For students, collecting data helped them develop research skills, become more aware of their linguistic context (language awareness) and reflect and reach conclusions based on the data (evidence) collected as part of an inquiry-based learning process. Afterwards, the collected data were useful for analytical purposes.

Specifically, the data corpus from the project taken into consideration for this chapter contains four subsets:

1. Numerical lists of languages ‘living’ in the students’ homes and cities;
2. Collages showing the evidence found at home and in their cities;
3. Word clouds of the language that most intrigued the students;
4. Answers to open and closed questions presented through a survey.

Due to the different features of the output (numbers, texts, image-based; survey responses), the data were analysed from an interpretive perspective, and in function of the format of the output. Identified languages in datasets 1 and 3 were tallied, then a qualitative perspective of ‘noticing’ of specific item types (Scales, 2013) were used to go through the data. The total number of languages used in dataset 2 (collages) was also calculated and then 3 examples were elected from the dataset, for closer qualitative content analysis (both textual and visual). Selection criteria of data were: the compositions represented a significant number of languages and they included multiple semiotic representations. Dataset 5 was analyzed through a content analysis lens to identify overall themes (Krippendorf, 2013).

4 Analysis and Discussion of the Data

4.1 *Dataset 1. List of Languages Living in the Students’ Homes and Cities*

Students were asked to list the languages that lived in their homes and cities and to post them in a collaborative writing document. The image below shows the results:

The students listed 40 languages in their homes, including lesser spoken languages such as Mayan, Sango, Twi and Uzbek (sic). The students found a total of 18 in their city, including graffiti, street language, traffic signs and music language as shown in Fig. 1. It is interesting that eight of the languages listed in homes and city were ‘non-standard’ languages (that is, they did not align with the commonplace notion of a system of communication used by a particular country or community). Although these young learners did not explicitly verbalize this concept, these findings hint at a burgeoning understanding of languaging (García, 2009; Makoni, 2012; Swain, 2006). Scholars in several fields, including sociolinguistics are advancing the need to go beyond the notion of bounded languages, based on monolingual bias (Bagga-Gupta &

Languages living in the students' homes	Languages living in the students' cities
Arabic	Arabic
Bar code	Catalan
Basq	Chinese
Catalan	English
Chinese	French
Croatian	German
Czech	Graffiti
Danish	Greek
Dutch	Italian
English	Japanese
Estonian	Numbers
Finnish	Polish
French	Sign language
German	Spanish
Hieroglyphic	Street language
Hindi	Traffic signs
Hungarian	Music Language
Italian	Panjabi
Japanese	
Korean	
Latin	
Lithuanian	
Maths	
Mayan	
Music	
Norwegian	
Polish	
Portuguese	
Russian	
Sango	
Sign language	
Slovak	
Slovenian	
Spanish	
Swedish	
Symbols	
Turkish	
Twi	
Uzbek	
Welsh	

Fig. 1 List of the languages that lived in the students' homes and cities

Messina Dahlberg, 2018) in order to recognize the fluidity of meaning-making and this implies a pedagogical entryway to do so.

The students' inclusion of several non-standard languages such as bar code, traffic signs, music, sign language, graffiti, hieroglyphics and symbols as languages that were part of their linguistic landscape can be regarded as very rich and encouraging data. As Kasanga (2015) states, "Signs, or semiotic resources, pervade our environment even if we do not sometimes notice (some, most, or even all of) them" (p. 123). In contrast, these 5th and 6th graders were able to spot other means of communication, different from what is generally understood as language, without explicit instructions to do so. Arguably, this compilation can set the groundwork for broadening the discussion beyond an analysis of presence or absence of particular languages to include multimodality and codes as part of the complex texture of everyday communication -and what it means to be communicatively competent (Byram, 2012).

4.2 Dataset 2. Collage Showing the Evidence Found at Home and in Their Cities

The collage served the teacher as evidence of the students' implications (did they take the time to explore their homes for evidence of multiple languages?) and as a means to promote creative, multimodal communication. Many studies that have taken into account multimodal learner output combine the student artwork with narratives (e.g.



Fig. 2 Linguistic landscape at home. Collage 1

learners' explanations of the art; see (Busch, 2012; Melo-Pfeifer & Schmidt, 2012; Prasad, 2013; Chik, 2018), however in our analysis, we opted to focus on the visual components of the collage.

Figure 2 demonstrates the effort the students took to be 'language detectives' who uncovered many hidden languages in their homes. In the example shown below, the student identified 15 languages, including numerical symbols and Twi (a dialect of the Akan language spoken principally in Ghana) and Sango (spoken in Central Africa Republic).

The student combined artistic collocation of the images with a textual list of the words found on the right-hand side of the collage (from the viewer's perspective). By textually highlighting specific languages, the viewer is made aware of the number and diversity of languages in the homescape and more likely compelled to research information about some of the lesser known languages exhibited (as were the authors of this chapter). Much like art movements based on collage-making (e.g. the Dada movement; Cramer & Grant, 2020), the artwork can be seen to have social meaning—relevant topics are brought to the fore (for instance relatively unknown languages) so that the viewer is obliged to interrogate and think about them and their current status in society (Apter, 2012).

Other learners conveyed their homescapes through images only, without explanatory texts but in all instances the learners displayed artistic and communicative competences that are typically associated with collage-making (Apter, 2012; Taylor, 2017). For instance, the collage in Fig. 2 (above) and the collage on the left-hand side of the page in Fig. 3 employs overlapping, which is a technique commonly used for creating cohesion while adding depth, layers, and dimension (Apter, 2012). The second collage in Fig. 3 uses careful outlining which helps ground the element while at the same time, highlighting the individual components.



Fig. 3 Linguistic landscape at home. Collages 2 and 3

As Bradley et al. (2018) explain, the collaging process provides young learners with the means to use any available resource they have to synthesise and display their research findings. As burgeoning ethnographic researchers, they are empowered through the creative process to ‘voice’ their findings as they want, without academic constraints or protocols.

4.3 Dataset 3. Word Clouds of Most Intriguing Words

The next task required the students to create a word cloud containing the words that most intrigued them. 61% of the students created a word cloud showing five words written in the language that most aroused their interest and curiosity. The languages, ranked from most often selected to less often mentioned are indicated in Table 2.

The student whose L1 is Arabic chose that language as did the student whose L1 is Bulgarian. Another student, who does not speak German but whose father is German chose this language for the word cloud. One student chose Romanian, which is not their L1 but is the L1 of another classmate. This interest in making their own or intimate others’ languages visible speaks powerfully towards the sense of student empowerment that can emerge from the legitimization of multiple languages in education spaces (García & Kleyn, 2016). There was also significant student interest in making visible less common languages (e.g. Latin, Slovene, Welsh, Estonian), conceivably indicative of a newly awakened awareness of languages around them that are not commonly heard in public spaces (e.g. television, cinema, music). Perhaps not surprisingly, French, Italian and German were quite common languages.

Table 2 Languages that most intrigued students, ranked from most often selected to less often mentioned

Language	Number of times chosen
French	11
Japanese	9
Italian and German	7 (each language)
Chinese	4
Arabic, English and Greek	3 (each language)
Portuguese	2
Russian, music, Latin, Slovene, Bulgarian, Slovak, Estonian, Turkish, Welsh, Polish, Romanian, Ukrainian	1 (each language)

This may be due to geographic proximity, language recognition or even due to familiarity with soccer leagues and their clubs' star players. Japanese was also indicated as quite intriguing and may be related to the reading habits of the students—a prior school survey of literature preferences indicated a predilection for Manga comics by many of the students.

The results suggest that the students are becoming more aware of languages present in their surroundings and hopefully more open to seizing learning opportunities around them in diverse learning spaces, including their own homes (Oliveira & Ançã, 2018; Svalberg, 2016).

4.4 Dataset 4. Student Reflections

To finish the online implementation students were posed several questions in asynchronous format. The idea of this activity was to guide them, as ethnographers, through the reflection process, based on the data they had collected. The principal aims were to help them make connections between the languages they had discovered, raise their multilingual awareness (what languages 'live' with them in their homes) while also beginning to highlight the diverse linguistic ecology around them and the values which may be associated with them (Kalaja & Melo-Pfeifer, 2019).

The questions began with a reformulation of the results in order to prompt the students to get them focused on their multilingual surroundings and awareness. Specifically, the first question stated: "Look at the list of languages that you have discovered at home. You have discovered 38 languages in total!!! Select the languages that intrigue you the most." The students could then choose from a list and select more than one (this question was related to the previous word cloud task). 59 students answered this question with Japanese receiving the most votes, followed by Italian, French and English. The next question focused their attention on the linguistic diversity in their city: "This is the list of languages discovered in your city. You discovered 18 languages in total!!! Can you believe it? Select the languages you DID NOT

EXPECT to see in your city.” This question was also answered by 59 students, who listed Greek first, followed by Panjabi and Thai (tied at 40 votes). These two languages were closely followed by Arabic, Polish and Moroccan Arabic as the languages that the students had least expected to see in their cities.

The successive questions aimed to provoke more reflection from the students regarding the language diversity and literacy practices in their community from a more critical perspective (Dagenais et al., 2009). Living in a linguistically loaded context (Catalonia, Spain, which is a bilingual region of Spain with a considerable number of home languages brought into the communities through immigration), the guiding questions brought focus on the importance of understanding individual and collective attitudes towards linguistic and cultural diversity (Gorter & Cenoz, 2015). When asked to think of the most common languages they had discovered in their city and why they thought these languages were the most prevalent whereas some were less visible, the young learners demonstrated the ability to analyze the power dynamics that tie together different linguistic ecologies (home, school, community; cf. Morgan & Martin, 2014). Several of the students answered that Catalan was the most common because it was the official language spoken in their territory (something which had not been discussed previously) and that other languages were not ‘allowed’. Another student made a link between languages spoken and nationalities: “Yes, it depends on where you are, for example, in the United States, their language is English, but here our language is Spanish and Catalan” and another one declared, “Depend [sic] of the region, the country, the village and the mayor or president”. Others recognized the significance of majority speakers: “It depends on how many people speak this language”. Another student responded: “In each country, the corresponding language usually dominates. Also some languages tend to predominate or others depend on the population, that is: If in Spain there is a French population there are also posters in French.” These responses seem to indicate an emergent ability to “critically analyze language and how it is embedded in power” (García & Kleyn, 2016, p. 193).

The students were explicitly asked if they associated any of the languages with feelings. Some students made a connection between music language and feelings while others associated the auditory qualities of certain languages with anger (German, Russian and Chinese) whereas another student mentioned that she ‘loved’ Japanese. One student mentioned that graffiti helps us to express ourselves when we paint. Japanese was seen by one student as a language he/she is in love with and along these lines, one student mentioned feeling positive towards Czech because of someone they know who speaks that language and yet another felt positive towards Arabic as it is his L1. These responses can be interpreted as part of the ‘affective dimension’ of the learners’ linguistic experiences (Melo-Pfeifer & Schmidt, 2012). For instance, some of the students referenced the different languages they had encountered as ‘fun’ because they were ‘weird’, were spoken quickly or the accent was appealing (referencing the auditory quality of languages), because they looked artistic or were very different from their own. On the other hand, two students mentioned their own L1s as fun when someone spoke it when it was not their L1.

While these data are different from the aforementioned study (these are textual, Melo-Pfeifer and Schmidt looked at children's illustrated representations of languages in their lives), the learners' responses in our study also helped identify their feelings associated to the languages in their homes and neighbourhoods and better understand pupils' emotional relationship to languages and cultures in their surroundings and beyond.

5 Conclusions

According to the Council of Europe (2018), language educators should strive for integrated plurilingual teaching practices that promote linguistic and cultural integrity, both inside and outside the school. Educators should adopt frameworks that recognize, accept and promote existent plurilingual repertoires of their students as a valid means of moving towards enhanced plurilingualism (more languages, more awareness and openness towards other languages and cultures) and encourage their learners to have agency over their linguistic and cultural repertoires. Introducing linguistic landscapes into language teaching has been promoted as a way towards these goals (Dagenais et al., 2009; Gorter & Cenoz, 2015). In our study we have found this to indeed be the case. Despite the difficulties of transferring the linguistic landscape to online (voluntary) activities during the period of shut-ins due to the Covid epidemic, the young learners were highly motivated and open to the activities proposed by the teacher. The high amount of participation for activities that were not compulsory and which they knew would not be part of their overall assessment in that year demonstrates their interest and willingness to engage in the learning tasks.

In reference to our first question regarding the impact of the project on the students' awareness of linguistic diversity in their environment, we have also seen how the activities supported the children's growing awareness of the variety of languages (in)visible in their 'linguistic ecologies' (Morgan & Martin, 2014; Young, 2017) and the social and individual value they hold in their environment. For instance, the students reflected on the 'officialness' of certain languages while pointing out their affective connections (Melo-Pfeifer & Schmidt, 2012) to other (non-official) languages because they are languages within their 'personal domain' (their L1, a mate or family member's L1). Similarly, Japanese was considered a relatively 'close' and 'loved' language, perhaps due to the popularity of Japanese comic books (Manga) and animated films (Anime). This substantiates the notion that linguistic landscape projects such as this one can build on students' experiences, values and out-of-school habits to transform their awareness and promote more critically engaged learning (Dagenais et al., 2009).

As regards whether the young learners gained critical skills for reflecting on the value of multiple languages in their lives, we have seen that they found links between languages and the power dynamics within different linguistic ecologies (Morgan & Martin, 2014). They recognized the authority of 'official' languages in specific domains as well as identifying the power wielded by 'national' languages.

The young learners also bring up ideological contradictions in their reflections that run parallel to recent sociolinguistic work on ‘linguaging’, which argues against essentialized notions of languages (Messina Dahlberg & Bagga-Gupta, 2019). For instance, despite making connections between nations and languages (e.g. in the USA, the people speak English), the learners also recognized that the language use depends on the speaker and their linguistic and non-linguistic repertoires, which allows them to be creatively playful in communication (e.g. graffiti, collages).

The learners also invoked more affective values to some languages, based on individual experiences while some students tended to relate some languages as more ‘exotic’ (or ‘weird’ as one child put it). This corroborates Melo-Pfeifer and Schmidt’s (2012) findings that plurilingual projects must explicitly confront potential stereotypes of languages and cultures as they emerge in the learners’ ‘ethnographic data’ and reflections. It is important that linguistic landscape projects such as this one promote language awareness that includes “how language works socially and culturally” (Svalberg, 2016, p. 399).

The student output described here corroborates other studies on the application of linguistic landscapes that propose linguistic landscape projects can help learners make meaningful connections between language(s) they study inside the classroom and the linguistic milieu they encounter on a daily basis (Dagenais et al., 2009; Gorter & Cenoz, 2015). These contextualized connections can even be extended to include more personal environments such as their homes (Tran et al., 2020). According to Young (2014), the integration of a critical language awareness is only possible if both initial teacher education and continuing professional development include programmes that prepare teachers to implement projects such as this one. This may mean that teachers are compelled to move out of the ‘comfort zone’ but the opportunity, as seen here, can inspire learning for all those involved.

References

- Antoniadou, V., & Dooly, M. (2017). Educational ethnography in blended learning environments. In E. Moore & M. Dooly (Eds.) *Qualitative approaches to research on plurilingual education-Enfocaments qualitativus per a la recerca en educació plurilingüe-Enfoques cualitativos para la investigación en educación plurilingüe* (pp. 237–263). Research-publishing.net. <https://doi.org/10.14705/rpnet.2017.emmd2016.630>.
- Apter, S. (2012). *The pulse of mixed media: Secrets and passions of 100 artists revealed*. North Light Books.
- Bagga-Gupta, S., & Messina Dahlberg, G. (2018). Meaning-making or heterogeneity in the areas of language and identity? The case of translanguaging and nyanlända (newly-arrived) across time and space. *International Journal of Multilingualism*, 15(4), 383–411. <https://doi.org/10.1080/14790718.2018.1468446>
- Bradley, J., Moore, E., Simpson, J., & Atkinson, L. (2018). Translanguaging space and creative activity: Theorising collaborative arts-based learning. *Language and Intercultural Communication*, 18(1), 54–73. <https://doi.org/10.1080/14708477.2017.1401120>

- Brown, K. D. (2012). The linguistic landscape of educational spaces. In D. Gorter, H. F. Marten, & L. V. Mensel (Eds.), *Minority languages in the linguistic landscape* (pp. 281–298). Palgrave Macmillan.
- Bucknall, S. (2012). *Children as researchers in primary schools: Choice, voice and participation*. Routledge.
- Busch, B. (2012). The linguistic repertoire revisited. *Applied Linguistics*, 33(5), 503–523. <https://doi.org/10.1093/applin/ams056>
- Byram, M. (2012). Language awareness and (critical) cultural awareness: Relationships, comparisons and contrasts. *Language Awareness*, 21(1), 5–13. <https://doi.org/10.1080/09658416.2011.639887>
- Campbell, E., & Lassiter, L. E. (2010). From collaborative ethnography to collaborative pedagogy: Reflections on the other side of middletown project and community-university research partnerships. *Anthropology & Education Quarterly*, 41(4), 370–385. <http://www.jstor.org/stable/40890856>.
- Chik, A. (2018). Beliefs and practices in foreign language learning: A visual analysis. *Applied Linguistics Review*, 9(2–3), 307–331. <https://doi.org/10.1515/applirev-2016-1068>
- Council of Europe. (2018). *Common European framework of reference for languages: Learning, teaching, assessment. Companion volume with new descriptors*. Council of Europe Publishing.
- Cramer, C., & Grant, K. (2020). Dada collage. *Smarthistory*. Accessed August 16, 2021, <https://smarthistory.org/dada-collage/>.
- Crookes, G. V., & Ziegler, N. (2021). Critical language pedagogy and task-based language teaching: Reciprocal relationship and mutual benefit. *Education Sciences*, 11(254), 1–19. <https://doi.org/10.3390/educsci11060254>
- Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F., (2009). In E. Shohamy & D. Gorter (Eds.) *Linguistic landscape: Expanding the scenery* (pp. 253–269). Routledge.
- García, O. (2009). *Bilingual education in the 21st century*. Wiley-Blackwell.
- García, O., & Kleyn, T. (2016). *Translanguaging with multilingual students: Learning from classroom moments*. Routledge.
- Gardner, R. (1985). *Social psychology and language learning: The role of attitudes and motivation* (1st ed.). Edward Arnold.
- Gorter, D., & Cenoz, J. (2015). Linguistic landscapes inside multilingual schools. In B. Spolsky, M. Tannenbaum, & O. Inbar (Eds.), *Challenges for language education and policy: Making space for people* (pp. 151–169). Routledge.
- Haque, S. (2012). Toward an identity stress. Language and religious affiliations of an immigrant adolescent in Norway. *Nordic Journal of Migration Research*, 2(3), 224–231. <https://doi.org/10.2478/v10202-011-0044-7>.
- Kalaja, P., & Melo-Pfeifer, S. (2019). *Visualising multilingual lives: More than words*. Multilingual Matters.
- Kasanga, L. A. (2015). Semiotic landscape, code choice and exclusion. In R. Rubdy & S. B. Said (Eds.) *Conflict, exclusion and dissent in the linguistic landscape. Language and globalization* (pp. 123–144). Palgrave Macmillan.
- Krippendorff, K. (2013). *Content analysis: An introduction to its methodology*. Sage.
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality. *Journal of Language and Social Psychology*, 16(1), 23–49. <https://doi.org/10.1177/0261927x970161002>
- Li, J., & Marshall, S. (2020). Engaging with linguistic landscaping in Vancouver’s Chinatown: A pedagogical tool for teaching and learning about multilingualism. *International Journal of Bilingual Education and Bilingualism*, 23(8), 925–941. <https://doi.org/10.1080/13670050.2017.1422479>
- Makoni, S. B. (2012). A critique of language, languaging and supervernacular. *Muitas Vozes*, 1(2), 189–199. <https://doi.org/10.5212/MuitasVozes.v.1i2.0003>
- Malinowski, D., Maxim, H. H., & Dubreil, S. (2020). Introduction. In D. Malinowski, H. M. Maxim, & S. Dubreil (Eds.), *Language teaching in the linguistic landscape* (pp. 1–13). Springer.

- Melo-Pfeifer, S., & Schmidt, A. (2012). Linking “heritage language” education and plurilingual repertoires development: Evidences from drawings of Portuguese pupils in Germany. *LI-Educational Studies in Language and Literature*, 12, 1–30. <https://doi.org/10.17239/LIESLL-2012.02.11>.
- Messina Dahlberg, G., & Bagga-Gupta, S. (2019). On the quest to “go beyond” a bounded view of language. Research in the intersections of the educational sciences, language studies and deaf studies domains 1997–2018. *Deafness & Education International*, 21(2/3), 74–98. <https://doi.org/10.1080/14643154.2018.1561782>.
- Moore, E., & Llompарт, J. (2019). De la didàctica de les llengües a la didàctica del plurilingüisme. *CLIL Journal of Innovation and Research in Plurilingual and Pluricultural Education*, 2(2), 57–65. <https://doi.org/10.5565/rev/clil.27>
- Morgan, B., & Martin, I. (2014). Towards a research agenda for classroom-as-ecosystem. *Modern Language Journal*, 98(2), 667–670.
- Ng, C. F., & Ng, P. H. (2015) A review of intrinsic and extrinsic motivations of ESL learners. *International Journal of Languages, Literature and Linguistics*, 1(2), 98–105. Retrieved July 2021 from, <http://www.ijlll.org/vol1/20-L016.pdf>.
- Oliveira, A. L., & Ançã, M. H. (2018). Language awareness and the development of learners’ plurilingual competence. In P. Garrett & J.-M. Cots (Eds.). *The Routledge handbook of language awareness* (pp. 238–256). Routledge.
- Ortega, L. (2017). New CALL–SLA research interfaces for the 21st century: Towards equitable multilingualism. *CALICO Journal*, 34(3), 285–316.
- Piller, I. (2016). *Linguistic diversity and social justice: An introduction to applied sociolinguistics*. Oxford University Press.
- Prasad, G. (2013). Children as co-ethnographers of their plurilingual literacy practices: An exploratory case study. *Language and Literacy*, 15(3), 4–30. <https://doi.org/10.20360/G2901N>.
- Scales, B. J. (2013). Qualitative analysis of student assignments: A practical look at ATLAS.ti. *Reference Services Review*, 41(1), 134–147. <https://doi.org/10.1108/00907321311300956>.
- Svalberg, A. (2016). Language awareness. In G. Hall (Ed.), *The Routledge handbook of English language teaching* (pp. 399–412). Routledge.
- Swain, M. (2006). Linguaging, agency and collaboration in advanced language proficiency. In H. Byrnes (Ed.), *Advanced language learning: The contribution of Halliday and Vygotsky* (pp. 95–108). Continuum.
- Szabó, T. P. (2015). The management of diversity in schools: An analysis of Hungarian practices. *Apples: Journal of Applied Language Studies*, 9(1), 23–51. <https://doi.org/10.17011/apples/2015090102>.
- Szabó, T. P., & Troyer, R. A. (2017). Inclusive ethnographies. Beyond the binaries of observer and observed in linguistic landscape studies. *Linguistic Landscape*, 3(3), 306–326. <https://doi.org/10.1075/ll.17008.sza>.
- Taylor, P. G. (2017). Artistic data visualization and assessment in art. *Visual Arts Research Education*, 43(1), 59–75. <https://doi.org/10.5406/visuartsrese.43.1.0059>
- Tran, T. T., Starks, D., & Nicholas, H. (2020). Discursive constructions of the viewing of a bathroom as a linguistic landscape in a shared home. *Australian Review of Applied Linguistics*, 43(1), 29–51. <https://doi.org/10.1075/araal.18065.tr>
- Young, A. (2014). Unpacking teachers’ language ideologies: Attitudes, beliefs, and practiced language policies in schools in Alsace, France. *Language Awareness*, 23(1/2), 157–171. <https://doi.org/10.1080/09658416.2013.863902>
- Young, A. (2017). From silencing to translanguaging: Turning the Tide to Support Emergent Bilinguals in Transition from Home to Pre-school. In B. Paulsrud, J. Rosén, B. Straszer, & A. Wedin (Eds.), *New perspectives on translanguaging and education* (pp. 108–128). De Gruyter.

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Walking Linguistic Landscapes as Ways to Experience Plurality: A Visual Ethnography into Plurilingualism with Elementary School Children in Japan



Mayo Oyama, Danièle Moore, and Daniel Roy Pearce

Abstract In Japan, where the language of schooling is overwhelmingly Japanese-only, and English the only widespread foreign language offered at all levels of education, elementary schools stand out as a particularly interesting context for observing the development of creative plurilingual pedagogies. Based on the documentation of local linguistic landscapes as ways to experience and reflect on plurality, and within a perspective where knowledge is grounded in experience and movement (Ingold, 2000), children's learning is contextualized through tools (like cameras and iPads). This inquiry process requires drawing on children's social imagination and the aesthetics of photography through walking explorations of the linguistic landscape to develop more complex understandings of locality and transnationalism (Moore & Haseyama, 2018; Haseyama, 2021), multilingual awareness (Melo-Pfeifer, 2015), and multilingual and multimodal literacies (Prasad, 2020). With this in mind, the exploratory research practice in this chapter was conducted with an elementary student who engaged in investigating linguistic landscapes during a self-directed research assignment. The inquiry-based methodology adopts a visual and sensory ethnography of/in movement (Pink, 2015; Vergunst & Ingold, 2008) anchored in a transdisciplinary plurilingual approach to research-based learning. Multimodal data sources include child- and researcher-initiated visual documentation and reflective journaling, digital photographs, and researchers' field-notes.

Keywords Plurilingual education · Linguistic landscapes · Inquiry-based learning · Language awareness · Transdisciplinarity · Elementary school · Japan

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1 Introduction

This contribution considers the development of inquiry-based plurilingual and trans-disciplinary projects to encourage critical awareness of plurality in the context of Japanese elementary instruction. While plurilingual pedagogies are widely known and practiced across the world, the question is how to successfully implement them in a context where the language of schooling is overwhelmingly Japanese-only, and English the only widespread foreign language offered at all levels of education. In what way and to what purpose can such methodologies contribute to research-based inquiry and the building of disciplinary knowledge, and bridge school and home learning while supporting intercultural awareness as language-in-use by making real-world connections through experiential learning and exploration?

We adopt a plurilingual lens to investigate the potential of linguistic landscapes in elementary education, through investigation of which children become ethnographers of their environments and everyday lives (Dagenais et al., 2009). We build on the work of sociolinguists and sociodidacticians who strive to investigate the interrelationships and interplays between the social, physical, and cultural aspects of an environment to conceptualize the multi-layered ecosystems that frame and are framed by people's language use (Calvet, 1994, 2005, 2006), relationships to space, representations and social positioning (Bulot & Veschambre, 2006) and language learning (Van Lier, 2010). As such, we situate ourselves in contextual approaches in education, in which context is an important factor to consider when investigating learning practices (Blanchet et al., 2009), and where various sites of learning are seen as multi-faceted continua, in which temporal and spatial dimensions interact to shape knowledge. This interest in context thus expanded here to open up to more dynamic ecological frameworks to theorise context as a *relational* property, and to better emphasize the qualitative nature and the complex weaving of interconnections and relationships between the learner and the learning in different spaces and scales (Plowman, 2016).

Derived from the Greek *oikos*, meaning house or household, the word ecology “encompasses interconnecting temporal dimensions that suggest dynamic adaptation over time, and spatial dimensions that imply physical surroundings, boundaries, networks and relationships” (Plowman, 2016, p. 191). Van Lier further defines ecology as,

the study of the relationships among elements in an environment or ecosystem, in particular the interactions among such elements. In the human sphere, we can distinguish relationships at physical, social and symbolic levels. These three levels interact in multiple ways and arrangements. [...] how multiple relationships are established in and among the physical, social and symbolic worlds in human ecosystems, and how language serves to establish, maintain and expand such relationships. (Van Lier, 2010, p. 4)

This idea is important in education because it helps conceptualize learning as the interweaving of interconnected texts and processes, rather than as bounded by disciplinary areas, different languages, contexts, and norms; it also disrupts top-down and compartmentalized approaches to teaching, as it contributes to developing grounded

explanations of social phenomena (see, for example, Green et al., 2011). Of particular interest is the idea that the ecological paradigm can support the development of a transdisciplinary approach to interlink the social and natural sciences and encourage a methodological dialogue in order to create, both for teachers and for students, explicit links between languages, various disciplines, and the learners' environment, and ways of doing and learning: Here, specifically through the linguistic landscape. As Malinowski, Maxim and Dubreil state,

Linguistics landscape, a term used to designate the visible, audible, and otherwise textualized languages of public space (Shohamy & Gorter, 2009; Van Mensel et al., 2016), has captured the imaginations of language teachers and SLA theorists for the encounters it offers with the authentic complex, and often contests languages and ideologies of everyday life (2020, p. 2).

Guyotte defines the social imagination as “a re/envisioning of social realities, considering what might be different and how individuals might *become* different through encounters with various ‘Others’” (2018, p. 62). Engaging with the local linguistic landscape through sensory ethnography and visual methodologies (Pink, 2015) creates for children different ways of engaging with their social reality and opportunities to become aware of themselves as social-ethical beings who live in relation to others, fostering interconnectedness through imagination.

Using the study of linguistic landscapes in plurilingual education emphasizes the centrality of embodiment and reflexivity in the learning process. The stance here is that knowledge can be experienced and discussed, and that multimodal tools, such as iPads or cameras, help ‘frame’ knowledge; they contribute to *pointing* (raising attention: Berthoud & Gajo, 2020), and in doing so, contribute to language awareness. Our inquiry has been prompted by an empirical study exploring everyday material (here, signage in the urban landscape) and sensory geographies (seeking to understand how children relate to their socio-spatial environment and make sense of their social worlds). The focus on children's practice and their theories prompts the empowerment of children in their own learning, and their positionality and relationality in the teacher-parent-learner dialogue and with the materiality of their (graphic and sensory) environment (Pink, 2015). Again, the meshwork and *relational* processes are central in this work, and we align with Szabó and Dufva who argue that,

While language awareness in its relation to learning and teaching have been extensively discussed, it has often been regarded as a property of an individual consciousness: a faculty or a tendency of a particular person to perceive, notice and reflect upon the linguistic features present in their environments. In contrast, we argue for an approach that contests the person vs. environment dualism and frames language awareness in terms of *relational* processes. (2020, p. 93)

Against this general background, the chapter focuses on an 11 year-old child, Yūki, to investigate the pedagogical relevance and implications of the study of linguistic landscapes to engage in ethnographic inquiry as embodied practice (Ingold, 2000), as a way of knowing and voicing (Baker & Campbell, 2000).

2 On Linguistic Landscapes as Plurilingual Pedagogy

In Japan, pedagogical linguistic landscape materials have already been developed (Isono, 2020), aimed at university students, to encourage analyses of preprepared Japanese linguistic landscape data, so that (mainly Japanese-speaking) learners can learn about Japanese. One of the authors, Danièle Moore, has also explored pedagogical applications of linguistic landscapes in the Japanese context (Moore & Haseyama, 2018): The study focused on practice at an international school which Japanese children attended on Saturdays, in which children photographically documented the linguistic landscape of the Tokyo Metro. The main focus of the practice was to develop children as inquirers, a focus that resonates with plurilingual education's stance of developing autonomous learners.

With the prior studies in mind, another of the authors, Mayo Oyama, encouraged her sixth-grade son, Yūki, to investigate the linguistic landscape for his self-directed research in the summer of 2020. In self-directed research, each student decides on a theme, devises a research plan, carries it out and reports the results, similar to a science fair. According to Umino and Andoh (2007), self-directed research projects trace back to science education in 1941, introduced as a means to enable learning that could not be covered within class hours, and that aligned with children's own interests, and have now become a staple summer holiday assignment at primary and secondary schools. While the most common field chosen by children is the natural sciences, they can pursue research in any discipline, including the humanities, the fine arts, and physical education, amongst others. Methods include not only experiment and observation, but survey studies and museum visits are equally encouraged. While children can conduct the research on their own, they are often assisted by family members, especially at a younger age.

The remainder of this chapter will examine Yūki's project and considers its possible application in the teaching of linguistic landscapes in Japanese elementary schools, as a way to connect, in meaningful ways, children's environments to the school curriculum.

2.1 *The Evolving Linguistic Landscape in Japan*

In order to arouse Yūki's interest, Mayo first showed him the following image (Fig. 1):

Here we would like the reader to consider the four stop signs in Fig. 1. Two are inverted triangles (① and ②), one is painted on the roadway (③), and the last adorns the telephone pole (④). Of the four signs, the oldest are written in a mixture of *kanji* and the phonetic *hiragana* syllabary (② and ③). The rectangular sign (④), written only in *hiragana*, is designed to be readable by those who cannot *kanji* characters (taught beginning in primary education). Stop sign ①, the newest of the four, is the only bilingual signage (止まれ STOP).



Fig. 1 Stop signs

Why the discrepancy? During Japan's modernization, the nation promoted monolingualism, with standard Japanese becoming the lingua franca of the archipelago. Following defeat in the Second World War, however, the country came under occupation, and the GHQ¹ required road-signs to be displayed in both Japanese and English. Why, then, is only the newest of the signs bilingual? After gaining autonomy, and in the lead up to the 1964 Tokyo Olympics, there was a massive increase in the number of road-signs around the nation, and laws regarding road signage were amended to promote uniformity, resulting in the abolition of English. The 1964 Olympics were an exceedingly important event for Japan, in part to demonstrate its post-war reconstruction, including the development of sophisticated transport systems; the Shinkansen high-speed rail system was opened on October 1st, 1964, airports were expanded, and the Tokyo Monorail built. Similarly, the road network was massively expanded, with new expressways developed; alongside these developments, signage was amended and uniformized—while English disappeared from road-signs,² pictograms became widespread to aid understanding for those who did not speak Japanese; it is also believed that the now commonly-used pictograms denoting the different sexes of toilets originated in Japan during this period.

¹ From 1945 until 1952, Japan was under occupation and the authority of the General Headquarters of the Supreme Commander for the Allied Powers.

² It is possible that the uniformization in Japanese-only was a part of the country's revitalization to demonstrate that it was a modern, first-world nation capable of conducting its affairs exclusively in the national tongue. While some might consider the removal of English as symbolizing the end of occupation by an 'enemy' language, as English was also a symbol of liberation from fascism, Japan's relationship with English is more complex.

The 1980s saw the return of English to various informative signs and guides around the nation, although it was not until April 2014 revisions to the Road Traffic Law that English returned to road-signs, primarily due to the dramatic increase in inbound foreign visitors, and, curiously, in the lead up to the next planned Tokyo Olympics/Paralympics of 2020/1 (Tomaru, 2014). As a result, since July 2017, beginning with road-signs due for renewal, bilingual signs have been reintroduced, not only in tourist destinations but nationwide—hence the discrepancy in the signage seen today.

3 The Practice

3.1 Initial Observations and Data Collection

Using the example above as a starting point, Yūki began his research. He was lent an iPad,³ and encouraged to photograph the linguistic landscape, initially focusing on ‘foreign languages’ and ‘languages other than Japanese.’

His investigations began inside the most immediate ecology, the house; stationery occasionally had English written on it (for instance, a made-in-Japan eraser labelled ‘PLUS PLASTIC ERASER’). Initial investigation revealed a wide range of foreign languages, especially in the kitchen, with its variety of imported foods such as dried tomatoes, tinned foods, olive oil, and sweets, to name a few.

Yūki photographed various objects with his iPad, and using Google’s camera translate, rendered them into Japanese. While some translations were serviceable, as there is variance in the camera translation’s recognition of characters, others were difficult to understand—it was also difficult to determine what languages were written on some of the objects. The translations themselves also change with movements of the camera, and the scope of the language highlighted; a potentially useful phenomenon to draw attention to in teaching, as a demonstration of the difficulty, and often the impossibility, of direct one-to-one translations between languages.

In the midst of the hot Japanese summer, when the evening was cooler, Mayo decided to walk with her children through the streets of Kyoto, taking photos with her smartphone. Mayo had initially instructed Yūki to look for non-Japanese languages, as without this instruction, he may not have paid attention to foreign language signage, but nevertheless she did not instruct him to look for *only* foreign languages. Some of the photos were suggested by Mayo herself, but Yūki soon took ownership of the activity and began taking pictures of his own accord, including a flower shop, whose signboard had an unusual mix of ideographic *kanji* characters and *katakana* syllabary (花ヨシ: discussed in more detail below).

³ As part of the Ministry of Education’s promotion of ICT in public schools beginning in 2020, one iPad or similar device has been offered to each child.

3.2 Data Collection and Hypothesizing During the Family Trip

During the summer, Mayo’s family took a trip to Tottori Prefecture, where they observed the linguistic landscape, including the vending machine in Fig. 2.

Both signs ① and ② are displayed in English, Chinese, and Korean, in that order. When Mayo asked Yūki, “Why isn’t there any Japanese on the sign?” he answered: “Japanese isn’t needed, because it’s an explanation of coins.” He was looking at sign ①, which illustrates how many coins are needed for each purchase, his reasoning being that anyone who speaks Japanese would know about the coins, and there is thus no need for a Japanese explanation. However, the QR code to the right (②) offers information in 15 different languages, this time including Japanese. According to the Coca Cola Company of Japan,⁴ this is also a measure in anticipation of increased numbers of inbound tourists and for the Olympic Games. By scanning the QR code, detailed product information such as raw ingredients, allergens, and nutritional information can be viewed on the spot. The 15 languages supported are Japanese, English, Traditional Chinese, Simplified Chinese, Korean, French, Thai, German, Spanish, Portuguese, Russian, Italian, Vietnamese, Indonesian and Arabic. Illustrations on how to operate the machines can also be viewed in these languages.

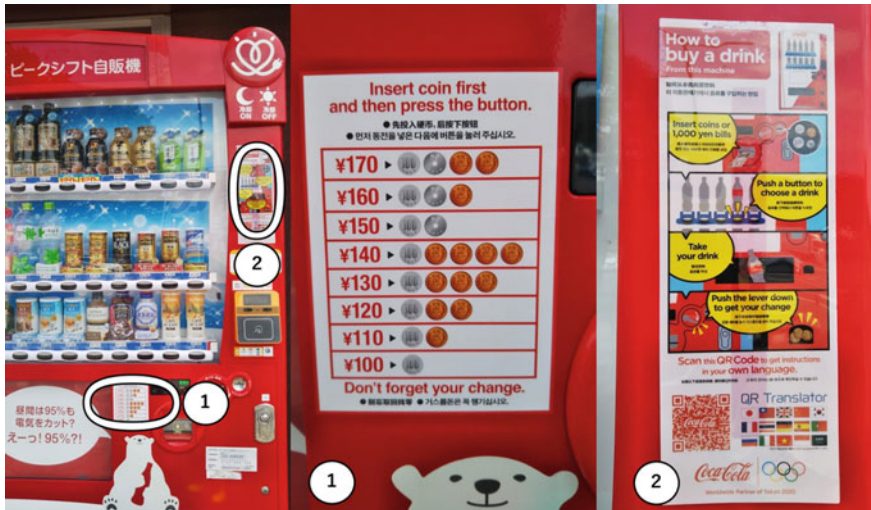


Fig. 2 Multilingual vending machine

⁴ <https://bit.ly/34YLdxy>.

3.3 Conducting Analyses

Having collected photographs in his home city and in Tottori, Yūki begins to analyse the data. He considered using the Google camera translation as a tool for analysis, but as it seemed easier to concentrate on paper than a screen, opted instead to print the photos. Yūki selected the data himself; images that either piqued his interest, or he thought might be easy to analyse. Figure 3 shows his work analysing a photograph of a French restaurant.

After hypothesizing about what languages were present, he typed various words into Google Translate to identify them. The analyses were thus multimodal; employing printed photographs, pen and paper, and iPads. His analysis of the restaurant showed that the restaurant's name and year of founding are in French (フランス語), while other information is a mixture of both English (英語), Japanese (日本語) and pictograms (represented by the *kanji* character, 絵).

Upon identifying the languages, he began to develop hypotheses from the question, “why these languages?” For the vending machines, it had been relatively easy to explain why there was no Japanese. As for the French restaurant, he began with “It’s in French because it’s French food,” but the other languages present prompted the question, “why is the rest of the information in Japanese or English, or pictograms?”

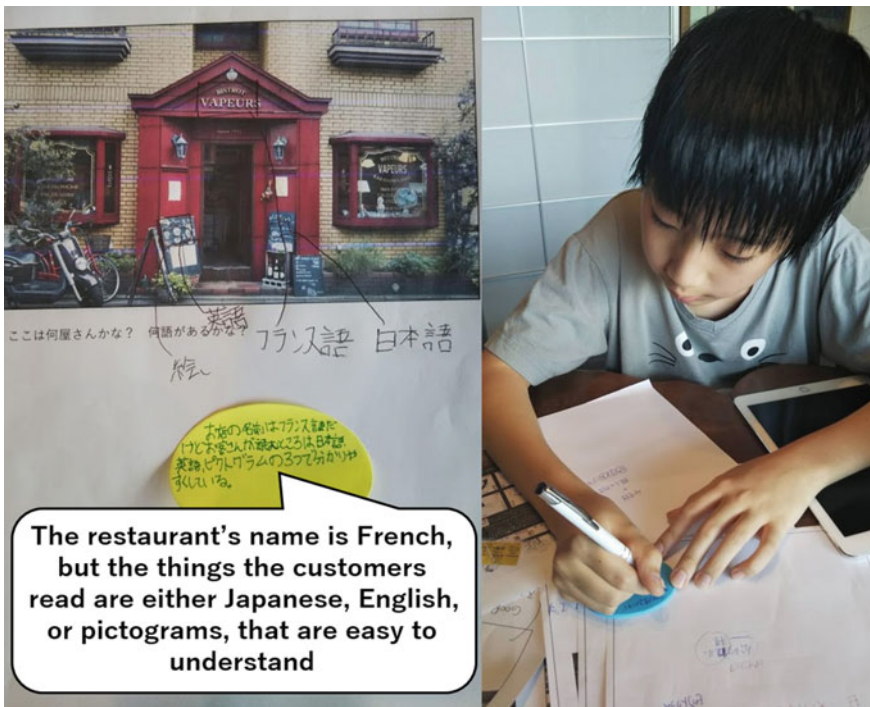


Fig. 3 Conducting analyses

It took a little more time to develop the reasoning that “most of the customers would read Japanese or English.”

There were some examples that were difficult to explain. For instance, Yūki had already discovered that public signage in Kyoto was often in Japanese, English, Chinese, and Korean. In Tottori, however, he noticed tsunami evacuation signs included Russian as well. Why the difference? He first predicts that “there are lots of Russians living there.” After discussing this with his mother, he developed the hypothesis that “the language of official signs is determined by the size of the population [that uses those languages].” This hypothesis engendered a further question, “why are there many Russian residents in Tottori?” (In fact, there is not a large Russian population, but historically many Russian sailors have visited the ports on the Japan Sea for trade).

In the process of observing the data and forming hypotheses, children are encouraged to link their findings to topics that they have previously studied in their elementary school classes. Recall the flower shop, mentioned above, which included a mix of *kanji* ideograms and *katakana* syllabary (花ヨシ: *hanayoshi*).⁵ When Mayo asks, “why *katakana*?” Yūki recalled learning in Japanese class that *hiragana*⁶ and *katakana* are used in different expressive contexts: i.e., *katakana* has a rigid feeling to it, while *hiragana* is ‘softer.’ Why would a flower shop opt for a more rigid expression? Yūki ventured, “to make it cool,” to which Mayo asked, “so it’s not cool to use *hiragana* (花よし)? How about more *kanji* (花善し)?” The questions were endless. Yūki then turned to a photo of a pharmacy, taken close to the flower shop: ‘Smile Pharmacy,’ again in *katakana* and *kanji* (スマイル薬局). Is ‘smile’ in *katakana* cool? Prompted by Mayo, “what language is smile, originally?” he knows that it was English. What about *yoshi* from *hanayoshi*, then? It is a Japanese word (和語). The question “why do we use *katakana* to write Japanese words?” arises.

In addition, some of the Japanese shops’ names ‘used difficult *kanji*.’ For instance, Yūki remarked at the difficult characters in the sign of a tea shop in Kyoto named *chikusei* (竹聲). When Mayo explained that the second character has the same meaning as 声 (*koe*: voice), he pondered why the more complicated character was used. 聲 is the old writing of the 声 character, included in school learning until 1945. In 1949, a table of *kanji* for standard use was established, which allowed for the use of mundane and abbreviated forms of *kanji*, and the forms of some *kanji* used up to that point were newly changed. So, why is the old character in use here? Again, the child’s hypothesis is that ‘it’s cool’ to use the old writing. It is likely that the usage of this *kanji* is to demonstrate an affinity of, and connection to, the traditional and sophisticated—these old characters have been in common usage in Japan from at least the eleventh century through to the 20th, and although no longer used in official

⁵ Katakana is one of Japan’s phonetic scripts, used today primarily for loanwords—it is rare to find a Japanese name written in katakana. It is also occasionally used for emphasis, much as italics might be used in English.

⁶ Another of Japan’s phonetic scripts, and the most commonly used in the present day. Japanese terms are typically written in hiragana, or a mixture of *kanji* and hiragana.

documents, are still taught in the secondary school curriculum as part of *kobun* (古文: classical literature).

In this way, while Yūki was first instructed to look for languages other than Japanese, the experience prompts him to consider the Japanese language around him, too, and triggers historical inquiry into the language, and shifts and changes in its usage, traces of which remain in the local linguistic landscape (including the evolution of road-signs with which he began his investigation). Yūki's mostly self-directed examinations of the linguistic landscape become a way to link his environment with trajectories of the language itself, and becomes an engaging way to explore linguistic histories, resulting in hypotheses that prompt further research—in order to address the hypotheses raised, a search through library books for answers and websites was necessary to gather more information.

3.4 *The Lapbook as a Creative Authoring Process for Collating, Displaying, and Sharing Results*

Shino Abe, an acquaintance of the authors and elementary school teacher, recommended using a lapbook as a learning portfolio (Abe, 2018). Lapbooks include various foldable sections in which three-dimensional storage and display systems within a nested structure allow for dynamic presentation of learning and research results. This is an excellent way for children to engage in authoring and take ownership of their learning, as it requires them to be 'hands on' in organizing their newly acquired knowledge. Mayo introduced lapbooks to Yūki through a YouTube video,⁷ to help him visualize how he could present his research. To fully enjoy the hands-on craftwork, Mayo prepared a variety of coloured papers, coloured pens, scissors, glue, and other tools necessary to make the foldables—also suggesting a variety of ideas for display by folding origami together. Yūki, sufficiently excited by the potential of the lapbook, began to think about how he would organise his foldables. His final creation is shown in Fig. 4.

Within Fig. 4, section '1' (titled 写真を撮る, 'taking pictures' in Japanese) is the first depiction of the research process, with the foldables labelled 'open gently.' When opened, the reader finds the places photographed (travel destinations, houses, and shops within the local neighbourhood, etc.) and the points that Yūki noted in his observations.

As the results of self-directed research projects are to be read by other children in the school, he crafted the content for section '2' (写真を印刷して気づいたことを書き込む: Printing the pictures and recording what is noticed) as a quiz for other children (Fig. 5).

Alongside the characters 什么语言 is the Japanese question, 'what language are these characters?' (incidentally, 什么语言 is the Chinese translation of the question

⁷ <https://www.youtube.com/watch?v=SJEztgwUvv4> (*Lapbooks 101: Why I Love Them and How I Use Them in My Classroom*, see also <https://lapbooking.wordpress.com/>).

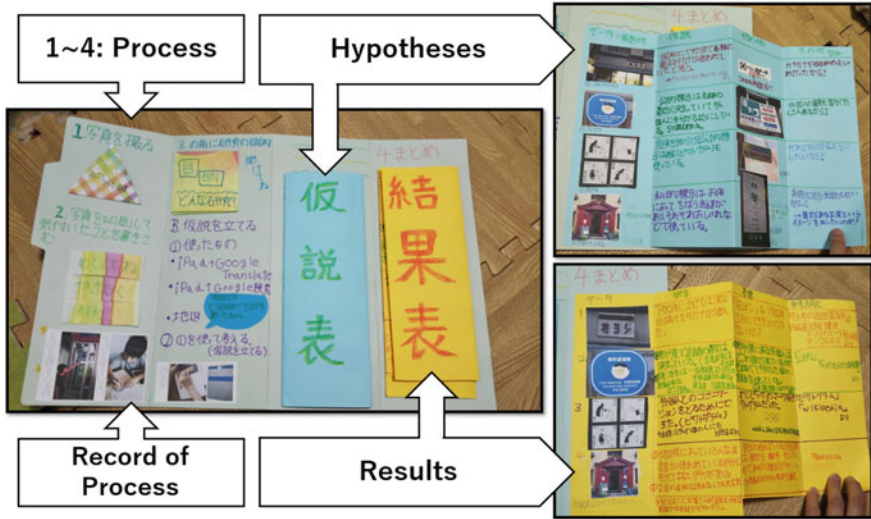


Fig. 4 Yuki's lapbook

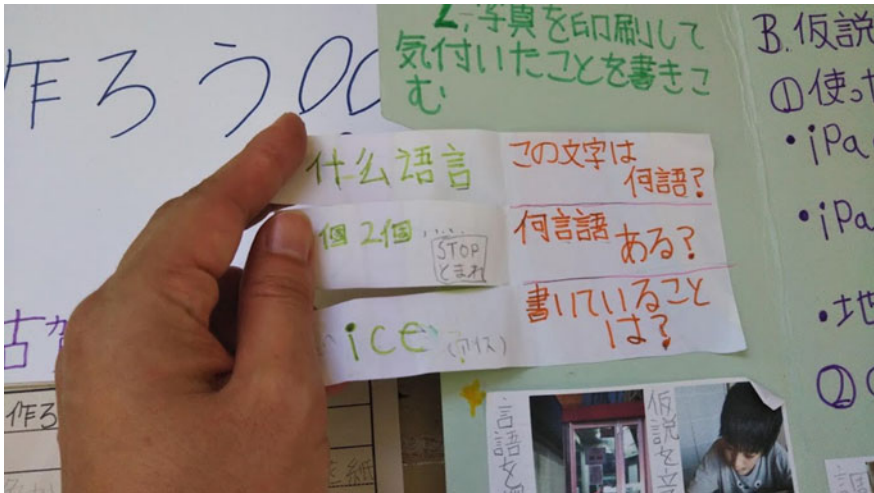


Fig. 5 Quiz for other children

itself, in simplified *hanzi* characters⁸). He has also drawn a ‘STOP, とまれ’ sign, alongside the question, ‘what languages are here?’ Finally, ‘ice’ (recall it is the height

⁸ The reason non-Chinese speaking children can attempt this quiz is, despite both Chinese *hanzi* and Japanese *kanji* originating from ancient Chinese characters, there is a clear difference between them, partly a result of mainland China’s simplification of *hanzi*, and a difference obvious enough even for schoolchildren.

of summer) at the bottom is accompanied by the question, ‘what is written here?’ In other words, his focus is on three things: The number of writing systems, the languages present, and the content of what is written.

Section ‘3’ (Fig. 4) covers the purpose of the research (研究の目的), and the tools he used to carry it out. The two references to Google denote to the translation software as well as Google search—to fully address his hypotheses, the translation software alone was insufficient, and required searching for more information.

To the far right are large foldables of coloured construction paper that cover both his hypotheses and the results of his research. The hypothesis table includes, for each picture, ‘date and location,’ a ‘hypothesis,’ ‘examples,’ and ‘other.’ Accompanying the first photo, the florist, *Hanayoshi*, is the following hypothesis: “The shop was founded in the Shōwa era, and I think *katakana* used to be used on signs then.”⁹ In the other ‘examples’ is the name of a local supermarket, a Japanese name, but again written in katakana. In the final column, ‘other,’ the hypothesis is expanded upon: “Is this because katakana was fashionable during Shōwa?” Here, Yūki lists examples through which he has identified patterns and drawn generalizations, while also positing further research questions. He is developing a posture of inquiry, and acquiring academic literacy, further demonstrated by his results section.

The ‘results’ foldable contains information that Yūki has researched, including references. The columns are labelled in order: Data, Observations, Discussion, and References—Keeping a record of references is an important part of learning with a lapbook, and of academic literacy, localizing new knowledge within what is already known. It is this literacy that the schoolteacher who introduced the lapbooks to the authors, Shino Abe, attempts to foster through her practice (Abe, 2018).

Finally, the lapbook is not simply a personal record of learning, it is intended to be viewed by others, which required Yūki to voice his discoveries in way that others could understand: He makes use of the flexibility in Japanese writing conventions, writing some elements vertically and others horizontally (much as the stop signs in the first figure: Note that two of the signs are written vertically). Yūki’s use of colour is also not random, but he employed a different colour for each theme. Design construction itself is closely linked to scientific organisation and is an important aspect of hands-on interdisciplinary plurilingual learning.

Throughout the project, the research was experiential. Starting with observations at home, before walking linguistic landscapes both local and further removed, Yūki made new discoveries and raised new questions about language that might not have otherwise occurred to him—including the shifting and evolving nature of the Japanese language. His final presentation of his discoveries was also experiential, as he considered how he might relate his discoveries of language old and new to other students: A voicing process that coincidentally included *voice* itself, both old (聲), and new (声).

⁹ The Shōwa era spanned from 1926 to 1989.

4 Discussion: Walking to Voicing

Child-led walks are a common method for investigating children's use and perceptions of their neighbourhoods (Carroll et al., 2015; Derr et al., 2018). In this contribution, the activity positioned Yūki as a legitimate co-researcher of his own language and literacy practices, purposefully drawing upon creative visual techniques and tools to facilitate data collection and reporting.

Much research on linguistic landscapes has focused on historically important languages, representations of minority languages, and why certain languages are important in a given region. Linguistic landscapes have also been introduced in Japan in this manner (e.g., Shoji et al., 2009; Oyama, 2021), and formed part of Yūki's discoveries—including differences in signage between regions. But what Yūki sees in his walking the linguistic landscape is also a history of change in the Japanese language itself, something touched upon by Isono (2020); children can actually see, smell, touch, and feel that the language is dynamic. They can also encounter and reflect on plurality in and outside the classroom, and the materiality of the signage in the home or the street, contributing to cultivating a meaningful relationship with their social worlds that connects children to their environment and communities. Photographing contributes to making visible, dialoguing, and imagining children's social landscapes, through an aesthetic experience of the language(s) in use around them.

Our observations of Yūki's experiences and his reflective lapbook illustrate his acute awareness of what he has learnt, and of the process of his learning. His creative crafting of his findings, and the multilayered quiz he developed, show his ability to envision and challenge what he believes might be his peers' preconceived ideas of language use in their community, to offer alternative ways of rethinking their social world. His work also illustrates pedagogical consciousness; he strives to inspire curiosity through *movement* (one must fold and unfold papers to discover answers; move one's eyes both vertically and horizontally, from left to right and right to left, top to bottom, and can engage in clockwise and counterclockwise directions); *aesthetics* and *visual* cues (colour coding for questions and answers, different scripts and writing systems, distribution of images and textual information; the play with different shapes to display information, such as triangles, rectangular boxes, and speech bubbles, but also lines, stripes, and fonts); and *touch* (collages of various paper types). The iPad and paper together offer affordance for multimodal composing that supports the crossing of boundaries between languages and sign systems (photographs, print and handwriting, voice-recording, camera translations), the play with visual and textual content, genres, and the development of a *metastance* that creates a framework to interpret text (Jaffe, 2009).

The exploratory engagement with linguistic landscapes thus anchors the development of metalinguistic and plurilingual awareness (Melo-Pfeifer, 2015). This is visible in Yūki's use of various norms in different languages, such as language-specific use of capitalization (i.e., for English words like Google), or the use of iconicity and different scripts in Japanese for effect (i.e., the use of hiragana, katakana,

or *kanji* ‘to look cool’ or to display sophistication, historicity, or foreignness), the raised awareness of the ease of coining words in Japanese, and his (re)constructing bridges between the writing systems of Japanese, English, and other languages (such as *kanji* to lever access to other languages using sinograms, and letters to bond Japanese with languages using alphabets), and the discovery of language power in language use made visible in the street semiology (Calvet, 1994; 2005). Code-mixing, borrowed words and translingual practices are creatively used as resources for affect and effect:

Translingual refers to an orientation to communication and competence that treats words as always in contact with diverse semiotic resources and constantly generating new grammars and meanings out of this synergy. (Canagarajah, 2020, p. 6)

Yūki used his digital images as anchors for conversation and multimodal composing, recontextualizing his images to make sense of his environment. The recontextualization of his documentary photographs into his reflective lapbook, from the context of the home and the street to that of his school across media, amplifies and recontextualizes meaning to attend to a larger audience: His schoolmates and teachers. Photographing, then recontextualizing pictures in a textual message in a lapbook, frames learning; what it is that children deem significant, and how they voice, construct, and circulate knowledge, while offering the potential for a more comprehensive whole-body engagement. The need for dialogue is crucial in this process, with the guiding parent, and with peers and teachers when back to school (which is anticipated by Yūki when he produces his lapbook for a specific audience, his classmates after the summer vacation¹⁰).

The linguistic landscape provided affordances for more complex understandings of the dynamics of society. The study of signage in the street opened a glimpse of Japanese governmental policy and language policy (in vitro policies) in practice in the urban landscape (in vivo policies, see Calvet, 1994), the difference in official signs between regions (four languages in Kyoto, five in Tottori), how private signs are used to express various identities in a specific urban area; all are examples of historical links made visible between region and language, and of the socio-historical implementation of local and transnational communities, how they cohabit, share and choose to “mark” their social and geographical territories (Calvet, 1994, p. 174).

5 Conclusion

This chapter considered the potential of the linguistic landscape in education to address the challenge of supporting children’s critical multilingual awareness in relation to their local geographies in a predominantly Japanese monolingual and English-only oriented country and school system.

¹⁰ Summer vacations in Japan do not mark the end of the academic year. Children return to the same class, with the same teachers and classmates after the break.

In this qualitative case-study, we explored how a child engages in a culture of inquiry and develops scientific methods to construct knowledge. We put emphasis on the educational potential of the study of linguistic landscapes (i) to develop awareness of diversity and interlink learning in various disciplines and ecological contexts (at school, at home, in the street), and (ii) to understand children's world-making. We used visual methodologies as ways to support sensory and experiential participation to engage with all the senses with situated multimodal texts. In this view, the walking to take pictures in smelly or noisy streets is a meaningful practice, in which 'reading' a sign is experienced through the body and a slow exploration of plurality and diversity in the child's everyday environment to map out and unpack social relations within the child's local geographies that builds on their experiences of their local environments to form their own understanding of the relational nature that cement people, places, and practices (Wales et al., 2021). The centrality and full body engagement of visually recording the linguistic landscapes through photographs and reflective conversations and writing scaffold how children experience and develop a sense of place and take on new roles and identities (Prasad, 2013). The study of linguistic landscapes, in this sense, opens new affordances to construct children's social geographies, as well as their sense of the social history of their local environment against the backdrop of other localities, in Japan and beyond.

The transdisciplinary approach to learning stimulates points of connection and overlapping between home and school, formal and informal learning in and beyond the classroom, digital web-based and book-based access to information; and the links between orality, sensory perception, photographs, and written messages to expand comprehension and sharing of information. The social purpose of the activities both support multimodal and plurilingual literacies and foster intercultural encounters, engaging children as mobile social actors. Mobilities create complex spaces of contact, where standard systems are constantly renegotiated. The texts and textual practices that are created through the visual documentation and critical reporting of signage take on new forms, values, and meanings within geographically situated textual ecologies, in which the child can endorse new identities as a learner and an experienced author-writer and take ownership of their learning. The linguistic landscape opens affordances to make real-world connections through exploration. Children can engage in experiential learning, problem-solving, critical thinking and understanding; knowledge can be lived, discussed and theorized. It is within this relationality that a better sense of what constitutes one's community is fuelled, as well as the realization of its complex and woven pluralities.

Though this study provides descriptive information about the learning processes of one child only, we believe that this chapter can contribute to our understanding of the complex interplay between social and physical factors contributing to children's agency in learning and their sense of community and belonging.

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References

- Abe, S. (2018). *Shogakko eigo kyoiku ni okeru Lap Book no shido to hyoka no kokoromi* [A trial of Lap Book teaching and assessment in school English teaching]. *Language Teacher Education*, 5(1), 115–129.
- Baker, C., & Campbell, R. (2000). Children, language and power. In R. Campbell & D. Green (Eds.), *Literacies and learners: Current perspectives* (pp. 15–29). Pearson Education.
- Berthoud, A. C., & Gajo, L. (2020). *The multilingual challenge for the construction and transmission of scientific knowledge* (Vol. 5). John Benjamins Publishing Company. <https://doi.org/10.1075/mdm.5>
- Blanchet, P., Moore, D., & Asselah Rahal, S. (2009). *Perspectives pour une didactique des langues contextualisée*. Édition des Archives Contemporaines.
- Bulut, T., & Veschambre, V. (2006). Sociolinguistique urbaine et géographie sociale: Articuler l'hétérogénéité des langues et la hiérarchisation des espaces. In R. Séchet & V. Veschambre (Eds.), *Penser et faire la géographie sociale. Contribution à une épistémologie de la géographie sociale* (pp. 305–324). Presses Universitaires de Rennes. <https://doi.org/10.4000/books.pur.1924>.
- Calvet, L.-J. (1994). *Les voix de la ville. Introduction à la sociolinguistique urbaine*. Essais Payot.
- Calvet, L.-J. (2005). Les voix de la ville revisitées. Sociolinguistique urbaine ou linguistique de la ville? *Revue de l'université de Moncton*, 36(1), 9–30. <https://doi.org/10.7202/011987ar>.
- Calvet, L.-J. (2006). *Towards an ecology of world languages*. Polity Press.
- Canagarajah, A. S. (2020). *Transnational literacy autobiographies as translanguaging writing*. Routledge. <https://doi.org/10.4324/9780429259999>
- Carroll, P., Witten, K., Kearns, R., & Donovan, P. (2015). Kids in the city: Children's use and experiences of urban neighbourhoods in Auckland, New Zealand. *Journal of Urban Design*, 20(4), 417–436. <https://doi.org/10.1080/13574809.2015.1044504>
- Dagenais, D., Moore, D., Lamarre, S., Sabatier, C., & Armand, F. (2009). Linguistic landscape and language awareness. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 253–269). Routledge.
- Derr, V., Chawla, L., & Mintzer, M. (2018). *Placemaking with children and youth: Participatory practices for planning sustainable communities*. New Village Press.
- Green, J., Skukauskaite, A., & Baker, D. (2011). Ethnography as epistemology. In J. Arthur, M. I. Waring, R. Coe, & L. V. Hedges (Eds.), *Literacies and learners: Current perspectives* (pp. 309–321). Sage.
- Guyotte, K. (2018). Aesthetic movements of a social imagination: Refusing stasis and educating relationally/critically/responsibly. *Critical Questions in Education*, 9(1), 62–73.
- Haseyama, K. (2021). *Dialogues with the written world(s): Plurilingual TEAL pedagogy and content learning of Japanese young learners in multilingual landscapes*. Unpublished Ph.D. Thesis, Simon Fraser University.
- Ingold, T. (2000). *The perception of the environment*. Routledge.
- Isono, H. (2020). *Gengo keikan kara manabu Nihongo* [Learning Japanese through linguistic landscapes]. Taishukan.
- Jaffe, A. (2009). Introduction. The sociolinguistics of stance. In A. Jaffe (Ed.), *Stance: Sociolinguistic perspectives* (pp. 3–28). Oxford University Press.
- Malinowski, D., Maxim, H., & Dubreil, S. (Eds.). (2020). *Language teaching in the linguistic landscape: Mobilizing pedagogy in public space*. Springer. <https://doi.org/10.1007/978-3-030-55761-4>.
- Melo-Pfeifer, S. (2015). Multilingual awareness and heritage language education: Children's multimodal representations of their multilingualism. *Language Awareness*, 24(3), 197–215. <https://doi.org/10.1080/09658416.2015.1072208>
- Moore, D., & Haseyama, K. (2018). Explorations urbaines et plurilinguismes: Des enfants photographes dans le métro de Tokyo. In G. Budach, V. Fialais, L. Ibarrondo, U. Klemmer, T. Leichsering, M. Leroy, M. Stierwald, R. Streb, & A. Weirich (Eds.), *Grenzgänge en zones de contact* (pp. 87–95). L'Harmattan.

- Oyama, M. (2021). *Cool guy—or Linguistic landscapes in Japan*. <https://bit.ly/3fq22pQ>.
- Prasad, G. (2013). Children as co-ethnographers of their plurilingual literacy practices: An exploratory case study. *Language and Literacy*, 15(3), 4–30. <https://doi.org/10.20360/G2901N>.
- Prasad, G. (2020). ‘How does it look and feel to be plurilingual?’: Analysing children’s representations of plurilingualism through collage. *International Journal of Bilingual Education and Bilingualism*, 23(8), 902–924. <https://doi.org/10.1080/13670050.2017.1420033>
- Pink, S. (2015). *Doing sensory ethnography*. Sage. <https://doi.org/10.4135/9781473917057>
- Plowman, L. (2016). Rethinking context: Digital technologies and children’s everyday lives. *Children’s Geographies*, 14(2), 190–202. <https://doi.org/10.1080/14733285.2015.1127326>
- Szabó, T. P., & Dufva, H. (2020). University exchange students’ practices of learning Finnish: A language ecological approach. In D. Malinowski, H. Maxim, & S. Dubreil (Eds.), *Language teaching in the linguistic landscape: Mobilizing pedagogy in public space* (pp. 93–117). Springer. https://doi.org/10.1007/978-3-030-55761-4_5.
- Shohamy, E., & Gorter, D. (Eds.). (2009). *Linguistic landscape: Expanding the scenery*. Routledge. <https://doi.org/10.4324/9780203930960>.
- Shoji, H., Backhaus, B., & Coulmas, F. (2009). *Nihon no genko keikan* [Japan’s linguistic landscape]. Sangensha.
- Tomaru, O. (2014). *Doro annai no Eigo hyoki kaizen nit suite* [On the improvement of English on road-signs]. https://www.ktr.mlit.go.jp/ktr_content/content/000105760.pdf.
- Umino, M., & Andoh, H. (2007). A survey on the history of research program in science education and student’s consciousness in Kurume Primary School attached to Fukuoka University of Education. *J SSE Research Report*, 22(1), 99–102.
- Van Lier, L. (2010). The ecology of language learning: Practice to theory, theory to practice. *Social and Behavioral Sciences*, 3, 2–6. <https://doi.org/10.1016/j.sbspro.2010.07.005>
- Van Mensel, L., Vandenbroucke, M., & Blackwood, R. (2016). Linguistic landscapes. In O. García, N. Flores, & M. Spotti (Eds.), *The Oxford handbook of language and society* (pp. 423–450). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190212896.013.5>.
- Vergunst, J. L., & Ingold, R. (Eds.). (2008). *Ways of walking*. Routledge.
- Wales, M., Mårtensson, F., & Jansson, M. (2021). ‘You can be outside a lot’: Independent mobility and agency among children in a suburban community in Sweden. *Children’s Geographies*, 19(2), 184–196. <https://doi.org/10.1080/14733285.2020.1773401>

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Empowering Students and Raising Critical Language Awareness Through a Collaborative Multidisciplinary Project



Sonia Cadi, Latisha Mary, Maria Siemushyna, and Andrea S. Young

Abstract This chapter presents the implementation and findings of a participatory research project about a local linguistic landscape project, with a lower secondary school class (children aged 13–14) in the East of France. The project involved teachers from a range of disciplines (French, Physical Education, History/Geography, Regional Language and Culture) who collaborated to develop a pluridisciplinary project focussing on the linguistic landscapes present in the school and local town. The project aimed at raising children’s knowledge about language(s) through a process which placed them at the centre as key actors and decision-makers. The chapter details the ways in which teachers were able to leverage children’s home languages and raise their critical language awareness through different pedagogical activities across the different disciplines. Some examples include creating language biographies (French), and participating in a linguistic landscape photo marathon in the town (P.E.). Based on data collected (observations and recordings of classroom activities, interviews with teachers and other educational actors and students’ written contributions), we analyse the pedagogical value of this project through the lens of concepts such as “plurilingual and pluricultural competence” (Coste et al., *Plurilingual and pluricultural competence*. Council of Europe, Strasbourg, 2009), “funds of knowledge” (González et al., *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. Routledge, 2005) and “educational partnerships” (Cummins, *Language power and pedagogy: bilingual children in the crossfire*. *Multilingual Matters*, 2000). We discuss how such a project can contribute to the construction of “interpersonal spaces of reciprocal empowerment between

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teachers and students” (Cummins, Pedagogies of powerful communication: enabling minoritized students to express, expand, and project identities of competence, 2021, p. 284).

Keywords Linguistic landscapes · Participatory research · Plurilingual and pluricultural competence · Funds of knowledge · Educational partnerships · Reciprocal student–teacher empowerment

1 Introduction

1.1 *Context of the Project*

In this chapter, we present and discuss the implementation of the LoCALL project in France in partnership with Collège Henri Meck (lower secondary school) in Molsheim, a small town of approximately 10,000 inhabitants, situated 25 kms from the city of Strasbourg near the French-German border. The diverse population of Molsheim includes inhabitants from the Alsace region and other regions of France as well as from border countries (e.g. Germany, Switzerland), different European countries (Poland, Italy, Spain, Portugal) and various countries outside Europe (Algeria, Morocco, Tunisia, Turkey, Brazil, China) (INSEE, 2018a). The percentage of the population with a migration background represents 9.6% of the total population (INSEE, 2018b). The historical and geographical context of Molsheim contributes to its distinct local (small town) and regional (strong Alsatian culture and identity) dimensions, alongside its European and international dimensions. The town of Molsheim was chosen for the implementation of the LoCALL project in France for several reasons. Firstly, as previously mentioned, the town contains a diverse population speaking a large variety of languages. This can be observed in the linguistic landscape of the town as well as among the student population of the school selected. Secondly, one of the co-authors of this chapter, Sonia Cadi, a French teacher at Collège Henri Meck had expressed a strong interest in being part of the LoCALL project. In addition to the motivation and enthusiasm which she also transmitted to her students and colleagues, Sonia also holds a Master’s degree in Sociolinguistics which provided her with appropriate and valuable knowledge when designing the pedagogical framework of the project together with the other members of the team from the University of Strasbourg’s School of Education and Lifelong Learning (INSPE). During the 2020–2021 school year our team of researchers worked with Sonia’s class of 13–14 year olds ($N = 28$). As the project progressed, teachers of other disciplines (Physical Education, History/Geography, Regional Language and Culture), as well as other students and school staff from various services (canteen, administration, maintenance) also became involved in the project in a variety of ways.

1.2 *Theoretical Framework and Project Aims*

Many scholars in the field of bi-plurilingualism have argued that schools need to not only recognise and value the linguistic and cultural diversity of their pupils but that they also need to engage them in critical reflection on the role and place of languages in their local environment and school, and in society as a whole (Gage, 2020; García, 2017; Van Mensel & Hélot, 2019). One of the aims of the LoCALL project was indeed to encourage discussions:

On language presence, roles and dynamics in broader social contexts, acknowledging languages and the linguistic resources that young people have at their disposal and promoting their integration in teaching practices.¹

The French implementation of the project aimed therefore to raise pupils' and teachers' awareness of the linguistic and cultural diversity in their environment (school, homes, town) and to develop their knowledge of the notion of plurilingual and pluricultural competence (Coste et al., 2009; Galante, 2020) through the exploration of local linguistic landscapes as a pedagogical tool. (Hancock and Hancock, 2021). Plurilingual and pluricultural competence has been described in the following way as:

A more flexible definition of plurilingualism, capable of conveying the diversity of individual situations spread out over a multi-dimensional, dynamic and evolving set of continuous variations. Plurilingualism does not describe fixed competences. Individuals develop competences in a number of languages from desire or necessity, in order to meet the need to communicate with others. Plurilingualism is constructed as individuals pursue their lives, it is a reflection of their social path (Coste et al., 2009, p. 17).

Despite the presence of rich linguistic diversity in schools in France and in educational systems around the world, pupils' competences in languages other than the language of schooling and/or languages taught as part of the curriculum are often ignored or even seen as a hinderance to their progress in the language of schooling (Agirdag, 2014; Cummins, 2000). The monolingual direction taken by many schools often deprives pupils and the entire educational community of a school of opportunities for developing plurilingual competences and expanding knowledge of the various languages present in schools and pupils' environments outside school. Investigating the linguistic landscapes present in pupils' lives, whether these be on a personal or public level, allows educators to open the doors to greater understanding on the part of school communities of the rich resources already present in pupils' lives and to develop all pupils' plurilingual competences. Investigating linguistic landscapes also allows students and educational staff members to become aware of some of the (hidden) language ideologies present in society, possibly leading them to challenge these on a grass roots and/or institutional level at some point down the road (Gorter, 2013; Gorter, 2018; Krompak et al., 2021; Malinowski et al., 2020).

Moreover, the project was constructed as a participatory action research project (Genat, 2009; Braye & McDonnell, 2012; Welikala & Atkin, 2014; Gibson et al.,

¹ <https://localproject.eu/theproject/>.

2017), attributing an important place to students' expressions of their personalities and identities through their agency and empowerment (Cummins, 2021) and encouraging their identity engagement (Cummins et al., 2005). In fact, students became not only participants, but active researchers themselves in the project through suggesting ideas, taking initiatives, working in pairs, in groups, encouraging other students and school staff to take part in the project, and developing creative activities in different disciplines.

Taking into account this engagement of the students in the project, we can argue that beyond awareness raising of linguistic and cultural diversity, students also developed knowledge, skills and competences through the interdisciplinary and interactional dimensions of the project progression.

Including pupils in the research process allowed them to draw on their “funds of knowledge” (González et al., 2005; Vélez-Ibáñez & Greenberg, 1992) and created opportunities to foster “educational partnerships” (Cummins, 2000) between the research team, pupils, teachers and families. By drawing on pupils' funds of knowledge we acknowledged and valued not only the knowledge that pupils had acquired at school, but also the wealth of complex social and cultural knowledge, skills, assets and competences that they had or were to acquire at home, in their everyday lives. We have also analysed to what extent these funds of knowledge, in particular those relating to family languages and cultures, are perceived or not as legitimate, educational resources by teachers (González et al., 2005; Vélez-Ibáñez & Greenberg, 1992). In this chapter we demonstrate how a pedagogical project on linguistic landscapes can encourage the legitimisation of these “funds of knowledge” by students and teachers. Much as Young and Hélot found in their project involving collaboration and shared learning experiences between parents, teachers and pupils, we were also attentive to ‘maintaining a fine balance of power to the benefit of all and not an imbalance of power in favour of the professionals’ (Young & Hélot, 2007, p. 27).

2 Implementation of the Project and Methodological Approach

Collaboration between Henri Meck lower secondary school and the LoCALL French research team began in 2019. During the academic year 2019–2020 the European project was outlined and the main objectives of the project were explained to the school administrators and teachers of various disciplines who had expressed interest in participating in the project. During one formal meeting and several informal meetings and exchanges of correspondence between researchers and teaching staff, ideas about how to implement the project in the school and in which pupils and staff would participate were discussed. Once the participating class of pupils was chosen, a basic framework of class activities was agreed upon and served as a springboard for the first year of the project's implementation in the 2020–2021 school year. Due to health regulations in the context of the COVID 19 pandemic, the teacher was present with

students in class, but the three researchers from the University of Strasbourg were only able to participate in the sessions through videoconference. It was only at the very end of the 2020–2021 school year that the researchers were granted permission to physically access the classroom. In addition to bi-monthly class sessions, pupils also participated in the project outside class time through carrying out independent work set by their teachers.

Throughout the implementation of the project, rich and varied data were collected, including: fieldnotes, audio recordings of classroom exchanges and student interviews (>100), videoconference recordings from the classroom and online training week, photographs and student productions such as language biographies. Examples of activities carried out by students and teachers are included in Table 1 and subsequently described.

- *Language biographies* (during French classes)

Students were first provided with explanations and some examples of creative representations of language biographies (e.g. in the form of a person, a flower, a map with the languages spoken, written, read, heard by the individual, the languages s/he would like to learn/learn more about, the emotions associated with these languages and their role in the life of the individual). Very quickly students appropriated the task and imagined new forms of language biographies, connected to their personalities (a trumpet, a plane, a cooking pot, a hand etc.) (Fig. 1).

- *Family migration histories* (History and Geography classes)

Table 1 Implementation of LoCALL project activities at Collège Henri Meck Molsheim

Activity	Dates
Language biographies	January 2021
Family migration histories	March 2021
Whole school interviews	March–April 2021
Plurilingual sports session	May 2021
Preparation of the linguistic pathway in Molsheim	May 2021
Presentation in the training week	June 2021

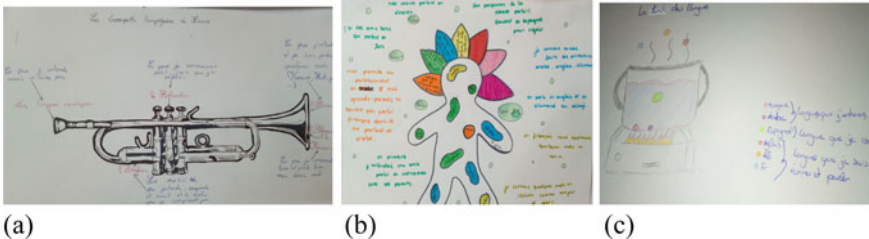


Fig. 1 Different forms of students’ language biographies: a trumpet b mannele c cooking pot

Students interviewed their families to uncover family migration stories and then presented the results in the form of collages including photographs, drawings and text explanations.

- *Whole school interviews* (prepared with the French teacher)

After discussing their own language biographies and migration stories, students also wanted to discuss these issues and learn about other people in the school. Therefore, they prepared an interview guide and conducted interviews with approximately 100 people in the school (other students, teachers, administrative staff, support and technical staff). They demonstrated initiative, courage and ability to work independently as they made the most of the opportunity to arrange to meet and interview people from the school that they did not know very well (for example, in addition to teachers who taught their class, they also interviewed other teachers with whom they did not have classes).

- *Plurilingual sports session* (Physical Education classes)

For the international LoCALL project online training week, students recorded an online sports session where they gave the names and explanations of sports exercises in different languages (the languages that they speak at home and the ones they learn at school).

- *Preparation of a pathway through the linguistic landscape of Molsheim*² (Fig. 2) (prepared with the French and P.E. teacher)

Students chose points of interests in the linguistic landscape of Molsheim and created questions relating to these points of interest, such as “Why is the name of a street written in two different languages? The language next to French, is it German or Alsatian? Does the writing in French and Alsatian mean the same thing?”

In order to value the students’ contribution to the project, the Henri Meck School and its linguistic and cultural diversity is presented as the first point of interest of the pathway (Fig. 2).

- *Presentation of the students’ contribution to the project at the third LoCALL international online training week* (prepared with the French teacher)

In the framework of the LoCALL project, every six months a different partner team organized a training week to share the project development and exchange with participants from different linguistic, cultural, social and professional backgrounds. The third LoCALL online training week was organized by the French team and took place from 31st May to 4th June 2021. The presentation of the project and of the activities undertaken by the students of Collège Henri Meck was one of the high points of the week-long program. Using different languages, students presented their work, their learning and were very active and keen to answer participants’ questions and to exchange with them.

² Pathway available in English and French in the LoCALL App: localproject.web.ua.pt/LoCALL.apk (chose “play” – “Strasbourg” – “Welcome to Molsheim”).



Fig. 2 General overview of the linguistic pathway created by Collège Henri Meck students in 2021

In order to understand the approach of the project and its possible pedagogical impact, it is crucial to mention that it was conducted as a “participatory action research” project (Braye & McDonnell, 2012; Genat, 2009; Gibson et al., 2017; Nind, 2011; Welikala & Atkin, 2014). A twofold reason motivated this choice of approach. Firstly, from a research methodology and data analysis perspective, following the work of Genat (2009), Gibson et al. (2017) and Welikala and Atkin (2014), the team wished to “engage with participants on an equal platform, or as equal as is possible, to enable the views and stories of those being researched to be heard clearly and without re- or mis-interpretation by the researchers” (Gibson et al., 2017, p. 110). Secondly, inspired by the work of Cummins et al. (2005) and Cummins and Early (2011), we consider that it is by sharing this particular space with students that they “will engage academically to the extent that instruction affirms their identities and enables them to invest their identities in learning” (Cummins et al., 2005, p. 41). In addition, our overarching aim for the project was to empower students and teachers and create opportunities for them to develop new knowledge, competences and skills. We will illustrate these aspects with examples in the following section.

3 Project Outcomes and Findings

As mentioned in the previous sections, students demonstrated ownership of the project from the very outset and during the initial activities, becoming not only beneficiaries, but active participants and co-constructors of the project and its pedagogical program. As a result of their personal implication in the project, their learning rapidly not only met the first objective of the project, raising awareness of linguistic and cultural diversity within the local environment, but went beyond it. Students learned a great deal about themselves, their classmates, and other people in the school as well as details of their own family history. We present examples of the acquired knowledge and skills below, revisiting the concepts previously defined in the theoretical framework section and grouping the data under three of the themes which have emerged from the data collected so far.

3.1 *Development of Plurilingual and Pluricultural Competences*

Through the creation of their own language biographies and the survey they conducted with their families and within the school, students identified more than 23 languages spoken in their class and more than 30 languages spoken by people on their school campus (lower Collège and upper Lycée schools). Students admitted that they knew that there were a number of different languages spoken by school members before undertaking this work, but that they were surprised to learn that there were so many of them. This was the first step for students towards discovering the linguistic and cultural diversity of their environment and is illustrated by the following extract from one of the hybrid interactive sessions:

Dans notre classe il n'y a pas que le français, il y a aussi le turc, l'arabe, l'espagnol, l'italien, l'albanais et le portugais. (Student, original quote, online class recording 03/06/2021).

In our class there is not only French, there is also Turkish, Arabic, Spanish, Italian, Albanian and Portuguese. (Student, our translation).

Later, in the Physical Education class and also during their presentation at the online training week, students took this awareness a step further and chose to speak their languages in front of their class and the other participants, many of whom were attending from other countries or areas of France. We consider that not only discovering the presence of these languages, but also using them in the classroom was a very important step in the development of students' and teachers' plurilingual and pluricultural competences. It encouraged them to value their own languages and also to find out more about other languages, other writing systems and other systems of pronunciation.

With respect to plurilingual and pluricultural competences, students not only gained knowledge about other languages, but they also developed “critical language awareness” (Alim, 2010), that is, language awareness that goes “beyond cognitive awareness’ directing it ‘toward social and political consciousness-raising and action” (Alim, 2010, p. 215).

Regarding the pedagogical value of critical language awareness activities, Alim also notes that:

After collecting data on their own speech, students gain a much higher level of metalinguistic awareness (speaking of themselves as style shifters possessing multiple languages and a range of speech styles) that allows them to not only better understand the abstract theory of ‘speaking’, but also to better understand the linguistic landscape of their social worlds. These worlds are not marginalized in the classroom, or ‘checked at the door’, but they are viewed as valuable cultural and linguistic spaces for learning (Alim, 2010, p. 218).

During the French implementation of the LoCALL project, one of the most explicit illustrations of this was the students’ discussion about what constitutes a “foreign” language in their eyes, but also from the perspective of others³:

1. Une langue étrangère est une langue autre que la langue maternelle. (Student 1, original quote).

A foreign language is a language other than the mother tongue. (Student 1, our translation).

2. Les langues étrangères sont les langues autres que le français. (Student 2, original quote).

Foreign languages are languages other than French. (Student 2, our translation).

3. La langue vivante est une langue que l’on parle dans la vie de tous les jours et une langue étrangère et une langue que l’on parle pas. (Student 3, original quote).

A living language is a language that you speak in everyday life and a foreign language is a language that you don’t speak. (Student 3, our translation).

4. J’entends de l’alsacien à la maison mais je ne le parle pas, est-ce que c’est une langue étrangère ? (Student 4, original quote).

I hear Alsatian at home but I don’t speak it, is it a foreign language for me ? (Student 4, our translation).

5. Je parle portugais à la maison ce n’est pas une langue étrangère pour moi. (Student 5, original quote).

I speak Portuguese at home, it is not a foreign language for me. (Student 5, our translation).

6. Je parle Albanais à la maison et c’est pas une langue étrangère pour moi. (student 6 , original quote).

I speak Albanian at home and it is not a foreign language for me. (Student 6, our translation).

³ (Source, for all quotes: class chat exchange at online session, 09/04/2021, via the videoconference platform BBB, University of Strasbourg).

7. Pour moi il n’y a aucune différence. Ce que nous considérons comme des langues vivantes pour nous (Français) peut être considéré comme une langue étrangère pour les Japonais par exemple. (Student 7, original quote).

For me there is no difference. What we consider as living languages for us (French people) can be considered as a foreign language for the Japanese for example. (Student 7, our translation).

8. “Langue étrangère” est un bien grand mot. La seule réponse possible est “tout est une question de point de vue”. (Student 8, original quote).

“Foreign language” is quite a loose word. The only possible answer is that “everything is a question of point of view”. (Student 8, our translation).

We see this critical side of language awareness through the students’ analyses of their own perspectives on the question, as well as other people’s stances, both in their immediate environment and from other countries. For example, to define a language as foreign some students (students 3 and 4) referred to the criteria of language competence and the level of mastery of the language (“the language you don’t speak”). Others (students 5 and 6) highlighted their everyday language practices and the languages they speak at home (Portuguese and Albanian) maintaining that these languages are not “foreign”. This led the class to discuss the question of why languages other than French, usually referred to as “mother tongue languages”, can also be considered as “not foreign”. One of the explanations proposed was the different ways languages are perceived at home and in the school. While these languages are “familiar” at home, they are considered as “foreign” languages at school where legitimate languages include the language of schooling and the languages taught in school.

To conclude this section, we can affirm that during the online training week not only were students able to take pride in their work and showcase their expertise concerning the linguistic landscape of their homes, school, town and region, but they were also able to understand first-hand how speaking different languages opens doors to communication with the wider world. They were clearly impressed by their teacher’s language skills in English, as well as those of the team, as they had never heard any of us speak a language other than French prior to this exchange.

3.2 Intergenerational Development of “Funds of Knowledge”

Both the aforementioned and the following quotations from the students also reveal how they began to understand that all these diverse languages are closely connected to the personal and family history of each person, and how this work led them to get to know other people better:

1. Le travail en Histoire Géo m’a appris beaucoup sur mes origines, parce que je pensais que j’avais plus d’origines portugaises qu’italiennes. Et en fait j’ai beaucoup parlé et échangé avec ma famille, mes grands-parents, etc. et ils m’ont beaucoup appris, et j’ai vu que

j'avais tout autant d'origines italiennes que portugaises. (Student of Portuguese-Italian origin, original quote, online class recording 03/06/2021).

The work in the History and Geography class taught me a lot about my origins, because I thought that I had more Portuguese than Italian origins. And in fact, I spoke and exchanged a lot with my family, my grand-parents, etc. and they taught me a lot, and I saw that I had as many Italian as Portuguese origins. (Student of Portuguese-Italian origin, our translation).

2. Moi avec ma grand-mère, je pensais que toute ma famille était d'origine de la France, et avec ma grand-mère j'ai appris que en fait du côté de ma grand-mère ils viennent tous d'Algérie, donc grâce à ça j'ai appris surtout d'où je viens. (Student from a French family who also lived in Algeria for some time, original quote, online class recording 03/06/2021).

Me with my grand-mother, I thought that all my family was originally from France, and with my grand-mother I learned that in fact on my grand-mother's side they all come from Algeria, so thanks to this I learnt where I come from. (Student from a French family who also lived in Algeria for some time, our translation).

We observed that working on plurilingual and pluricultural competences encouraged intergenerational exchanges. These intergenerational exchanges can be a source of intergenerational transfer of knowledge and skills and therefore contribute to the development of diverse funds of knowledge. Therefore, based on these examples, we can say that using linguistic landscapes and linguistic diversity as a pedagogical tool can help teachers and students to become more aware of these funds of knowledge. Moreover, if we analyse the following quotation from another student:

Grâce par exemple, grâce au travail qu'on a fait en Histoire Géographie, moi j'ai voulu apprendre l'italien pour me rapprocher de mon arrière-grand-mère. (Student of Italian origin, original quote, online class recording 03/06/2021).

Thanks for example, thanks to the work that we did in History and Geography, me, I wanted to learn Italian to get closer to my great-grand-mother. (Student of Italian origin, our translation).

We see that this student also recognized the value of these intergenerational exchanges and family funds of knowledge, as this activity encouraged him not only to reflect but also to act—to take initiative and to go in search of these interactions and funds of knowledge. From this example we can also see the importance of the recognition of these funds of knowledge by the school (González et al., 2005; Vélez-Ibáñez & Greenberg, 1992) in order to encourage the valuing of these funds of knowledge by the students themselves.

3.3 Development of Educational Partnerships

Educational partnerships were developed on different levels, but first and foremost inside the classroom: in pairs (working on the interviews), in small groups (preparing the linguistic pathway) and with the whole class (working in class throughout the

whole year and also presenting the project during the online training week). As we can see from the following testimony, students do not explicitly name this collaboration as a “partnership”, but they do talk about solidarity and supportive relationships created in class:

On a réussi vraiment à s’entraider, on était vraiment tous ensemble, on a vraiment fait des groupes avec des gens avec qui on parlait moins, et du coup ça nous a rapproché tous ensemble, on était vraiment solidaires, on s’est tous aidés, et c’était vraiment bien. (Student, original quote, online class recording 03/06/2021).

We all managed to help each other, we were really all together, we really made groups with people with whom we spoke less, and so we got closer to each other, there was real solidarity, we all helped each other, and that was really nice. (Student, our translation).

Moreover, students, as partners in the research also developed a very close relationship with their French teacher, Sonia Cadi, who was the main driving force behind the project in school. It is very important to say that this educational partnership between Sonia and her students was also possible because Sonia allowed this partnership to happen by encouraging autonomy and confidence among her students (which is not very common in vertical authority structures where teacher-led work tends to be the norm) and perceived and valued them not just as her students, but as individuals:

So for me as a teacher it was a very interesting activity to know, to have knowledge about language abilities of my students and their feelings too, and their lives. (Teacher, original quote, online class recording 03/06/2021).

Moreover, thanks to the activities in other disciplines, and in particular to the whole-school survey, students could also create partnerships with other people in their school:

Quand on a travaillé avec les autres classes, ça faisait bizarre, en fait au début on ne les connaissait pas tous, mais à force de les interviewer on a appris plein de choses sur eux, bon moi par exemple j’ai appris plein de choses sur plein d’élèves, et quand on travaillait avec les 3^{ème} ça faisait bizarre parce qu’ils sont plus grands que nous, et pour les adultes aussi, pour les professeurs, et voilà. (Student, original quote, online class recording 03/06/2021).

When we worked with other classes, it was strange, in fact at the beginning we didn’t know all of them well, but while interviewing them we learnt a lot of things about them, well, me for example, I learnt many things about many students, and when we worked with 3^{ème} class it was strange because they are older than us, and for the adults too, for the teachers, that’s it. (Student, our translation).

Such comments indicate the creation of “interpersonal spaces of reciprocal empowerment between teachers and students” (Cummins, 2021, p. 284) and additionally between students.

4 Concluding Remarks

Although the positive repercussions of undertaking this project, as we have reported on, were many and varied, setting out on a journey into the unknown linguistic landscape was challenging. One of these challenges was that some teachers did not initially appreciate the linguistic diversity potential of what in their eyes was a small town in a rural setting. However, when presented with the first concrete results, the work produced by the students, teachers were encouraged to persevere and to move forward with the project. Moreover, regarding the workload and the packed school curriculum, they could easily see how they could connect the project to their school programmes and realised that they could adapt it to their aims and objectives—some took part in the interviews, some contributed throughout the whole year, while others just gave a one-off session. As for example Nathalie Luttringer, teacher of History and Geography and of Regional Language and culture, mentioned:

A un moment donné il va falloir faire des choix, parce que dans mon programme, j'ai consacré du temps au projet, et dans mon programme mon temps n'étant pas extensible, je vais devoir raccourcir ou traiter plus rapidement certains chapitres du programme, mais en même temps on a le programme et les compétences, aujourd'hui. Et dans les compétences on nous demande de travailler les compétences orales, on nous demande de travailler les compétences d'autonomie, on nous demande les compétences du travail collaboratif, donc en même temps moi j'ai travaillé les compétences. Donc je n'ai pas perdu mon temps. (Interview with Nathalie Luttringer, 13/01/2022, Collège Henri Meck de Molsheim, original quote).

There comes a time when a choice has to be made, because in my programme, I dedicated some time to the project, and my time is not expandable, I have to shorten or to go quicker through certain chapters of my programme, but at the same time there is a curriculum and there are competences today. And within competences we are asked to work on oral competences, competences of autonomy, of collaborative work, so at the same time I have worked on these competences. Therefore I haven't wasted my time. (Interview with Nathalie Luttringer, 13/01/2022, Collège Henri Meck de Molsheim, our translation).

Teacher implication in this kind of project also depends, on the one hand on the support of the administration and more specifically on the support from the head teacher (who we would like to thank her once again for her support), and on the other hand on the relationships between the colleagues and their readiness to support each other's projects. As for example Danièle Pion, teacher of Sports and Physical Education notes:

Je suis ici au Collège depuis une dizaine d'années, je travaille avec Madame Cadi depuis une dizaine d'années, nous avons l'habitude de travailler ensemble sur différents projets, on s'entend bien, on a des affinités, donc dès que l'une d'entre nous s'investit dans un projet, l'autre s'implique parce qu'elle sait qu'en général ce sont des projets intéressants. Au sein du Collège Henri Meck on est quelques enseignants comme ça qui sont dynamiques, qui ont envie d'innover, qui ont envie de découvrir d'autres, qui sont curieux, qui s'intéressent aussi aux autres matières qui sont pas fermés sur leurs matières et qui savent que pour les élèves, un projet, quand ça vient de plusieurs disciplines, ça a plus de sens pour les élèves [...] Donc quand elle m'a proposé ce projet je me suis tout de suite dit que j'allais trouver des moyens

pour faire des liens en EPS [...] et en fait j'ai vraiment fait confiance à Sonia. C'est-à-dire elle m'a dit voilà ce projet est intéressant et moi j'ai dit je suis partante. (Interview with Danièle Pion, 13/01/2022, Collège Henri Meck de Molsheim, original quote).

I have been here in this collège for about ten years, I have been working with Madame Cadi for about ten years, we are used to working together on different projects, we get on well, we have similar interests, when one of us gets involved in a project, the other one follows because we know that generally these are interesting projects. At Collège Henri Meck we are several teachers like this who are dynamic, who would like to innovate, who would like to discover, who are curious, who are not closed off in their subjects, who take an interest in other subjects and who know that for students a project, when it involves several disciplines, it makes more sense for the students [...] So, when she suggested this project to me, I thought at once that I would find a way to make connections with the Sports classes [...] In fact I really followed Sonia. That means she told me here is an interesting project and I said I'm in. (Interview with Danièle Pion, 13/01/2022, Collège Henri Meck de Molsheim, our translation).

In conclusion, there were different levels of implication amongst staff, but this enabled a whole school approach and students became empowered and learned a lot while communicating with other students, teachers and school staff not only on a student to student basis, or a student to teacher one, but as individuals in their own right with their rich and varied identities revealed through meaningful, interpersonal exchanges. It is important to highlight pupils' increased motivation and initiative, and the fact that even the teachers were pleasantly surprised by what the pupils were capable of doing independently. As mentioned for example by Sonia Cadi, French language and literature teacher and project coordinator within the school, one of the illustrations of the students' involvement is the presence of almost all of the students at a session which took place exclusively online when students had to connect to a videoconference link from their home. Their teacher was proud to say that this online class dedicated to LoCALL was joined by almost all of the students, which was not always the case for online classes in other disciplines.

Finally, last but not the least, regarding the outcomes of the project, many parents reported unexpected positives as a result of the project concerning their children: students gaining in confidence, learning to speak in public, to communicate clearly, gaining in maturity, digital and team work skills (individual interviews with parents, 13/01.2022, Collège Henri Meck Molsheim):

1. La co-construction pour l'interview, la prise de parole parce que je pense que c'est vraiment le fait marquant, sur le partage aussi le fait de s'intéresser aux autres, même si on leur le ramène un peu sur le plateau là, de se dire, ouvre-toi quand-même, y a pas que ta vie, y a pas que tes copains, y a pas que le sport, y a des choses qui se passent ailleurs. (Interview with Mme L., mother of a student, original quote, 13/01/ 2022).

The co-construction for the interview, speaking in public because I think it's a key outcome, sharing also and taking an interest in other people, even if everything is delivered to them on a plate, saying to yourself, come on, look around, there's more than your life, there's more than your friends, there's more than sport, there are things happening elsewhere. (Interview with Mme L., mother of a student, our translation).

2. Moi j'avais l'impression que justement il avait, est allé chercher pas mal d'informations, à se questionner à ce qui semblait être pertinent par rapport à un projet donné, par rapport à

un objectif donné, en tout cas c'est la première fois, je pense que ce sont des compétences qu'il avait déjà certainement mais il n'en parlait pas, alors que là il a posé des mots, il en a parlé, en disant voilà on voudrait ça à la fin, qu'est-ce qu'on doit faire, quelles seraient les questions, dans le parcours qu'est-ce qui serait intéressant dans Molsheim de montrer à voir, quelles questions, quels thèmes on pourrait aborder dans l'Application. (Interview with Mme B. mother of a student, original quote, 13/01/2022).

I had the impression that he had really, he looked for quite a lot of information, asked questions about what might be relevant concerning a given project, concerning a specific objective, in any case, it's the first time, I think they're competences he had almost certainly already developed, but he's never talked about them, but this time he put them into words, he talked about them, saying so this is what we would like at the end, what do we have to do, what questions could we have, for the pathway what would be interesting to show, to see in Molsheim, what questions, what themes could we address in the app (Interview with Mme B. mother of a student, original quote).

3. L'histoire de Molsheim, déjà ça, et la cohésion car on est des rugbymans dans l'âme, donc l'esprit d'équipe, travailler ensemble.. et tout ce qu'il y a, le côté aussi virtuel, les logiciels, [prénom de son fils] m'en a parlé, il a dit il y a des logiciels que je ne connaissais pas, et ça ça lui a plu [...] aller vers les gens, rencontrer les adultes, et se confronter un petit peu au monde d'adultes.. il y a des mots à utiliser, à ne pas utiliser, ce qu'on essaie de lui apprendre depuis tout petit... la politesse et tout... et je pense que ça a été un plus. (Interview with Mr M, father of a student, original quote, 13/01/2022).

The history of Molsheim, for a start, and cohesion because we are rugby men at heart, so team spirit, working together.. and everything that's, the online side of things too, the software, [name of his son] told me about it, he said there were programmes I didn't know, and he really liked that [...]going up to people, meeting adults, facing the adult world a bit... there are certain words you can use or not use, things we have tried to teach him since he was little... good manners and all that... and I think that was a bonus. (Interview with Mr M, father of a student, our translation).

These testimonies from parents show the importance of home-school interactions, the co-construction of educational projects and the recognition of parental involvement by the school, as was the case for the LoCALL project at Collège Henri Meck Molsheim:

Souvent on considère l'élève comme une page blanche quand il entre en cours... alors que selon moi, le reconnaître dans son identité plurilingue c'est le légitimer dans son identité, cela contribue à effacer tout conflit de loyauté entre la famille et l'école, et le rend ainsi disponible pour les apprentissages (ça c'est bien la raison pour laquelle tous les profs peuvent se reconnaître dans ce type de projet). (Teacher email exchange with the team, original quote, 25/02/2022).

A student is often considered as a blank page when he enters the classroom...but for me, recognising his plurilingual identity means legitimatising his identity, it contributes to erasing all loyalty conflicts between family and school, and therefore enables him to be attentive to learning (that's exactly the reason why all teachers can identify with this type of project). (Teacher email exchange with the team, our translation).

These testimonies reveal that although collaborative projects are certainly challenging, they are also a very enriching experience for all the people involved, in terms of developing knowledge, competences, but also human relations. In these ways, we hope that the LoCALL project has added its modest but concrete contribution to the recognition of linguistic and cultural diversity in our societies.

References

- Agirdag, O., Jordens, K., & Van Houtte, M. (2014). Speaking turkish in belgian primary schools: Teacher beliefs versus effective consequences. *Bilig*, (70), 7–28.
- Alim, S. H. (2010). Critical language awareness. In N.H. Hornberger, & S.L. McKay (Eds.), *Sociolinguistics and Language Education. New Perspectives on Language Education* (pp. 205–231). Multilingual Matters.
- Braye, S., & McDonnell, L. (2012). Balancing powers: University researchers thinking critically about participatory research with young fathers. *Qualitative Research*, 13(3), 265–284. <https://doi.org/10.1177/1468794112451012>
- Coste, D., Moore, D., & Zarate, G. (2009). *Plurilingual and pluricultural competence*. Council of Europe.
- Cummins, J. (2000). *Language Power and Pedagogy: Bilingual Children in the Crossfire*. Multilingual Matters.
- Cummins, J. (2021). Pedagogies of powerful communication: Enabling minoritized students to express, expand, and project identities of competence. In L. Mary, A.-B. Krüger & A.S. Young (Eds.), *Migration, Multilingualism and Education: Critical Perspectives on Inclusion* (pp. 284–297). Multilingual Matters.
- Cummins, J., Bismilla, V., Chow, P., Cohen, S., Giampapa, F., Leoni, L., Sandhu, P., & Sastri, P. (2005). Affirming identity in multilingual classrooms. *Educational Leadership*, 63(1), 38–43.
- Cummins, J., & Early, M. (2011). *Identity texts: The collaborative creation of power in multilingual schools*. Trentham Books.
- Gage, O. (2020). Urgently needed: A praxis of language awareness among pre-service primary teachers. *Language Awareness*, 29(3–4), 220–235.
- García, O. (2017). Critical multilingual language awareness and teacher education. In J. Cenoz, D. Gorter, & S. May (Eds.), *Encyclopedia of language and education (3rd ed., Vol. Language Awareness and Multilingualism*, pp. 263–280). Switzerland: Springer.
- Galante, A. (2020). Plurilingual and pluricultural competence (PPC) scale: The inseparability of language and culture. *International Journal of Multilingualism*. <https://doi.org/10.1080/14790718.2020.1753747>
- Gibson, S., Baskerville, D., Berry, A., Black, A., Norris, K., & Symeonidou, S. (2017). Including students as co-enquirers: Matters of identity, agency, language and labelling in an International participatory research study. *International Journal of Educational Research*, 81, 108–118.
- Genat, B. (2009). Building emergent situated knowledges in participatory action research. *Action Research*, 7(1), 101–115. <https://doi.org/10.1177/1476750308099600>
- González, N., Moll, L. C., & Amanti, C. (2005). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. Routledge.
- Gorter, D. (2018). Linguistic landscapes and trends in the study of schoolscapes. *Linguistics and Education*, 44, 80–85.
- Gorter, D. (2013). Linguistic landscapes in a multilingual world. *Annual Review of Applied Linguistics*, 33, 190–212. <https://doi.org/10.1017/S0267190513000020>
- Hancock, A., & Hancock, J. (2021). On the outside, looking in: learning community languages and Scotland's 1+2 Language Strategy. *Current Issues in Language Planning*, <https://doi.org/10.1080/14664208.2020.1867415>

- Institut national des études statistiques et économiques (INSEE). (2018a). <https://www.insee.fr/fr/statistiques/5397751?sommaire=5397790&geo=ARR-673>. Accessed 16 March 2022.
- Institut national des études statistiques et économiques (INSEE). (2018b). <https://www.insee.fr/fr/statistiques/5397749?sommaire=5397790&geo=COM-67300>. Accessed 16 March 2022.
- Krompák, E., Fernández-Mallat, V., & Meyer, S. (Eds.) (2021). *Linguistic landscapes and educational spaces*. Multilingual Matters.
- Malinowski, D., Maxim, H. H., & Dubreil, S. (Eds.) (2020). *Language teaching in the linguistic landscape: Mobilizing pedagogy in public space*. Springer.
- Nind, M. (2011). Participatory data analysis: A step too far? *Qualitative Research*, 11(4), 349–363. <https://doi.org/10.1177/1468794111404310>
- Vélez-Ibáñez, C. G., & Greenberg, J. B. (1992). Formation and transformation of funds of knowledge among U.S. Mexican households. *Anthropology & Education Quarterly*, 23(4), 313–335.
- Van Mensel, L., & Hélot, C. (2019). Le multilinguisme en contexte éducatif au 21^{ème} siècle: Perspectives critiques. *Cahiers Internationaux De Sociolinguistique*, 2, 9–17. <https://doi.org/10.3917/cisl.1902.0009>
- Welikala, T., & Atkin, Ch. (2014). Student co-inquirers: the challenges and benefits of inclusive research. *International Journal of Research & Method in Education*, 37(4), 390–406, <https://doi.org/10.1080/1743727X.2014.909402>
- Young, A. S., & Hélot, C. (2007). Parent power: Parents as a linguistic and cultural resource at school. In A. Camilleri Grima (Ed.), *Ensemble: Promoting Linguistic Diversity and Whole-School Development* (pp. 17–32). Strasbourg, France / Graz, Austria, Council of Europe / European Centre for Modern Languages (ECML).

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Thinking Allowed: Linguistic Landscapes-Based Projects for Higher-Order and Critical Thinking Skills



Klaudia A. Kruszynska and Melinda Dooly

Abstract This chapter describes the design and integration of linguistic landscape (LL)-based projects in a secondary English as a foreign language course. Throughout the project, students were encouraged to learn about and become ethnographers while documenting their neighbourhoods' LL. The project was also designed to promote learners' critical thinking (CT) and higher order thinking skills (HOTS). In this chapter we identify and discuss which critical and higher order thinking skills students used to construct knowledge from their ethnographic work and final presentation of their findings. We adapt and apply definitions provided by Beyer (1985) for critical thinking skills and Lewis and Smith (1993) for higher order thinking skills to Silbey's (2021a, b) framework, which is based on Grounded Theory (Charmaz, 2007) to analyse students' selected output as well as their responses in post-project interviews. Our analysis indicates that the LL project supported students' development of linguistic and intercultural sensitivity.

Keywords Linguistic landscapes · Critical thinking · Higher order thinking skills project-based learning

1 Introduction

In a constantly transforming globalized world where there are significant socio-political and economic changes, it is increasingly paramount for teachers to equip their students with skills that will enable them to face incessant change. Foreign language teachers can play a vital role in the process of preparing students to not only learn the target language of the classroom, but, more importantly, arm them with

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tools that will enable them to become aware of and familiar with other languages they may need further down their personal and/or professional paths. Language teachers can also help raise students' cultural and linguistic sensitivities towards other languages and cultures (Bergroth et al., 2021). It is increasingly important for individuals to develop linguistic and intercultural sensitivity as economic, political and social relationships span multiple national borders. Moreover, some researchers find correlations between language learning and development of higher order and critical thinking skills (Bergroth et al., 2021; Toyoda, 2015), another key competence needed for the immediate and far future of learners.

For the purpose of this study, we draw on Beyer's (1985) definition of critical thinking (CT): "critical thinking is the assessing of the authenticity, accuracy and/or worth of knowledge claims and arguments" (p. 271). Additionally, we use Lewis and Smith's (1993) definition for higher order thinking skills (HOTS), described as "elaborating the given material, making inferences beyond what is explicitly presented, building adequate representations, analysing and constructing relationships (...) all of which are involved in even the most apparently elementary mental activities" (p. 133). HOTS can be divided into lower levels of thinking, which include the ability to generate information, and higher levels that involve the application of the former to guide one's behaviour. For this study, CT and HOTS have been operationalized through the application of measurable verbs and related domains that stem from Bloom's taxonomy, as adapted and updated by Anderson et al. (2001). In this way, we can track the students' use of lower and higher order thinking skills during a Linguistic Landscape (LL) pedagogical approach to foreign language teaching.

Recently there has been a significant amount of research carried out on the use of LL in a language classroom (Gorter, 2018), as many scholars find it a useful tool to interrogate definitions of language and to expand students' conceptualizations towards the notion of language as "a unique and complex repertoire made up of diverse semiotic and multimodal resources" (Vallejo & Dooly, 2020, p. 9). Despite a growing interest in this field, there are fewer studies that focus on learners' perspectives regarding LL-based projects and their impact on their learning, and in particular on the development of their metacognitive awareness.

Following Malinowski et al.'s (2020, p. 1) notion that "this wealth of language and literacy opportunities in the discursive world of public texts and textual practices" can be an excellent tool in students' development of HOTS and CT skills, we developed and implemented LL-based activities, which not only promoted language awareness and language skills, but also aimed to enhance students' HOTS. We believe that LL-based projects encourage students to ask questions about themselves and 'others' in a very authentic and personal way, as many times the 'others' are their classmates. In the ever changing twenty-first century it is particularly important for schools to equip young people in HOTS that include analysing, comparing, or evaluating so that they can better manage the circumstances in which they live and will come to live.

This study's goal is to answer the following research question: To what extent do LL-based projects promote and/or support HOTS and CT skills among secondary school students? Expanding on the notion of promotion of CT, it can be argued that

all teachers—not only in language-focused subjects—need to help their students to become more reflective so that they can better understand how they learn and identify skills they can use to advance their learning. Over the past three decades, there has been an emerging consensus on the importance of CT as one of the key goals for education to respond to the social and economic needs of learners and the general populace (Ananiadou & Claro, 2009; McAleese et al., 2013). CT has been present in education since the teachings of Socrates but has become firmly entrenched as a foundational principle of education in the European Union (Paris Declaration, 2015). In education policy documents, CT is put forth as intrinsic for social stability, economic growth, personal and collective creativity, individual and social well-being, and as a basis for the continuance of democratic society (Kromydas, 2017).

As regards language teachings, it has long been prevalent in theories on learning that CT is relevant because knowing how to express oneself helps one think clearly and systematically. Being able to break down oral and written texts can lead to enhanced ability to comprehend and express increasingly complex ideas (Dooly, 2015; Ross et al., 2012). Arguably, as their ability to apply CT increases, students need to be presented with classroom activities that will allow them to question their (and others') assumptions in order to promote “linguistically sensitive teaching” that “includes awareness of the role of languages in learning, identity growth and wellbeing” (Bergroth et al., 2021, p. 2).

One means of promoting CT is through contextualized inquiries (Johnson, 2002). Contextualizing students' learning so that they can then make connections to the complex world in which they live is not always an easy task. Linguistic Landscape (LL) can provide an authentic and up-to-date means to raise students' awareness of their surroundings (Dagenais et al., 2009) and give teachers a powerful tool to bring the 'outside' world into the classroom. Through LL, together they can then critically interrogate and probe their sociocultural contexts. This study's aim is to demonstrate that through LL-based projects, which invite and guide students in analysing their own LL-generated data through measurable verbs related to HOTS, it is possible to educate more autonomous and critical learners who are able to question and reflect upon their surroundings.

2 Theoretical Background

One of the first and most well-known definitions of LL was proposed by Landry and Bourhis (1997) who defined it as: “visibility and salience of languages on public and commercial signs in a given territory or region” (p. 23). Since the introduction of the term, there has been continuous scholarly interest and significant research regarding LL in diverse geographical (and disciplinary) areas, reaching as far as rural areas of Zambia (Banda & Jimaima, 2015). As Barni and Bagna (2015) have noted, there is “a considerable scope for analysing the LL with different and often interdisciplinary approaches—semiotic, sociological, political, geographical, economic—that draw

not only on quantitative but, above all, on qualitative research methods” (Barni & Bagna, 2015, p. 6; cited in Bagna & Bellinzona, 2021).

Cenoz and Gorter (2008) are widely considered as the pioneers who first saw the value of LL in language acquisition. Malinowski (2015) later proposed that “linguistic landscape research offers valuable tools for pedagogical application” (p. 1) and, in recent years, more and more researchers and practitioners have seen LL as a beneficial tool in pedagogical application, especially in the foreign language classroom (Gorter, 2018). LL has been used in the English as a Foreign Language (EFL) classroom to provide students with authentic English input, as per Sayer (2010) who prompted his students in Oaxaca, Mexico, to become ethnographers in a LL-based activity with the goal of examining which signs in English could be found in the city. A more recent anthology of LL activities in language classes has been edited by Solmaz and Przymus (2021) and compiles teaching proposals from teachers around the world.

Rowland (2013, p. 498) summarised the pedagogical benefits in prior LL studies as the following:

- develop students’ critical literacy skills
- improve students’ pragmatic competence
- increase the possibility of incidental language learning
- facilitate the acquisition of multimodal literacy skills
- stimulate students’ multicompetence
- enhance students’ sensitivity to connotational aspects of language.

In his study of LL-output produced by 27 university students, Rowland (2013) found that the above-described pedagogical benefits could also be developed in a context of EFL. Similarly, Ying (2019) proposed that LL in an EFL classroom offers “language learning in ‘real-life’ situations” (p. 1) and that it develops students’ positive attitudes towards the “use of English in city space as teaching material” (p. 7). However, the study also revealed that, depending on their age and their level (high school, graduate, or postgraduate students), they had different opinions on how “English on signs can improve vocabulary, English literacy, and critical thinking” (Ying, 2019, p. 9).

This short review reveals that the use of LL in the EFL classroom has emerged within the last few years as a useful tool to promote students’ language development, language awareness, and help them become ethnographers of their linguistic and cultural milieu (Gorter, 2018; Melo Pfeifer & Schmidt, 2012). LL has also been applied as a support for CT development in students. Lozano, Jimenéz-Caisedo and Abraham (2020) use LL-based projects “to make students read texts critically by asking questions that involve identifying the text’s purpose, interpreting the perspectives and intentions of those who created it, and situating those texts in the socio-cultural context where those texts (Street Signs) are found in the city” (p. 26). Along similar lines, we propose that LL can promote HOTS and CT skills, which are arguably required in all areas of learning, but especially in a foreign language classroom.

3 Research Methodology

For some years now, academic institutions have actively included teachers and students in their research, with the idea of promoting reflexive teaching and learning practice as well as making the academic responses more adequate to the current educational needs (Larrivee, 2000; Nussbaum, 2017). As both the researcher and the implementer of the project, the first author's goal was to acknowledge the tension between the researcher and the object of the research. This implies accepting and fully subscribing to the notion that the person doing the research can also be the subject of it. Doing so can help reduce the gap between research teams (of which the second author belongs to) and their subjects, and between theory and practice (Nussbaum, 2017) and ensure a more equitable and balanced research. The authors are aware that this approach has both gains and drawbacks. On one hand, being the classroom teacher allowed students to talk in great detail about many things that happened in the lessons during the interviews without needing to provide her with the context. However, on the other hand, the students might have been hesitant to share some of their opinions, as she was also responsible for their evaluation in the subject where LL activities were carried out. To mitigate this, students were assured at the beginning of each interview that their answers would not affect their evaluation; furthermore, the interviews were carried out after students had received their final marks for LL-based projects.

Overall, this study is formulated as a practitioners' research: it is conducted by individuals with dual roles of both practitioner and researcher in order to enhance and improve the practice under question (Campbell & Groundwater-Smith, 2009; Ergas & Ritter, 2020). The data analysis is based on Silbey's (2021b) adaptation of Grounded Theory, "where the theory is built ostensibly from ground up (relying entirely on the data)". This approach stems from the compilation of empirical data (observations, the respondents' words, or documentary evidence) together with the "use of some concepts from the existing literature and theoretical resources as possible codes" (Silbey, 2021a, n.p.). According to Tavory and Timmermans (2014), some categories may emerge directly from the data while other categories or concepts may be imported from elsewhere, if they are relevant to what is observed in the data.

Since this qualitative study has as its objective to investigate whether any of the HOTS are visible in the learners' output, an adapted version of Bloom's Taxonomy (Anderson et al., 2001) provided us with preliminary 'imported categories' or domains to help identify possible displays of different levels of cognition. This taxonomy is useful for exploring CT, as these skills are an integral part of both higher and lower order thinking as defined by Bloom. HOTS are often divided into two components: (1) lower order thinking (ability to generate information): knowledge, comprehension, application and (2) higher order thinking (application of the former to guide behaviour): analysis, synthesis and evaluation. Applying these domains to documentation of the learners' output as they carry out the LL project can help us determine what HOTS the students use while working on the LL-based activities (Table 1).

Table 1 Descriptors of imported concepts for analysis (based on Bloom's Taxonomy)

Bloom's definition					
Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Remembers previously learned information	Demonstrates understanding of the facts	Applies knowledge to actual situations	Breaks down objects or ideas into simpler parts and finds evidence to support generalizations	Compiles component ideas into a new whole or proposes alternative solutions	Makes and defends judgments based on internal evidence or external criteria

Source The Tenth Annual Curriculum Mapping Institute: Snowbird Utah, July 15–18, 2004 Adapted from Benjamin Bloom

4 Context

4.1 Participants

The study was conducted in a private secondary school located in a medium size town in Catalonia, Spain. Twenty-six students, eleven boys and fifteen girls, in their third year of compulsory secondary education (ages 14–15) took part in this research. Students came from five different homerooms and were assigned to this specific English class based on their English level. Their English level ranged from B1 to B2 level. Students attended four 50-min English lessons per week. The first author was the students' regular English teacher during the year the data were collected.

LL-based activities were incorporated into the first and second term's teaching plan, part of the work were formative tasks, others summative. The activities were varied, there were both oral and written tasks, some required the use of technology (voice recording, videos), some used drawing on paper, some were done individually and some in groups.

4.2 Pedagogical Activities that Led to Data Compilation

Written parental permission was obtained at the onset of the study and students were informed that their work might be analysed for research purposes.

Students took part in the LL-based activities described below. Bloom's Taxonomy was used to set the learning objectives (LO): comprehension, application, analysis, synthesis, and evaluation. These learning objectives were integrated into the LL activities to promote reflection. Itemized measurable verbs as LOs are as follows:

1. Comprehension: Reflect on personal language biographies as relates to self/family.

Task: Students individually prepared linguistic biographies: posters in which they represented languages that were spoken by them and/or were important in their families through images. They then recorded themselves describing their posters, paying special attention to reasons why they had chosen specific images to represent their languages.

2. Synthesis: Combine known languages to create one text, nurturing language awareness of grammar, phonetics, and meaning.

Task: In groups of three to five, students prepared a literary text (a poem, a story, a song) in which they used all the languages represented in their linguistic biographies. They were free to choose the theme and text format. Next, they recorded themselves reading or singing and accompanied it with images that best corresponded to their texts (e.g. vlog).

3. Evaluation: Analyse and consider fellow students' writing.

Task: Students worked in the same groups as in which they had prepared their literary text. Each group analysed a text written by a different group, guided by six questions prepared by the teacher (based on Bloom's Taxonomy's measurable verbs). Next, students presented their finding to the rest of the class.

4. Application: Present ideas about your neighbourhood's LL findings.

Task: Students individually organized pictures representing different languages that they had discovered in their neighbourhoods, grouping them into different categories, e.g., official (top-down), unofficial/informal (bottom-up), etc.

5. Analysis: Describe and compare languages found in different neighbourhoods.

Task: Students, in groups, prepared videos in which they compared the photographs they had taken in the previous activity.

For this paper, we consider two datasets: students' videos related to activity 5 and students' interviews responses.

4.3 Description of Data

Dataset 1: Videos

Due to the high volume of collected data only activity 5 was analysed for the purpose of this chapter: *Analysis: Describe and compare languages found in different neighbourhoods*. This activity was selected for analysis because it gave students an opportunity to develop different HOTS on various cognitive levels. The data proceeded from seven videos; four videos were created by groups of 4 students, one of 3, one of 2, and one of 5. The length of each video varied from five to nearly twelve minutes.

To analyse the video content, the authors (1) drew up a table with the measurable verbs and related domains: label, list, select (knowledge), discuss, explain (comprehension), apply (application), arrange, plan, design, create (synthesis), compare,

describe, justify (evaluation); (2) viewed each student groups' video multiple times; (3) took notes in order to compare student's utterance to the above-described Bloom's Taxonomy measurable verbs; (4) annotated findings in the table.

Dataset 2: Interviews Responses

Additional data were collected during group oral conversational interviews in English. These were done with students from the same homeroom to ensure that they felt comfortable among their peers; groups consisted of two to five students. The interviews were voluntary, and they took place in a separate room. During the interviews the students were asked to share their perspectives on this school year's English lessons. The incidents could refer to both positive and negative aspects of the LL lessons. When needed, the researcher asked prompting questions to encourage the participants to further explain the recalled situation, examine their own reactions and critically evaluate what they had learned from it. The interviews were video recorded and transcribed.

The data collected through students' interview is an example of inductive qualitative research, which consists of first collecting observations and then findings generalizations or patterns across the observations (Silbey, 2021a). The collected data were then coded as indicated by Charmaz (2007) through "categorizing segments of data with a short name that simultaneously summarizes and accounts for each piece of data" (p. 43).

To analyse the students' interview responses, the authors (1) highlighted the responses that were related to LL-activities; (2) identified when students had brought up these activities to find connections to topics, particularly language-related themes. After this initial analysis, the following themes related to LL-activities emerged: Way of learning; Participation; Digital skills; Group work/Collaboration. The last two categories—Digital skills and Group work/Collaboration—are not discussed in this chapter as they are not directly related to the research questions that this investigation attempts to answer.

5 Analysis and Results from Each Dataset

5.1 Dataset 1: Videos

The Table 2 summarizes the number of utterances related to each measurable verb. Following the table, we provide a generalized overview of student output and student quotes that provide further insight into the students' perspective regarding their learning, through the LL project, in each domain. Organizing data in this way gave us an opportunity to view student output and to explore student perspectives, for example their viewpoints on the easiest or the most challenging tasks.

Table 2 Numerical overview of output in relation to measurable verbs

Domain	Measurable verb	Number of utterances
Knowledge	Label	26
	Select	26
	List	1
Comprehension	Discuss	6
	Explain	13
Application	Apply	10
Synthesis	Arrange	26
	Plan	26
	Design	26
	Create	26
Evaluation	Compare	6
	Describe	4
	Justify	8

In general, we found that the students were able to accomplish the learning goals for each domain. Beginning with knowledge, all of the students selected pictures, labelled and listed languages that were visible in the pictures that they had taken in their neighbourhoods. Working together, one group listed all the languages they had found at the beginning of their presentation and the other groups gave the name of each language together with the pictures of the signs that they had chosen to represent the given language. As one student explained, “The languages that we have used have been: Catalan, English, Spanish, Japanese, Italian, French, Chinese, German, Braille.”

One student labelled the Hindu language as Indian, not realizing that there are actually many languages spoken in India; however, in all cases the learners were able to provide explicit information that displayed fundamental understanding of the neighbourhood’s linguistic landscape.

In what concerns comprehension, the students were able to explain how they had identified the languages visible in their pictures and languages on the photographed signs and six of them explicitly discussed their findings with their group members. This same number of students made reference to their partners’ findings in the videos; highlighting that the use of comparison and discussion of their findings with each other supported and enhanced their comprehension of the content. At this stage, a little over half of the students demonstrated that they had strategies to interpret better their local linguistic landscapes, as the following quote shows: “I could identify all languages by putting them into translator, google them, and also by my knowledge in other languages, e.g. I speak Spanish and Catalan so I could recognize these languages.”

Moving on to application and analysis, learners were expected to apply prior theoretical knowledge related to sign types (top-down or official versus bottom-up or informal) to put their pictures into different categories. Ten students attempted

to use the previous lessons' information related to category of signs (bottom-up, private–public, etc.) in order to classify their sign pictures. Several students described formal business signs or informal signs (such as hand-written notes); however, some students' attempts were incorrect: “This [sic] two photos are private as they are from businesses, and they are restaurants. “ At this stage, several of the learners demonstrated a capacity to use prior knowledge to analyse and recognize patterns in the LL of their community.

The domain of synthesis was directly related to the core task of groups planning, designing, and creating a video that integrated feedback from other group members. In this final phase, learners negotiated how to organize the information in order to best communicate their intended message. Despite being a voluntary basis activity, all the groups prepared videos, with all group members participating in their elaboration. This implied pulling together all of the previous information and incorporating it into the end result of an informative, explicatory video. However, it must be noted that most of the groups prepared their videos in a way that each group member recorded his/her sign photos and their description and then the groups combined the composite parts.

Finally, in the evaluation stage the students compared different group members' findings to select signs they believed best represented each language. They also had to justify their choices, as this quote shows: “The four members of the group have taken different pictures, but we've decided to show only some of them because they show culture of the language, we can find them in our daily lives, or we can differentiate them between public or private”. Furthermore, they had to describe the signs, e.g., explain their locations and see if all group members found their signs for specific languages in similar places (city centres, etc.), if there is only one or multiple languages (and why?) on the same sign, etc. Five students explicitly compared their findings to those of their colleagues by making clear reference to what the others had or had not found in their neighbourhoods (e.g., “All of my partners found signs [sic] in Catalan”). Eight students justified why they had chosen specific pictures for each language: “This sign attracts people because people will think that this is traditional Chinese food.” Four students tried to describe in depth their signs, for instance, they outlined how some of them were in one language while others were written in multiple languages or mentioned specific locations where they had found greater variety of languages, implying that they were reaching a stage where they could perceive correlations between what they were studying and its greater impact (e.g., social values of languages in public places).

5.2 Dataset 2: Interviews

During the interviews, students were asked to reflect on all the aspects of the lessons, but the teacher-researcher was careful not to specifically allude to any of the LL-based activities. Students' utterances are divided into the two categories that emerged from analysing the data: participation and way of learning.

Participation

Significantly, when asked what they enjoyed most during English lessons 17 out of 24 students mentioned the LL-based activities. The rationale the students gave for foregrounding these specific activities were varied. One reason provided was because the LL-activities allowed them to get to know their classmates better: “we all know our basis and things, but maybe we don’t know that her father comes here from Chile.” This reasoning seemed corollary to the fact that they were able to connect to their classmates and feel comfortable around them; the LL project helped them be more accepting of each other, especially since this was the only class the students had together.

Students also enjoyed learning about LL because it was highly personal and learner-centred: “it’s like in some way connected to our lives.” In turn, this increased their participation: “depending on topics sometimes I’m more interested in participating” and “it interested us, they’re not boring stuff and it’s a thing that you introduced to us and then we did it.” Some students mentioned LL-based activities as a way of learning more about their neighbourhoods: “So I need to really explore my city.”

Ways of Learning

Students seemed to intuitively understand that LL-based activities promoted deeper cognition, although they were not able to state it explicitly. As one student explained: “we tend to forget things less [...] because it’s like you’re putting your memory to work.” The students seemed to be aware that practising, formulating and expressing opinions helped them learn: “with your class we talk, we interact with you. It’s better because we think and we practise more English.” Another student put emphasis on her understanding of how she learns (metacognitive awareness) and on the authentic use of the target language (what she called ‘practice’): “for learning, the best lesson is practicing. [...] So, practising makes us think, oh, I did this, this and this and then you’re like, um, expand your level”, and “but then we improve our English stating our opinion.” Learners also underscored that by examining their own work and comparing what they had done before they were able to achieve better comprehension: “you can listen to yourself and your partners or friends and compare yourself and see if you did something bad or you can improve it for an exam”. Listening to their colleagues’ feedback was also highlighted by the learners as beneficial to their learning process. “I know that feedback is very important, so we get to learn from other people’s mistakes” The students seem to recognize that the process helped them develop metalinguistic and metacognitive awareness.

The interview’s responses indicate that students enjoyed learning about LL and were able to use HOTS, synthesise different components into new ideas or propose alternative solutions in order to form and defend opinions and thereby expand their knowledge, understanding and skills. As they explained, it is “not simple activities, like more that you need to open your mind and it interests you to learn things. The

activity interest you [...] and this can help you to understand more [and pay more] attention to that thing.”

6 Discussion

The analysis shows that, for the most part, the project’s aim to use LL-based activities to promote students’ HOTS and CT was achieved. Students applied different cognitive skills to complete the task requirements. They did well within the classification process based on Bloom’s Taxonomy, and, significantly, a high percentage of them was able to combine both lower and higher order thinking skills that are essential for CT. In the lower order skills, there is evidence they used their previous knowledge to perform the beginning part of the task: selecting pictures, listing, and labelling languages. Furthermore, most students were also able to describe and present their own findings (new knowledge built on prior knowledge) in a clear and concise way. Then they assembled all the parts together with other group members to create one video that summarized their findings (synthesis). However, the majority of the learners did not discuss their findings in detail with other group members (only six did this, as stated in Sect. 5.1), which seems to indicate that the skills of ‘evaluation’ were not fully achieved.

The last part of the task (evaluation), required students to compare all group members’ findings and prepare a video discussing similarities and differences. Several students found it difficult to apply their previous theoretical knowledge related to different types of signs (bottom-up, top-down etc.) as indicated by the low number of groups who attempted to do so in their videos.

Even though several students provided descriptive information about their signs, for example the exact location, only four attempted an in-depth analysis related to these signs. These four students discussed cultural references found on the signs: “It is an Italian restaurant because it’s called bota (boot) like the shape of Italy on the map” or the relationship of the language to the community: “We found it interesting that the name of the stores are in French and that some people may even not realize that the names are in French.” These attempts seem related to discussions that had taken place in earlier lessons about languages and their role in one’s identity, national identity, and language hierarchies. Nonetheless, this knowledge was not completely assimilated, and the students seemed unwilling and insecure about carrying out exhaustive investigation regarding this topic.

Students did better in the parts of the tasks where they could work on their own or with little interaction with other group members. The segments that required more negotiation with partners were only partially completed or were not done at all. Perhaps not surprisingly the activities they found most challenging were the most cognitively demanding ones. There may be different reasons why students found this specific part of the task difficult. There may not have been enough time spent in class practising this type of tasks, there may have been too many people in the group and, therefore, too much data to compare, or perhaps not enough time was provided

in the class to do all the required task parts. It could also have been due to lack of sufficient teacher supervision during the group work. It would be interesting to see if by ameliorating all or some of the above conditions the results would improve.

As regards the interviews, similar to Ying's (2019) findings, students' responses indicate that LL-based projects appeal to teenage learners. Learners in our study have demonstrated their interest in learning about topics directly related to them, such as languages and cultures. Furthermore, as various students pointed out, they enjoyed being challenged with themes that were new to them and required them to reflect and rely on their previous experiences and knowledge, although they needed teacher support and guidance to do so, as was evidenced when analysing students' videos, all of which can be related to the development of HOTS.

The students' interview responses demonstrated that they were aware that they learned more when they participated in activities in which learning outcomes were defined by using measurable verbs. They were able to point out in which situations they had learned the most and what favoured their progress. However, their metacognitive awareness is implicit rather than explicit and that leaves room for the teachers to further train the learners to be more reflective about their learning process and further promote CT. This will also allow them to know what strategies and skills they will need to develop when learning other languages, in case they need them in their future personal and/or professional lives.

We see in the interviews that the students enjoy taking an active role in their learning through becoming ethnographers and documenting languages present in their neighbourhoods. Similar to Lozano et al. (2020) findings, students elaborated on their data, making inferences in order to create their output about their neighbourhoods' LL. They found expressing their opinions and interacting with their peers and teachers gratifying (reasoned discussion and debate are key strategies for CT development), but, at the same time, they were very self-conscious about the effect their words may have on their colleagues' perceptions of them. Due to this, it is proposed that teachers ensure that students feel safe and comfortable with the teachers and classmates before introducing topics that may require them to share personal views or verbalize complex thinking processes.

7 Conclusion

This study's main aim was to measure the extent to which LL-based projects might promote students' HOTS and CT. It was demonstrated that LL-activities can be used successfully not only to promote both CT and HOTS, but that this pedagogical design can also increase students' metacognition related to their foreign language learning. We have seen that through LL-based projects students can learn to critically interrogate and probe the sociocultural environment in which they live. Embedded in a project that promotes ethnographic skills, these young learners gained investigative skills while discovering new aspects of the languages present in their neighbourhoods. Through presentation, comparison and evaluation of each other's work, they learned

to assess their colleagues' accuracy and knowledge claims, which are key starting points for developing HOTS and CT.

Moreover, this LL-based project has proven to be a very useful tool to engage students' interest and consequently improve their motivation and their participation in tasks and lessons. Additionally, providing them with opportunities to learn more about their peers led to deeper interpersonal relationships between them and helped them appreciate the diversity represented by their classmates, and, equally important for teenagers, gave students the opportunity to feel more comfortable sharing their experiences.

It is acknowledged that the results of the study refer to a small sample of students and are constrained to the context of one specific school, and therefore cannot be generalised to other settings. However, we feel that the findings provide a solid basis for further studies to gain more in-depth understanding of learners' perceptions of LL-based projects and provide insight for other teachers regarding ways to use LL-activities in the service of CT and HOTS development in their own classrooms.

References

- Ananiadou, K., & Claro, M. (2009). 21st century skills and competences for new millennium learners in OECD countries. *OECD education working papers, 41*. OECD Publishing. <https://doi.org/10.1787/218525261154>
- Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. Longman.
- Bagna, C., & Bellinzona, M. (2021). *Italian schools in the 21st century: Languages and functions of school spaces*. Presentation at LoCALL Webinars in the 3rd Training Week. localproject.eu
- Banda, F., & Jimaima, H. (2015). The semiotic ecology of linguistic landscapes in rural Zambia. *Journal of Sociolinguistics, 19*(5), 643–670. <https://doi.org/10.1111/josl.12157>
- Barni, M., & Bagna, C. (2015). The critical turn in LL: New methodology and new items in LL. *Linguistic Landscape, 1*, 6–18. <https://doi.org/10.1075/ll.1.1-2.01bar>
- Beyer, B. K. (1985). Critical thinking: What is it? *Social Education, 49*(4), 270–276.
- Bergroth, M., Llompart-Esbert, J., Pepiot, N., Sierens, S., Dražnik, T., & Van Der Worp, K. (2021 early view). Whose action research is it?: Promoting linguistically sensitive teacher education in Europe. *Educational Action Research, 1*–20. <https://doi.org/10.1080/09650792.2021.1925570>
- Campbell, A., & Groundwater-Smith, S. (2009). *Connecting inquiry and professional learning in education: International perspectives and practical solutions*. Routledge.
- Cenoz, J., & Gorter, D. (2008). Linguistic Landscape as an additional source of input in second language acquisition. *IRAL, International Review of Applied Linguistics in Language Teaching, 46*, 257–276. <https://doi.org/10.1515/IRAL.2008.012>
- Charmaz, K. (2007). Coding in grounded theory practice. In K. Charmaz (Ed.), *Constructing grounded theory. A practical guide through qualitative analysis* (pp. 42–71). Sage.
- Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F. (2009). Linguistic landscape and language awareness. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 253–269). Routledge.
- Dooly, M. (2015). Learning to e-function in a brave new world: Language teachers' roles in educating for the future. In A. Turula, B. Mikolajewska, & D. Stanulewicz (Eds.), *Insights into technology enhanced language pedagogy* (pp. 11–25). Peter Lang.

- Ergas, O., & Ritter, J.K. (2020). Introduction: Why explore self in teaching, teacher education, and practitioner research. In O. Ergas & J. K. Ritter (Eds.), *Exploring self: Toward expanding teaching, teacher education and practitioner research* (pp. 1–16). Emerald Publishing Limited.
- European Union Education Ministers. (2015). *Declaration on promoting citizenship and the common values of freedom, tolerance and non-discrimination through education*. Informal meeting of European Union Education Ministers.
- Gorter, D. (2018). Methods and techniques for linguistic landscape research: About definitions, core issues and technological innovations. In M. Pütz & N. Mundt (Eds.), *Expanding the linguistic landscape: Multilingualism, language policy and the use of space as a semiotic resource* (pp. 38–57). Multilingual Matters.
- Johnson, E.B. (2002). *Contextual teaching and learning* (2nd Ed.). Corwin Press.
- Kromydas, T. (2017). Rethinking higher education and its relationship with social inequalities: Past knowledge, present state and future potential. *Palgrave Communications*, 3(1), 1–12. <https://doi.org/10.1057/s41599-017-0001-8>
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality. *Journal of Language and Social Psychology*, 16(1), 23–49. <https://doi.org/10.1177/0261927x970161002>
- Larrivee, B. (2000). Transforming teaching practice: Becoming the critically reflective teacher. *Reflective Practice*, 1(3), 293–307. <https://doi.org/10.1080/713693162>
- Lewis, A., & Smith, D. (1993). Defining higher-order thinking. *Theory into practice*, 32(3), 131–137. <https://www.jstor.org/stable/i264779>
- Lozano, M.E., Jiménez-Caicedo, & Abraham, L. (2020). Linguistic Landscape projects in Language Teaching: Opportunities for critical language learning beyond the classroom. In D. Malinowski, H. Maxim & S. Dubreil (Eds.), *Language teaching in the linguistic landscape. Mobilizing pedagogy in public space* (pp. 17–42). Switzerland.
- Malinowski, D. (2015). Opening spaces of learning in the linguistic landscape. *Linguistic Landscape*, 1(1/2), 95–113. <https://doi.org/10.1075/ll.1.1-2.06mal>
- Malinowski, D., Maxim, H. H., & Dubreil, S. (Eds.) (2020). *Language teaching in the linguistic landscape. Mobilizing pedagogy in public space*. Springer.
- McAleese, M., Bladh, A., Berger, V., Bode, C., Muehlfeit, J., Petrin, T., Schiesaro, A., & Tsoukalis, L. (2013). *Report to the European Commission on improving the quality of teaching and learning in Europe's higher education institutions*. Publication Office of the European Union.
- Melo-Pfeifer, S., & Schmidt, A. (2012). Linking “heritage language” education and plurilingual repertoires development: Evidences from drawings of Portuguese pupils in Germany. L1-Educational. *Studies in Language and Literature*, 12, 1–30. <https://doi.org/10.17239/L1ESLL-2012.02.11>
- Nussbaum, L. (2017). Investigar con docentes. In E. Moore & M. Dooly (Eds.), *Qualitative approaches to research on plurilingual education/Enfocaments qualitativus per a la recerca en duccació plurilingüe/Enfoques cualitativos para la investigación en educación plurilingüe* (pp. 23–45). Research-publishing.net.
- Ross, A., Dooly, M., & Hartsmar, N. (2012). *Equalities and education in Europe: Explanations and excuses for inequality*. Cambridge Scholars Publishing.
- Rowland, L. (2013). The pedagogical benefits of a linguistic landscape project in Japan. *International Journal of Bilingual Education and Bilingualism*, 16(4), 494–505. <https://doi.org/10.1080/13670050.2012.708319>
- Sayer, P. (2010). Using the linguistic landscape as a pedagogical resource. *ELT Journal*, 64(2), 143–154. <https://doi.org/10.1093/elt/ccp051>
- Silbey, S. (2021a). *Qualitative research methods: Conversational interviewing*. edX MITx 21A.819.1x online course: www.edx.org
- Silbey, S. (2021b). *Qualitative research methods: Data coding and analysis*. edX MITx 21A.819.2x online course: www.edx.org
- Solmaz, O., & Przymus, S. (Eds.). (2021). *Linguistic landscapes in English language teaching. A pedagogical guidebook*. <https://www.linelproject.com>

- Tavory I., & Timmermans, S. (2014). *Abductive analysis: Theorizing qualitative research*. University of Chicago Press.
- Toyoda, E. (2015). Collaborative video blended learning for exercising higher-order thinking—evaluation using community of inquiry framework. *International Journal of Social Media and Interactive Learning Environments*, 3(2), 126–141. <https://doi.org/10.1504/ijsmile.2015.070763>
- Vallejo, C., & Dooly, M. (2020). Plurilingualism and translanguaging: Emergent approaches and shared concerns. *International Journal of Bilingual Education and Bilingualism*, 23(1), 1–16. <https://doi.org/10.1080/13670050.2019.1600469>
- Ying, Z. (2019). Beliefs of EFL learners towards pedagogical values of linguistic landscape in China: A case study carried out in three schools. *Journal of Education, Society and Behavioural Science*, 31(3), 1–11. <https://doi.org/10.9734/jesbs/2019/v31i330152>

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Linguistic Landscapes in Multilingual Learning and Teaching Environments

Is There a Place for Global Citizenship Education in the Exploration of Linguistic Landscapes? An Analysis of Educational Practices in Five European Countries



Mónica Lourenço, Joana Duarte, Francisco P. Silva, and Bruna Batista

Abstract Prior research has shown that linguistic landscapes (LL) can promote language awareness and critical thinking, foster text-to-world connections, and develop intercultural awareness and understanding. Still, few studies have specifically explored the potential of LL in contributing to global citizenship education (GCE), an educational perspective that aims to prepare students to fully embrace the opportunities and challenges of a globalised world, and to assume active roles, both locally and globally. The study reported in this chapter draws on data gathered in an ongoing international project that brings together researchers, teacher educators, language (and other subject) teachers, and students from five European countries. The study investigates whether, to what extent, and how the LL multimodal modules designed and carried out by the teachers in the different partner cities of the project address domains of learning, include competences and topics, and are developed according to methodological approaches aligned with GCE. To do this, a qualitative methodology was adopted and an analytical tool for content analysis was created drawing on key GCE literature. Based on the findings, a set of recommendations are proposed, illustrated by example activities that may inspire teachers to address GCE in a more comprehensive and meaningful way while exploring LL.

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1 Introduction

The field of linguistic landscapes (LL) has emerged relatively recently but has experienced a rapid expansion in the past two decades among researchers working on sociolinguistics, literacy and multilingualism (van Mensel et al., 2017). LL refer to the “visibility and salience of languages on public and commercial signs in a given territory or region” (Landry & Bourhis, 1997, p. 23). According to Gorter (2018b, p. 42), “LL attempts to understand the motives, uses, ideologies, language varieties and contestations of multiple forms of ‘languages’ as they are displayed in public spaces.” From the very start, LL studies have focused on issues related to globalisation, as LL effectively put on display the tensions that occur between local and global flows, acting as a linguistic mirror of the dynamics of our globalised society (Gorter, 2013; Hélot et al., 2012). While much of the earlier research has been conducted in the domains of sociolinguistics and literacy studies, recent work has been linked to education (Gorter, 2018a). Research has shown that LL can foster text-to-world connections (Li & Marshall, 2018), provide in-depth learning about cultural and historical meaning (Shohamy & Waksman, 2009), promote language awareness and critical thinking (Clemente et al., 2012; Dagenais et al., 2009), and develop intercultural awareness and understanding (Gorter & Cenoz, 2015a). Still, few studies have specifically explored the potential of LL in contributing to global citizenship education (GCE), an educational perspective that aims to help students to fully embrace the opportunities and challenges of a globalised, interdependent and multicultural world, and to assume active roles, both locally and globally (Dill, 2018; Torres, 2018).

The study reported in this chapter draws on data gathered in the LoCALL project, an Erasmus + project that brings together researchers, teacher educators, language (and other subject) teachers, and students from five European countries. The study investigates whether, to what extent, and how the modules designed and staged by the teachers in the different partner cities/regions of the project address domains of learning, include competences and topics, and are developed according to methodological approaches aligned with GCE. To do this, a qualitative methodology was adopted and an analytical tool for content analysis (Hsieh & Shannon, 2005) was created drawing on three types of literature on GCE: documents from international organisations (UNESCO, Council of Europe), documents from NGOs (Oxfam) and academic research papers.

The chapter is organised in the following way. It begins with an overview of key literature and recent research on the two central topics of this study—linguistic landscapes and global citizenship education—with a focus on the links between the two. Then, it describes the study, namely the context and corpus of analysis, and the

methodological design, including the analytical tool. This is followed by a presentation of the results according to each category of analysis. The chapter ends with a conclusion where the main findings and limitations of the study are discussed and recommendations, illustrated by example activities, are proposed aiming to inspire teachers to address GCE in a more comprehensive, meaningful and systematic manner while exploring LL.

2 Linguistic Landscapes in Educational Research

Shohamy and Gorter's (2009) conceptualisation of Linguistic Landscapes (LL) goes beyond Landry and Bourhis' (1997) initial definition of LL as the mere description of the various ways in which multilingualism is visualised, expressed and disseminated in the public space, as "it [= LL] contextualizes the public space within issues of identity and language policy of nations, political and social conflicts. It posits that LL is a broader concept than documentation of signs; it incorporates multimodal theories to include also sounds, images, and graffiti" (Shohamy & Gorter, 2009, p. 4). This approach shows the broad understanding of what constitutes the subject of investigation in LL research, as well as its efforts to achieve a deeper understanding of the issues investigated by focusing on the relationship between an analytical framework and the contextualisation of topics (Ziegler et al., 2018). Recently, there has even been a call for extending LL research to encompass the body as a corporeal landscape with a focus on 'skinscapes' (Peck & Stroud, 2015), 'sensescapes' (Prada, 2021; also the same author in this volume) or on sounds in the landscape, i.e., 'soundscapes' (Scarvaglieri et al., 2013). LL in research in applied linguistics and education is a relatively new field (Bolton et al., 2020). There are two common lenses towards analysing LL in education (Brinkmann et al., 2022):

- Learning *in* the LL (Malinowski et al., 2020), which brings together the classroom and the public spaces through an ethnographic focus, in which teachers and students observe, document and analyse languages in their representation in public spaces. Learning in the LL can occur incidentally (Cenoz & Gorter, 2008; Tjandra, 2021) or/and through planned noticing strategies (e.g., fostering language awareness).
- Learning *through* the LL, which happens when students' attention towards previously chosen elements is fostered during the analysis of existing LL. Learning through LL in the classroom means bringing the public space into the classroom and re-contextualising it as a classroom document.

In order to explore the role of the LL in second language acquisition research, Cenoz and Gorter (2008), looked into five different perspectives that might intervene in that relationship: LL as input; LL and pragmatic competence; LL and literacy skills; LL and multicompetence; and LL and affective and symbolic factors. Research on LL within the scope of education has so far highlighted the broad understanding of what

LL can contribute to in educational settings and focused on identifying contributions at different levels:

1. in terms of defining the general framework, themes and topics that LL in education investigate;
2. in fostering specific knowledge of a particular subject (e.g., language education);
3. in relation to the learning goals related to so-called ‘soft skills’ and general values.

In relation to (1) *the general framework, themes and topics of LL educational research*, most initiatives developed so far place LL research within the larger framework of globalisation, diversity and social justice, by zooming on inequity in the public space (Gorter & Cenoz, 2020) or on hierarchies as expressed in the unequal representation of communities in a given societal context (Gorter, 2013; Hélot et al., 2012). The aim is often to change participants’ views on language and community representation and to engage in critical thinking in relation to existing hierarchies. In the context of teacher education, for example, Hancock (2012) concluded that the very act of investigating LL can potentially affect teacher students’ world views and the school environment in which they will teach.

Regarding (2) *the specific knowledge of particular subject areas*, LL research has found evidence for the positive impact of using LL in language education, specifically in relation to the affective and cognitive dimensions of James and Garrett’s (1992) dimensions of language awareness. As such, working with LL has been linked to fostering students’ openness towards languages (Dagenais et al., 2009) and enhancing language learning through the exploration of language learning strategies and awareness (Cenoz & Gorter, 2008; Hernández-Martín & Skrandies, 2020; Roos & Nicholas, 2019; Sayer, 2020; Tjandra, 2021). In addition, Nilsen et al. (2017) found that LL research in education could foster critical language learning in a study that looked at the perceptions and understandings that both teachers and students have about linguistic diversity. Other studies looked at how LL foster second or foreign language acquisition (Cenoz & Gorter, 2008), the development of translanguaging and transcultural competence, translanguaging practices and plurilingual methodologies (Gorter & Cenoz, 2015b). Finally, Rowland (2013) also identified pragmatic competence and language learning, multimodal literacy skills, and sensitivity to connotational aspects of language as skills that can be developed when exploring LL in educational settings.

In relation to (3) *overarching soft skills and values*, LL have been found to enhance students’ intercultural competence and critical thinking through the development of attitudes and knowledge related to the understanding and engagement in particular linguistic and cultural scenarios (Clemente et al., 2012). This was reiterated by Rowland (2013) who described a gain in critical literacy skills, through a deeper understanding of the power of language. LL have also been linked to the development of participatory skills. Pennycook (1999) described LL as a pedagogy for engagement and an engagement device that can turn students into activists and engaged individuals in their communities. In an empirical study with primary school-aged children, Clemente (2017) discovered that LL may function as a tool to make students more aware about their role and responsibilities in building (or writing) cities that are more

inclusive and sustainable. These studies suggest that LL can in fact be linked to a global citizenship education approach.

3 Global Citizenship Education: A 21st Century Priority

Global citizenship education (GCE) has become a catchphrase in the past decades, partly as a response to the times of rapid and unprecedented change we have been living through since the turn of the millennium. The call for a global citizenship is grounded in the assumption that today people live in a global context and interact at a planetary level. In a world that is increasingly interdependent, GCE promotes a sense of belonging to a global community emphasising a shared common humanity among people. This community extends beyond the human sphere, embracing also the biosphere and natural environment. This reflects the importance of reformulating the concept of citizenship in a broader context of a 'homeland-earth' (Morin & Kern, 1999) where human beings are collectively responsible for helping reduce inequalities, overcoming differences and prejudice, fighting for human rights and social justice, and healing their 'common home' (Pope Francis, 2015).

Although GCE has been the focus of international, regional and national conferences and fora since the 1990s, momentum around this educational perspective increased in 2012 with the publication of the *Global Education First Initiative*. The document, launched by United Nations' (UN) Secretary General Ban Ki-moon, set fostering global citizenship among the top educational priorities of the twenty-first century, next to access to education and quality education, identifying key actions that may help countries and governments meet these priorities (UN, 2012). Among those specifically addressing GCE are:

- To develop the values, knowledge and skills necessary for peace, tolerance, and respect for diversity;
- To cultivate a sense of community and active participation in giving back to society;
- To ensure schools are free of all forms of discrimination, including gender inequality, bullying, violence, xenophobia, and exploitation.

Another major impetus for GCE came with the adoption of the Sustainable Development Goals (SDGs) at the UN Sustainable Development Summit in 2015. SDG Target 4.7 focuses specifically on the transformative potential of GCE in building peaceful and sustainable societies, highlighting the need to ensure that by 2030

all learners acquire the knowledge and skills needed to promote sustainable development including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, *global citizenship* and appreciation of cultural diversity and of culture's contribution to sustainable development (UN, 2015, authors' emphasis).

In addition to world leaders, academics all over the world have also been devoting their attention to GCE. According to the third edition of the *Global Education Digest*

(ANGEL, 2020), which provides a reasoned bibliography of academic and research materials relevant to the field of GCE, the number of publications on the theme has increased dramatically since 2015. Similar results are given when we make a search on Scopus, the largest article database worldwide. We can identify nearly 1000 journal articles written about this topic in the past 10 years, revealing a significant growing trajectory since 2010.

Yet, despite increasing attention to GCE, the concept is still unknown or perplexing to most of the world's teachers and teacher educators (Hopkins, 2020). This may be attributed to the contested nature of the concept itself (see, for instance, Andreotti & Souza, 2012; Bowden, 2003; Davies, 2006), and to its openness to multiple interpretations and operationalisations. Oxley and Morris (2013), Pais and Costa (2017) and, more recently, Pashby et al. (2020) have found that, coupled with the different designations used to define a 'global citizenship' (e.g., 'planetary citizenship', 'world citizenship', or 'cosmopolitan citizenship'), there are multiple ideological constellations overlapping and even contradicting one another within the field of GCE. Starting with Andreotti's (2006), 'soft' versus 'critical' dichotomy, GCE has been pushed and pulled in a continuum ranging from the neoliberal discourse, which privileges a market rationale focused on self-investment and enhanced profits, to the critical democracy discourse, highlighting the importance of ethical values, social responsibility and active citizenship.

For this study we take as reference the work of Santamaría-Cárdaba and Lourenço (2021), who define GCE as a transformative educational perspective whose purpose is to educate citizens to be autonomous and think critically so that they can understand the existing social inequalities and act in a committed way seeking to transform society into a more just one. According to UNESCO (2015), this entails the development of three conceptual dimensions—cognitive, socio-emotional, and behavioural—which correspond to the three domains that are required to create a well-rounded learning experience. Based on these dimensions, key learning outcomes are identified, which describe the knowledge, skills, values and attitudes that learners can acquire and demonstrate as a result of GCE, as well as key learner attributes. These are: informed and critically literate, socially connected and respectful of diversity, and ethically responsible and engaged.

Oxfam (2015) offers a similar perspective on GCE, defining the 'global citizen' as someone who is aware of the wider world and has a sense of their own role as a world citizen; respects and values diversity; has an understanding of how the world works; is passionately committed to social justice; participates in the community at local and global levels; works with others to make the world a more equitable and sustainable place; and takes responsibility for their actions. This organisation goes on to define the key elements for developing active and responsible global citizenship, proposing a tripartite approach that includes the knowledge and understanding, skills, values and attitudes that learners need both to participate fully in a globalised society, and to secure a more just, inclusive and sustainable world than the one they have inherited. These include, for instance, knowledge and understanding of social justice, equity, and diversity; critical thinking, and ability to challenge injustice and inequality; respect for diversity and belief that people can make a difference.

In order to help teachers address these issues, several international organisations (see, for instance, UNESCO, 2014, 2015; Council of Europe, 2012, 2019), have produced a series of guides and booklets that provide guidance on how to translate GCE principles into practice, featuring examples of ‘good’ practices. Emphasis is placed on participatory and transformative learning practices that are learner-centred, encourage dialogue, promote critical thinking and creativity, are empowering and solution-oriented, develop resilience and ‘action competence’. Among these approaches feature *issues-based learning*, which engages students with global issues; *dialogue-based learning*, which promotes oral interactions between participants, improving their communication and reflection skills; *collaborative learning*, which promotes positive interdependence between participants’ efforts to learn; *problem-based learning*, which uses collaborative group work to engage learners with problem exploration, and *service-learning*, which actively engages learners in a range of global issues within their schools and local communities. In line with these pedagogical approaches, best practices in global citizenship education include *debates*, as a means of raising awareness of contemporary global issues and developing communication and argumentation skills; *blogs* on a topic of global or local relevance to practise writing; *role-playing or simulation games* to promote students’ oral skills and empathy, and favour the discovery of other perspectives and world-views; *visual diagrams*, such as issues trees, as a way of structuring an enquiry to encourage learners to explore the causes, effects (or symptoms) and solutions of a given issue; *sports activities*, stimulating interpersonal relations and promoting cohesion and mutual respect; or voluntary *community service*, which fosters social responsibility and commitment. Another instrument often cited as an important source of reflection about global issues are *real photographs*. As reported by Oxfam (2015, p. 13): “Photographs can be hugely influential in shaping our ideas about ourselves, other people and the wider world. However, the pictures we see do not always tell the whole story.” It is important, therefore, to get learners questioning photographs (or artefacts), as well as their own assumptions about them. This is also one of the main tools and approaches used in LL research and pedagogy (Clemente, 2017), providing yet another evidence of the links between LL and GCE.

4 Methodological Design

In line with this background, the purpose of this study is to understand whether, to what extent, and how the modules conceived and implemented by teachers in the five different partner cities/regions of the LoCALL project address domains of learning, include competences and topics, and are developed according to methodological approaches aligned with GCE. To address this aim, a qualitative study was carried out supported by a content analysis of the multimodal modules. This methodological procedure for data analysis, given its heuristic function, is justified and distinguished from other procedures as it allows researchers to systematically and objectively analyse textual data and to infer about the analysed content aiming to respond to the

proposed research objectives and questions (Schreier, 2012). In this study, we built upon predefined categories of analysis providing content description and inferences based on a *directed* or *deductive approach* (Hsieh & Shannon, 2005; Schreier, 2012). This approach permits the validation or conceptual expansion of the area the study focuses on, in this case GCE and LL, based on a structured process. This process started with the collection of suitable data, i.e., the corpus of analysis, which consisted of the LL modules available at the time the study was being developed. This was followed by the definition of the coding categories, drawing on key literature, and the construction of the categorisation matrix or analytical tool, whereby all the data were reviewed for content and coded for correspondence to or exemplification of the identified categories. All researchers/authors of this chapter were involved in the process of data analysis, and multiple instances for peer debriefing were carried out in order to validate both the analytical tool and data coding.

4.1 Context of the Study

This study was developed within the Erasmus + project LoCALL, an acronym which stands for ‘Local linguistic landscapes for global language education in the school context’. LoCALL’s main goal is to promote global language education in the school context through the use of LL and multilingual pedagogies, in order to build a bridge between pupils’ (and teachers’) lived experiences with multilingualism inside and outside school.

LoCALL’s aims are realised through the sequential but interrelated conception of four intellectual outputs (IO): (i) *(multimodal) modules* for teaching and learning through LL, aimed at teachers and teacher trainers and developed in a collaboration between the researchers and the school teachers or student teachers in the different partner cities; (ii) *tutorials* based on ‘how to’ questions related with pedagogical or methodological issues, and *podcasts* describing experiences of teachers and students with LL; (iii) *a mobile App* to explore and learn about LL, using a multiple-choice question game; and (iv) *guidelines* for (language) teachers and curriculum developers. Our analysis focuses precisely on the first of these outputs, as further explained below.

4.2 Corpus of Analysis

Data collected for this study consisted of a total of 12 multimodal LL modules developed by the teachers and the researchers involved in the LoCALL project and available on the website www.localproject.eu by 15 July 2021. Table 1 provides an overview of the modules including the original title and the English translation, the age of the pupils, the context(s) of implementation, the languages explored in the activities, and the disciplines/subjects involved.

Table 1 Corpus of analysis

Title in English (Original title)	Age group	Context	Languages	Disciplines/subjects
1. Exploring LL in the EFL classroom ("Explorar a PL na aula de língua inglesa")	6–9	Formal—classroom	Portuguese English French Gaelic	Arts Foreign Languages
2. Jungle of Languages ("Sprachschungel")	10–16	Formal—classroom	French German Low German (<i>Plattdeutsch</i>) English Portuguese Turkish	Foreign Languages
3. Languages and Society ("Sprache und Gesellschaft")	10–16	Formal—classroom	German English Bulgarian Polish Romanian & others	Foreign Languages History Social Sciences
4. Language Detective ("Taaldetective")	12–16	Formal—classroom Informal—outdoors	Dutch English Frisian & others	Foreign Languages Geography History
5. LL at home ("Paisaje lingüístico en casa")	10–11	Informal—home Formal—digital	Spanish English Catalan & others	Arts Foreign Languages ICT
6. LL in our city ("Paisaje lingüístico de nuestra ciudad")	10–11	Formal—digital Informal—outdoors	Spanish English Catalan & others	Arts Foreign Languages ICT
7. Digital landscapes—Memes	12–16	Formal—digital	Dutch English Frisian & others	Arts Foreign Languages History
8. Digital landscapes—Poems	12–16	Formal—digital	Dutch Frisian & others	Arts Foreign Languages History
9. Sensorial Maps ("Mapas sensoriais")	6–16	Informal—outdoors (with family)	Spanish & others	n/a

(continued)

Table 1 (continued)

Title in English (Original title)	Age group	Context	Languages	Disciplines/subjects
10. Wordcloud ("Nube de palabras")	10–11	Formal—digital	Spanish English Catalan & others	Arts Foreign Languages ICT
11. LL pop-up map ("Carte pop-up de PL")	6–14	Formal—classroom	French & others	Arts Foreign Languages Geography History Social Sciences
12. Family migration history ("Histoire migratoire familiale")	13–14	Informal—home	French & others (e.g., heritage languages)	Geography History Foreign Languages

As we can see, the majority of the modules were developed for pupils in the 10–11 and in the 12–16 age groups. Still, three modules also target younger pupils aged between 6 and 10 years old. Regarding the contexts in which the modules were developed, these were either formal or informal. Formal contexts were related to the classroom setting and activities could be carried out either face to face or online. The latter was a common strategy used by teachers during COVID19 school lockdown. Informal contexts included out-of-school activities carried out at home or outdoors, mainly in the city/village where the pupils lived. Some of these activities could also be guided or teacher-led, but they were less structured and more flexible than the activities taking place inside the classroom. In a formal context, we can find ten modules, five of which were developed for an in person and in classroom context, and the remaining five took an online format. The informal context, in turn, appears in five of the modules that constitute the corpus of analysis. From these, three activities took place outdoors and two at home. It should be noted that some modules included activities that could be developed in different contexts, for instance in formal (inside the classroom) and informal (in the city) settings. Regarding the languages explored during the activities, at least fourteen different languages were present. Most of them were official state languages with a majority status in the target countries/regions (e.g., Catalan, Dutch, French, German, Portuguese or Spanish); others were minority languages (e.g., Frisian and Gaelic) or dialects (e.g., Low German); some languages were part of the school curriculum, while others are frequently absent from the classroom setting (e.g., heritage or migrant languages). In what concerns the main disciplines or subjects involved, we can see that most modules provide an opportunity for interdisciplinary links connecting foreign languages and other subjects such as arts, history and geography. Apart from these subjects, other disciplines and areas are mentioned such as social sciences and ICT.

4.3 *Instrument and Procedures for Data Analysis*

In order to conduct the content analysis of the LL modules, an analytical tool was developed comprising four major categories: *domains of learning*, *competences*, *topics* and *approaches*, which are considered useful when analysing GCE pedagogical activities (see, for instance, Lourenço & Simões, 2021). The definition of subcategories emerged and evolved through the analysis of data alongside the interrogation of related literature in the field of GCE and LL. Agreement on the tool was reached after a preliminary analysis of the modules and following a peer-debriefing process between the researchers/authors. Each category and subcategory are explained in detail below.

Category A. Domains of learning is related to the areas that the learning experience with LL is expected to affect. It includes three subcategories—cognitive, socio-emotional and behavioural—which are considered the three conceptual dimensions of GCE by UNESCO (2015). The *cognitive dimension* focuses on developing the knowledge and thinking skills that are necessary for learners to better understand the world and its complexities. In the context of this study, it is regarded as being specifically linked to foreign language learning and to the development of critical thinking and language awareness, but it might also include other content knowledge associated with the history, geography and culture of a given place. The *socio-emotional dimension* includes the feelings, emotions, attitudes and social skills that enable learners to live peacefully with others. It considers, in particular, the development of attitudes of respect towards linguistic and cultural diversity and the recognition and valorisation of plurilingual repertoires. Finally, the *behavioural dimension* is linked to the conduct, performance and engagement of learners, and to their ability to act towards linguistic equity and to participate in the creation of more inclusive communities.

Category B. Competences includes the knowledge, skills, values and attitudes that learners are expected to develop when participating in activities that are rooted in the exploration of LL. These include *language-related knowledge and skills* linked to language awareness, decoding, transfer and analytical skills, (multimodal) literacy skills, translanguaging, plurilingual competence, or pragmatic competence; *other content knowledge and skills* linked to text-to-world connections established, for instance, within the subjects of history and geography, or skills involving the use of technology; *soft skills* (also known as ‘twenty-first century skills’ or ‘transversal skills’), including critical thinking, creativity or collaboration; *attitudes and values*, namely respect for diversity, awareness and valorisation of one’s own identity and culture, intercultural awareness and understanding, empathy and commitment to social justice and equity.

Category C. Topics comprises the knowledge areas that can be foregrounded in LL activities, especially when using a GCE lens. These include *identity*, namely self-awareness and self-esteem; *diversity* (linguistic, cultural, ethnic, religious, socio-economic, political, and disability); *globalisation*, linked to multilingualism and multiculturalism, on the one hand, and to the hegemonic status of the English language, on the other hand; *language attitudes* reflecting language ideologies and stereotypes towards languages and their speakers; *language (in)equity* associated with the unequal representation of communities in a given societal context; *language policy* that might render some languages invisible; *language families* (Germanic, Indo-European, Romance, ...) and *language types* (migrant, minority, official, regional, or endangered languages); *migration* and migrant communities (un-/mis-) represented in the community; *participation/activism* for social and linguistic justice; and *sustainable development* in ensuring inclusive, just and peaceful communities.

Finally, *Category D. Approaches* highlights the main teaching and learning methodologies to support the development of competences associated with GCE and most commonly used when working with LL. *Dialogue-based learning*, which recognizes the unique life experiences each learner brings to the learning interaction, seems to provide a useful basis to exchange ideas about LL and about learners' linguistic and cultural 'lifeworlds'. This can be used alongside *reflective learning*, which helps students think deeply about their own experiences, namely via individual written assignments. Another possibility is *problem-based learning*, which engages learners with the exploration of a real problem, helping them pinpoint causes and present possible solutions. This approach might be useful in promoting their reasoning and participatory skills, which are fundamental attributes of a global citizen. Problems or problematic situations can be the centre of a broader class or school project. Therefore, through *project-based learning*, learners can gain knowledge and skills by working for an extended period of time on an authentic, engaging, and complex question, problem, or challenge. All of these approaches can be used together with *collaborative learning*, which promotes positive interdependence between learners and action competence.

Figure 1 provides a visual description of the analytical tool, which highlights the links that might be established between the different categories and subcategories, but which are not meant to be mutually exclusive.

For data analysis, each researcher was responsible for one of the categories described above (A to D) and for three of the modules that make up the corpus of analysis (1–12). Thus, through a crosschecked analysis, it was possible for researchers to initially analyse three modules globally, considering all categories. At a later stage, this analysis was validated by the other team members, responsible for each category of analysis.




	A. DOMAINS	B. COMPETENCES	C. TOPICS	D. APPROACHES
	COGNITIVE	Language-related knowledge Other content knowledge	Language families and language types Globalisation	Problem-based learning Reflective learning
	SOCIO-EMOTIONAL	Attitudes/Values	Identity Diversity Language attitudes Language (in)equity Migration	Dialogue-based learning
	BEHAVIOURAL	Language-related skills Other content skills Soft skills	Language policy Participation/activism Sustainable development	Project-based learning Collaborative learning

Fig. 1 Overview of the analytical tool

5 Results and Discussion

The results of this categorisation are presented in Table 2, a double-entry table, where we can find the 12 modules distributed by the columns and the categories and subcategories of analysis divided by the rows. The centrality of a specific subcategory inside a module was marked by using the (+) sign. A detailed account of the results is given in the following sections.

5.1 Domains of Learning

As mentioned before, to define the domains of learning we used the categorization proposed by UNESCO (2015) which indicates the cognitive domain, the socio-emotional domain and the behavioural domain as the three dimensions of GCE. In line with prior research on the presence of GCE in the curriculum (Santamaría-Cárdaba & Lourenço, 2021), the cognitive domain is the most representative, being present in 10 out of the 12 modules analysed. The cognitive domain concerns the knowledge and the knowledge construction and mobilisation skills that pupils need to develop with a view to understanding the world in all of its complexity. In the case of the modules analysed, more attention seems to have been given to the acquisition of knowledge than to its construction or mobilisation. An example of a module centered on the cognitive domain is module 10, where, after an initial collection of LL-items at home and in the city, pupils had the opportunity to select one of the languages found and to learn words in those languages displaying them in a word cloud.

Also in relation to the cognitive domain, we found that in eight out of the 10 modules where this category was identified, this was associated with another learning domain (either socio-emotional or behavioural). Still, in most of these modules knowledge acquisition and/or the development of thinking skills associated with a

Table 2 Categorisation of the data

		<i>Modules</i>											
		1	2	3	4	5	6	7	8	9	10	11	12
<i>Domains of Learning</i>	Cognitive	✓+	✓+	✓+	✓	✓	✓	✓	✓		✓+		✓
	Socio-emotional	✓		✓			✓	✓+	✓+		✓+	✓	✓+
	Behavioural				✓					✓+		✓	
<i>Competences</i>	Language-related knowledge/skills	✓+	✓+	✓+	✓+	✓+	✓+	✓+	✓+	✓	✓+		✓+
	Other content knowledge/skills	✓			✓				✓	✓			✓+
	Soft skills	✓			✓	✓	✓	✓+	✓+	✓+	✓-	✓+	✓
	Attitudes/Values	✓			✓								✓
	Identity								✓+				✓+
<i>Topics</i>	Diversity	✓+	✓+	✓+	✓	✓	✓			✓+	✓+	✓+	✓+
	Globalisation												
	Language attitudes				✓			✓	✓				✓
	Language (in)equity												
	Language policy												
	Language families and language types	✓+								✓	✓		✓+
	Migration		✓	✓+				✓-	✓	✓			✓+
	Participation/ activism	✓			✓					✓+		✓	
	Sustainable development												

(continued)

Table 2 (continued)

		<i>Modules</i>												
		1	2	3	4	5	6	7	8	9	10	11	12	
<i>Approaches</i>	Dialogue-based learning	✓+		✓+	✓+			✓	✓					✓+
	Collaborative learning									✓+				
	Problem-based learning	✓				✓+	✓+				✓+			
	Project-based learning	✓+			✓+			✓+	✓+	✓+		✓+		✓+
	Reflective learning	✓+	✓	✓+	✓+	✓+	✓+	✓+	✓+		✓+			✓+

Frequency: (+) central

specific topic were central to the activities (e.g., modules 1, 2 and 3). It is also worth mentioning that there was no module covering all of the three learning domains.

Second to the cognitive domain, the socio-emotional domain was also identified in a considerable number of modules (eight out of 12), being central to four modules and often in association with the cognitive domain. An example is module 8, where the pupils had the opportunity to create a poem on a topic that was most significant to them after resorting to an online search to find out how to write a poem, reading examples of poems in different languages, as well as getting to know some of the characteristics of poetic writing, such as the use of rhymes or metaphors. Another example where the socio-emotional dimension was particularly emphasised is module 12. In this module, pupils were invited to interview their relatives about the languages present at home and in their family history, having later to present their findings to their peers in the classroom. This allowed students to develop attitudes and values of respect for and valorisation of the linguistic and cultural diversity that characterises the global world of the twenty-first century.

Although the learning domains of GCE are meant to be approached in an interrelated way, since they are interdependent (UNESCO, 2015), the behavioural domain assumes particular importance from a GCE perspective as it corresponds to the realisation of what is expected from a global citizen, i.e., an active and participatory engagement with a view to building more inclusive and sustainable communities also from a linguistic point of view. Yet, this domain was identified in only three out of the 12 modules analysed, being central to only one of the modules (module 9). In this module pupils walk around their neighborhood to collect photographic records of the LL and sound recordings of the languages they hear in order to create a path on Google My Maps. This activity allows pupils and visitors to experience the linguistic and cultural diversity of a place, thus contributing to building a more inclusive community.

5.2 *Competences*

Concerning competences, and as it would be expected from activities involving LL, language-related knowledge and skills are central in 11 out of 12 modules. Knowledge acquisition related to languages and cultures and to the concept of LL is evident in seven out of 12 modules. In module 4, for example, pupils watch a video about LL and their types and about where to find them, while in module 2, pupils read a text titled “Jungle of languages” and then fill in a worksheet that invites them to write down their own definition of LL. Language learning is only mentioned explicitly as an outcome in module 10. In this module, pupils are asked to make a word cloud with three words they would like to learn in the language(s) that intrigue(s) them the most, and to record themselves speaking those words.

Regarding language-related skills, all modules target one or more basic language skills, with emphasis being placed on productive skills (speaking and writing). In modules 7 and 8, which revolve around online linguistic landscapes, pupils discuss

writing techniques and then create either multilingual memes or poems that they are to present in class. Other examples of activities that promote the development of speaking or writing skills through LL include writing a summary about information collected through photographs (module 4), voicing one's opinion about the presence/absence of specific languages in the LL (modules 1, 4), interviewing people in the street (module 9) or interviewing family members (module 12).

Common to all modules are activities that promote pupils' language awareness and invite them to recognise different languages, identify similarities and differences between them, and find translations or equivalent words using prior knowledge and transfer skills. This usually involves the analysis of photographs taken by the pupils themselves (modules 4, 6) or suggested by the teachers (modules 2, 3), but it can also include artefacts or other objects (food packages, books, CDs, magnets, posters, etc.) pupils collect in their homes (modules 1, 5). These activities are usually followed by a reflective dialogue, which triggers the development of pupils' pragmatic competence by inviting them to discuss the functions of the texts and the communicative intentions behind them (modules 3, 4).

In what concerns soft skills, these stand out in 10 out of 12 modules, although they are only central in four. In this case, there seems to be a predominance of creativity as an outcome of arts-based activities, such as collages (modules 5, 6, 12), drawings or constructions of an imagined or real LL (modules 1, 11), or multimedia activities (module 9). Critical thinking is also mentioned as an outcome of the activities developed by the pupils in five modules. A clear example is the central activity in module 3, titled "Languages and Society", where pupils are asked to analyse a multilingual poster and to uncover the reasons for the discrepancies they find between the languages chosen in the poster and the ones that belong to the most representative migrant groups in Germany.

The acquisition of other content knowledge is only evident in four modules, although most of them make a reference to the possibility of establishing links with disciplines other than (foreign) languages. Content related to history and geography, mainly in association with migration, is visible in two modules (3 and 12); module 4 opens the room to maths by asking pupils to count the number of photos they took, the number of languages they found and to indicate percentages; finally, module 1 addresses the theme of food and drinks linked to the gastronomic traditions of a given place and in association with the LL of restaurant names and multilingual menus. In terms of other skills, ICT-related skills stand out in five modules, particularly the ones that propose activities to be carried out in digital format. In this case, pupils are not only required to use their computers or smartphones, but to use specific software, such as Google My Maps, and social media, such as WhatsApp (module 9).

Surprisingly, only three modules explicitly mention the development of pupils' attitudes and values in their learning goals statements. In this case, the focus is related mainly with fostering respect for and valorisation of cultural and linguistic diversity, in general, and of pupils' plurilingual repertoires understood as part of their own identity, in particular. This is evident, for instance, in module 12, where pupils are asked to interview their relatives to unveil their family's migration history. The results of this activity, which was presented in the form of a collage with text and

illustrations, led pupils to become more respectful of their own cultural and linguistic heritage and helped teachers to become aware of their pupils' life stories viewing them as resources for learning rather than as problems to be overcome.

Although not explicitly mentioned in the learning goals, modules 1, 4 and 9 suggest yet another important outcome of the exploration of LL—the development of a committed and engaged attitude towards creating more inclusive and equal communities. In activity 1, pupils are asked to draw their imagined LL in a sheet of paper. Drawings, which are included as results of the intervention, show a large variety of (real and invented) languages, different scripts, as well as different and happy people living in harmony with others and nature, suggesting that pupils want their LL to be more multilingual, diverse and sustainable. In a similar way, in activity 4, pupils have to imagine that they are giving advice to their local government regarding changes they would like to see in their LL. Pupils were eager to argue strongly about the inclusion of more Frisian in the LL of Leeuwarden, the capital city of Friesland, showing that they understand that languages are identity markers and, therefore, should be protected. Finally, in module 9, families are invited to collect the 'visualscapes' and the 'soundscapes' of their neighbourhood and to build a sensory map that can be displayed in the school library or in the city museum. These activities suggest that there is room for LL to promote pupil's language activism, which involves an engaged pursuit of the preservation and promotion of linguistic diversity.

5.3 Topics

In terms of the topics, the majority of the modules (10 out of 12) focuses on issues related to diversity; in seven of these activities, diversity was coded as a central topic taking a broad definition of the concept. For example, module 1 is dedicated to exploring linguistic and cultural diversity in the primary school English classroom, by conducting language biographies and working around the topic of "food and drinks" from an LL perspective and within arts education. Module 2, directed at lower secondary education, specifically addresses language diversity, as the students read and reflect upon the text "Jungle of languages", focusing on language richness, language diversity, language awareness, culture and urban features.

Next, the topic of migration was present in six out of the 12 modules and it was central in two of them. In module 3, the issue of migration to larger urban areas in Europe is the main topic. The teacher is to discuss a multilingual poster in order to find out the origin of the poster, the languages featured in it, the translations of these languages and the reasons for the languages chosen bringing together the issues of migration in society and language. The languages in the banner are featured as they stand for the largest migrant communities in the city of Hamburg and can easily be replaced with other languages for other settings. In module 12 the History and Geography teachers encourage the students to question their own family history in order to find out whether they had a migratory background. The students present the results of their discussions through collages' with text and illustrations. So migration

is perceived as a reality of urban European areas that can be analysed through their crystallisation in terms of visible language diversity in the LL. But pupils are also encouraged to relate the topic of migration to themselves and their own family history.

Several other topics are featured in four of the modules, namely language attitudes, participation/activism and language families and types. Language attitudes are not central in any of the activities but are one aspect alongside other aspects in four modules. In module 4, pupils are encouraged to take on the role of a 'language detective' and investigate the LL in their own neighbourhood or setting. They work in groups, make photographs and analyse them in a quasi-scientific way, by quantifying languages in signs, identifying different types of signs (monolingual, bilingual, multilingual) and identifying the functions of the languages in the signs. On the basis of their analyses, they must then take on the role of a language policy advisor and provide recommendations for a re-shaping of the LL of the analysed area. In the example provided in the module, the non-Frisian speaking pupils, after analysing the LL of their officially bilingual region with Dutch and Frisian co-existing, came to the conclusion that the regional language Frisian was under-represented in the LL, although it should play a much more prominent role as a marker of regional identity but also as a commodification agent in commercial activities for tourists and visitors. The pupils started the module with a somewhat negative attitude towards Frisian, and by engaging in an analysis of the LL, came to develop a positive attitude towards the language in the context of the regional LL.

The topic of participation/activism is central in one of the four modules in which it is featured. In module 9 pupils go on two tours to collect the sound and visual landscapes of the neighborhood where their school is located, in order to build a multimedia device on the sensory landscapes of the neighbourhood. The sound tours consist of interviews with people from the neighbourhood: neighbours, tourists, people who come to work, etc. The visual tours intend to make a photographic collection of landscape elements of the neighbourhood that appeal to different languages and/or cultures. The topic of participation/activism thus derives from the degree of involvement of the pupils as co-researchers in the construction of the sensorial maps of the module.

The topic of language families and types was coded as central in two of the four modules in which it was identified. For example in module 12 a broad definition of language families and types is taken in which the pupils investigate the migration history of their ancestors, including the languages, whereas in module 1, focused on LL around the topic of "food and drinks", language families are explored by working with the central vocabulary of the topic in the different languages and grouping it according to language families.

Identity is central in all three of the modules in which it was coded. Modules 7 and 8, for example, are focused on investigating and producing digital landscapes in the form of multilingual memes (module 7) and multilingual poems (module 8). On the basis of an analysis of existing memes and poems online and in several languages, pupils reflect on how these forms of digital LL can contribute to fostering happiness and well-being. Then they produce their own memes or poems, using several languages, and revealing parts of their identities as multilingual writers.

Finally, four of the topics in our analytical tool were not found in any of the 12 modules: globalisation, language inequity, language policy and sustainable development. This can be due to the fact that the topic of globalisation has mainly been operationalised in the topics of migration and diversity, whereas language inequity and language policy were marginally addressed in activities around language families and types. The lack of focus on sustainable development would indeed point towards a need to review the modules in order to address issues around the sustainable development goals more explicitly.

5.4 Approaches

Of the five subcategories that make up the approaches, we can see that there is a greater incidence of activities that use reflective learning. We verified, however, that the analysed modules do not always clearly contemplate the issues on which reflection is promoted. This subcategory integrates reflective questions about migration (modules 3 and 12), LL in different contexts, from the home (modules 5, 10 and 12) to the local context (modules 1, 4, 6, 9 and 10). There is also work focused on personal emotions (modules 7, 8 and 10) or those of a particular group (modules 7 and 8), as well as reflection on the presence or absence of local languages in the LL of the city (modules 1, 4, 6, 9 and 10).

The second most representative subcategory is related to activities focused on project-based learning. Seven out of the 12 modules use approaches that promote learning through projects. The strategies revolve around pupils collecting and recording LL as language detectives (module 4) in different places, from the street, school, supermarket or other places in the community. The creation of poems (module 8), memes (module 7), collages (modules 4, 5, 6 and 12) or pop-ups (module 11) based on or that include elements of the LL are also frequently mentioned, not only in terms of visual LL, but also in terms of sound landscapes (module 9). In this subcategory we can also find activities focused on the creation of linguistic biographies (module 1) and the exploration of the LL at the food level in the city (module 1).

With regards to an approach based on dialogue, out of the 12 activities that make up the corpus, six use this approach, although not always in isolation. Dialogue arises from the promotion of debates, discussions or conversations (modules 1, 3, 4, 7, 8 and 12) related to the concept of ‘educating cities’ (module 1) whose goal is to improve the quality of life of their inhabitants on the basis of their active involvement (International Association of Educating Cities, 2020). The creation, in groups, of an imaginary city (modules 1 and 11) that integrates and responds to the individual and collective needs of each person, requires that students discuss among themselves and make decisions that allow them to reach mutual agreements. Activities that invoke the families related to migration (modules 3 and 12), or the creation and presentation of poems about personal and collective emotions (module 8) also appear as some of the examples that make up the corpus of analysis and that reflect an approach based on dialogue.

Problem-based learning, in turn, appears in five modules and focuses on the dynamics that are closely related to the aforementioned informal contexts—the home (modules 5, 10 and 12) or the community (modules 1, 4, 6, 9 and 10). In this case, pupils are confronted with a question or dilemma they are expected to find an answer to by conducting research at home or in the city. For instance, in module 5 pupils are expected to answer the question: “How many languages live in your house?” and then search for artefacts (packages, books, pamphlets) that display different languages, showcasing them in a collage or making a video sharing their discoveries.

Collaborative learning only stood out in one of the modules (module 9), as the creation of the proposed project would tend to require the collaboration of several people. It seems to us that this collaboration may have been based on individual contributions that were fundamental to the project’s success, as there was a need to create scripts with questions for an interview, as well as to build sound and photographic maps with route delimitation to be carried out by the participants (pupils and their families).

6 Conclusion and Recommendations

Our study aimed at analysing 12 multimodal modules for LL-based language education developed within the LoCALL project, by proposing and applying an analytical tool that addressed domains of learning, competences, topics, and methodological approaches aligned with GCE. In terms of the domains of learning, our analysis showed that the vast majority of the LoCALL-modules are focused on the development of cognitive skills, namely related to the acquisition of knowledge about different languages and cultures. This is followed by modules focussed on different aspects of the socio-emotional domain, mostly related to language attitudes or values/emotions when engaging with different languages. Modules focusing on the behavioural domain were scarce and this domain was often not intertwined with the other domains. Focus on behaviour meant mobilising pupils for action in relation to investigating or protecting different languages. These results are in line with general studies on citizenship education, and GCE in particular, which have also identified the predominance of the cognitive domain and the general under-representation of aims related to behavioural aspects (Joris & Agirdag, 2019; Santamaría-Cárdaba & Lourenço, 2021).

In relation to the competences featured in the modules, and as expected, language-related knowledge and skills were central, as all of them target one or more basic language skills, with emphasis being placed on productive skills. In addition, many of the modules also aimed at fostering language awareness by identifying similarities and differences between languages and finding translations across languages. In terms of soft skills, we found a predominance of creativity as an outcome of arts-based activities, multimedia skills, and a focus on critical thinking. These results resonate Shohamy and Gorter’s (2009) broad conceptualisation of LL as going beyond the mere description of languages and language use in public signage to also focus on

issues of identity, awareness and language policy. They attest to the broad understanding of the competences addressed in our LL research, as a result of the relationship between the analytical framework of LL and the contextualisation of topics (Ziegler et al., 2018).

Regarding the topics addressed in the modules, we found a clear focus on the issues of diversity, migration, language attitudes, participation and activism, which are typical topics within GCE. As expected, an emphasis on the analysis of language and cultural diversity in modern European societies was present in many of the modules. Also deconstructing existing language hierarchies or addressing pupils' own language attitudes was important. Surprisingly no module focused on the topics of globalisation, language inequity, language policy nor on sustainable development. The choice of topics, however, goes beyond mere language-related issues to reflecting also aspects of diversity and migration, for example. This can be seen as a form of transformative pedagogy which is in line with Santamaría-Cárdaba and Lourenço's (2021) definition of GCE as a means to educate citizens for autonomous and critical thinking so that they can understand the existing social inequalities and act in a committed way to transform societies into more just communities.

Finally, in terms of the approaches chosen, our results show a major focus on reflective learning, although sometimes not further specified. Reflective learning happens in relation to the topics of migration and LL in different contexts, from the home to the local context. In addition, project-based learning was also central, for example in the form of jointly searching for and recording linguistic landscapes, as well as dialogue-based learning in the form of debates or discussions. Problem-based learning was, in turn, less salient and the 'problems' were limited to the collection of LL at home or in the local context. Our results are summarised in Table 3.

Table 3 Overview of the main results

Focus	A. Domains	B. Competences	C. Topics	D. Approaches
Central	Cognitive (acquiring knowledge about languages and cultures)	Language-related knowledge and skills (language awareness, productive skills)	Migration and diversity	Project-learning
Average	Socio-emotional (conveying emotions, developing respect for and valorisation of diversity)	Soft skills (creativity and critical thinking)	Language attitudes and values	Reflective learning
Marginal	Behavioural (contributing to building more inclusive communities)	Attitudes and values (respect for diversity, participatory engagement)	Participation and activism	Problem-based learning

Our analysis thus shows that working with LL in the (language) classroom can very much be aligned with aims, topics and approaches of GCE, covering cognitive, socio-emotional and behavioural domains of learning. The main topics of migration and (language) diversity, attached to tackling language attitudes and fostering participation and activism are in line with what Pope Francis (2015) calls for in terms of reformulating the concept of citizenship to reduce inequalities, overcome differences and prejudice, fight for human rights and social justice. We conclude that at the basis of both language education through LL and GCE are pedagogies centred around participation, equality and social engagement. With Erling and Moore (2021), we can say that LL can be regarded as a “socially engaged pedagogical approach and field of research grounded in ideals of social justice” (p. 1).

Regarding our analytical tool, the taxonomy proved to be useful as a matrix for analysing pedagogical LL-modules from a GCE perspective. Still, further research with a larger sample should be conducted in order to better assess its potential and limitations. A follow-up study should also include the actual classroom experiences of teachers and pupils and seek out to map processes of change in the involved stakeholders over time. In the current study, we did not set out to reach all-encompassing conclusions, we merely sought to identify main trends in the ways teaching through LL converges with GCE aims, topics and approaches.

Based on these findings, we propose below eight recommendations that may inspire teachers to address GCE in a more comprehensive and meaningful way while exploring LL.

Recommendation #1: Create bridges between the classroom and the real world using LL.

Working with LL should not limit itself to photographing, identifying or counting languages. LL are a formidable opportunity to establish connections between the school curriculum and the real world. When analysing signs and artefacts that compose the LL of a specific site, teachers can make explicit links to curriculum content, drawing pupils’ attention to what they already know about other languages and about the world. They can also address topics such as globalisation, migration and multilingualism, while asking questions that make pupils go beyond what they see: “Who made this sign (a shop owner, local authorities, a private citizen...)?”, “Who is the intended audience of the sign?”, “Why were these languages chosen (and not others)?”, “How does this relate to the linguistic and cultural communities living in this area?”. These strategies can help pupils better understand the world and its complexities and discover some of the roots of social (and linguistic) inequality.

Recommendation #2: Establish links with disciplines other than (foreign) languages.

GCE reaches its full potential as a whole-school approach infused in the ethos of the school community. As emphasised by Oxfam (2015), GCE can provide purpose, motivation and coherence in teaching and learning, while reinforcing key knowledge, skills and values. Hence, working with LL within a GCE perspective should not be something specific to the language classroom, but should engage teachers from all subject areas, addressing curriculum goals in a cross-disciplinary way that

makes sense to the pupils. Activities such as creating maps and itineraries of the LL, discovering people and events related to a particular street name or sign, or becoming acquainted to local or foreign artistic manifestations can easily be linked to the curriculum of Geography, History and Arts and provide pupils with more opportunities to learn how our communities and societies work.

Recommendation #3: Promote critical thinking and collaboration through problem or project-based learning.

Critical thinking and collaboration are two soft skills that have been deemed essential for global citizenship and for life in the twenty-first century (Cambridge, 2020; Oxfam, 2015). Using approaches such as problem-based learning and strategies such as the issues tree, teachers can stimulate pupils' reflective thinking about real world problems that are apparent in the LL, such as discrimination, fake news or social inequality. This can also be conducted as a classroom or school project that implies active collaboration between pupils, teachers and staff. Having a 'language of the month' (see Clemente, 2017) is just one of the numerous possibilities to promote collaboration within and beyond the school walls, while building a more inclusive LL.

Recommendation #4: Provide opportunities for pupils to investigate and reflect about their own linguistic and cultural identity.

Educating 'global citizens' does not mean detaching pupils from their identity roots. On the contrary, through exploring and reflecting about the LL present in their homes, schools or cities, pupils can not only become more aware about their linguistic and cultural background and their plurilingual repertoires, but also (re)gain a sense of self-esteem. This can contribute to a positive acceptance of diversity. As highlighted by Beacco (2004, p. 40), "if one recognizes the diversity of languages in one's own repertoire and the diversity of their functions and values, that awareness of the diversity one carries within one is such as to foster a positive perception of other people's languages."

Recommendation #5: Promote pupils' participation, engagement and decision-making.

Educating for global citizenship is about helping pupils understand that they have the power to act. While exploring LL, pupils can reflect about issues related to language (in)equity or social (in)justice. Activities such as identifying changes that need to be made in the LL in order to make it more inclusive, fair or sustainable can involve pupils in an engaged journey towards the preservation and promotion of linguistic diversity and towards collective well-being.

Recommendation #6: Involve the family and other members of the community, including local authorities.

The African proverb "It takes a village to raise a child" is a perfect motto for GCE. Apart from the teachers and staff, the family and other community members can provide pupils with meaningful and positive learning experiences while exploring LL. Inviting family members to the school to talk about their migration history or

language learning experiences, providing times and spaces for community members, such as migrants or refugees, to chat with pupils about their struggles adapting to a new linguistic and cultural reality, or bringing in local authorities to debate pupils' suggestions for a more inclusive LL can help pupils discover their individual and collective identities, make real-world connections and develop their participatory skills.

Recommendation #7: Use LL as an opportunity to address and achieve the Sustainable Development Goals.

The seventeen Sustainable Development Goals (SDGs) were designed as a blueprint to achieve a better and more sustainable future, providing a sense and a direction for societal change. The achievement of these goals relies primarily on the education of global citizens, who are informed and engaged. When exploring LL, teachers can address SDGs as topics linked to poverty, well-being, climate action or responsible consumption, for example, but they can also include them as learning goals, developing activities that promote pupils' critical thinking and engagement towards reducing inequalities and making cities, institutions and societies more inclusive, peaceful, resilient and sustainable. These activities can take the form of drawings depicting pupils' ideal LL, role-play or simulations portraying migrants' experiences with a new linguistic reality, translations of information signs in the school that include the languages spoken by the school community, or letters to local authorities presenting suggestions and advice on how to change the LL to make it more inclusive.

Recommendation #8: Promote a learning environment that is democratic and dialogical, caring and supportive, stimulating and inspiring.

An important principle to keep in mind when conducting LL activities that cater for global citizenship is that the approaches and strategies used are learner-centred and dialogue-based, allowing pupils' to express their own opinion, use their linguistic repertoire, and make links to prior knowledge. Furthermore, it is important that these activities are focused on the behavioural domain, stimulating pupils' creativity and inspiring them to make a change.

References

- ANGEL (Academic Network on Global Education and Learning). (2020). *Global Education Digest 2020*. Development Education Research Centre. <https://doi.org/10.4324/9780429463860>
- Andreotti, V. (2006). Soft versus critical global citizenship education. *Policy and Practice: A Development Education Review*, 3, 83–98.
- Andreotti, V., & Souza, L. M. (2012). *Postcolonial perspectives on global citizenship education*. Routledge.
- Beacco, J.-C. (2004). From linguistic diversity to plurilingual education: The guide for the development of language education policies in Europe. Report from the Conference "Languages, diversity, citizenship: Policies for plurilingualism in Europe" (pp. 35–46). Council of Europe.

- Bolton, K., Botha, W., & Lee, S.-L. (2020). Linguistic landscapes and language contact. In R. Hickey (Ed.), *The Handbook of Language Contact* (pp. 281–300). Wiley-Blackwell.
- Bowden, B. (2003). The perils of global citizenship. *Citizenship Studies*, 7(3), 349–362. <https://doi.org/10.1080/1362102032000098913>
- Brinkmann, L. M., Duarte, J., & Melo-Pfeifer, S. (2022). Promoting plurilingualism through linguistic landscapes: A multi-method and multisite study in Germany and the Netherlands. *TESL Canada Journal*, 38(2), 88–112. <https://doi.org/10.18806/tesl.v38i2.1358>
- Cambridge. (2020). *Cambridge Life Competencies: A framework to develop skills for life*. Cambridge University Press.
- Cenoz, J., & Gorter, D. (2008). The linguistic landscape as an additional source of input in second language acquisition. *IRAL—International Review of Applied Linguistics in Language Teaching*, 46(3), 257–276. <https://doi.org/10.1515/IRAL.2008.012>
- Clemente, M. (2017). *Paisagem linguística urbana: o caso de Aveiro e sua relevância educativa*. PhD Thesis in Education. Universidade de Aveiro. <http://hdl.handle.net/10773/22801>
- Clemente, M., Andrade, A. I., & Martins, F. (2012). Learning to read the world, learning to look at the linguistic landscape: A primary school study. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 267–285). Peter Lang.
- Council of Europe. (2012). *Global education guidelines: A handbook for educators to understand and implement global education (updated version)*. North-South Centre of the Council of Europe.
- Council of Europe. (2019). *Global education guidelines: Concepts and methodologies on global education for educators and policy makers*. North-South Centre of the Council of Europe.
- Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F. (2009). Linguistic landscape and language awareness. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 253–269). Routledge.
- Davies, L. (2006). Global citizenship: Abstraction or framework for action? *Educational Review*, 58(1), 5–25. <https://doi.org/10.1080/00131910500352523>
- Dill, J. (2018). Global citizenship education: A critical introduction to key concepts and debates. *British Journal of Educational Studies*, 66(4), 559–560.
- Erling, E. J., & Moore, E. (2021). Socially just plurilingual education in Europe: Shifting subjectivities and practices through research and action. *International Journal of Multilingualism*, 18(4), 523–533. <https://doi.org/10.1080/14790718.2021.1913171>
- Gorter, D. (2013). Linguistic landscapes in a multilingual world. *Annual Review of Applied Linguistics*, 33, 190–212. <https://doi.org/10.1017/S0267190513000020>
- Gorter, D. (2018a). Linguistic landscapes and trends in the study of schoolscape. *Linguistics and Education*, 44, 80–85. <https://doi.org/10.1016/j.linged.2017.10.001>
- Gorter, D. (2018b). Methods and techniques for linguistic landscape research: About definitions, core issues and technological innovations. In M. Pütz & N. Mundt (Eds.), *Expanding the linguistic landscape: Linguistic diversity, multimodality and the use of space as a semiotic resource* (pp. 38–57). Multilingual Matters.
- Gorter, D., & Cenoz, J. (2015a). The linguistic landscapes inside multilingual schools. In B. Spolsky, M. Tannenbaum, & O. Inbar (Eds.), *Challenges for language education and policy: Making space for people* (pp. 151–169). Routledge.
- Gorter, D., & Cenoz, J. (2015b). Translanguaging and linguistic landscapes. *Linguistic Landscape*, 1(1), 54–74. <https://doi.org/10.1075/ll.1.1/2.04gor>
- Gorter, D., & Cenoz, J. (2020). Theoretical development of linguistic landscape studies. *Linguistic Landscape*, 6(1), 16–22.
- Hancock, A. (2012). Capturing the linguistic landscape of Edinburgh: A pedagogical tool to investigate student teachers' understandings of cultural and linguistic diversity. In C. Hélot, M. Barni, R. Janssens & C. Bagna (Eds.), *Linguistic Landscapes, Multilingualism and Social Change* (pp. 249–266). Peter Lang.
- Hélot, C., Barni, M., Janssens, R., & Bagna, C. (Eds.). (2012). *Linguistic landscapes, multilingualism and social change*. Peter Lang.

- Hernández-Martín, L., & Skrandies, P. (2020). Taking the foreign out of language teaching: Opening up the classroom to the multilingual city. In D. Malinowski, H. H. Maxim, & S. Dubreil (Eds.), *Language teaching in the linguistic landscape: Mobilizing pedagogy in public space* (pp. 293–325). Springer.
- Hopkins, C. A. (2020). Foreword. In P. Bamber (Ed.), *Teacher education for sustainable development and global citizenship: Critical perspectives on values, curriculum and assessment*. Routledge.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. <https://doi.org/10.1177/1049732305276687>
- International Association of Educating Cities. (2020). *Charter of educating cities*. International Association of Educating Cities.
- James, C., & Garrett, P. (1992). *Language awareness in the classroom*. Longman.
- Landry, R., & Bourhis, R. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology*, 16(1), 23–49.
- Li, J., & Marshall, S. (2018). Engaging with linguistic landscaping in Vancouver's Chinatown: A pedagogical tool for teaching and learning about multilingualism. *International Journal of Bilingual Education and Bilingualism*. <https://doi.org/10.1080/13670050.2017.1422479>
- Lourenço, M., & Simões, A. R. (2021). Teaching and learning for global citizenship in the EFL classroom—towards a pedagogical framework. In S. Saúde, M. A. Raposo, N. Pereira & A. I. Rodrigues (Eds.), *Teaching and Learning Practices that Promote Sustainable Development and Active Citizenship* (pp. 86–106). IGI Global.
- Malinowski, D., Maxim, H., & Dubreil, S. (Eds.). (2020). *Language teaching in the linguistic landscape. Mobilizing pedagogy in public space*. Springer.
- Joris, M., & Agirdag, O. (2019). In search of good citizenship education: A normative analysis of the International Civic and Citizenship Education Study (ICCS). *European Journal of Education*, 54(2), 287–298.
- Morin, E., & Kern, A. B. (1999). *Homeland Earth: A manifesto for the new millenium*. Hampton Press.
- Nilsen, A. B., Fylkesnes, S., & Mausethagen, S. (2017). The linguistics in othering: Teacher educators' talk about cultural diversity. *Reconceptualizing Educational Research Methodology*, 8(1), 40–50.
- Oxfam (2015). *Education for global citizenship: A guide for schools*. Oxfam GB.
- Oxley, L., & Morris, P. (2013). Global citizenship: A typology for distinguishing its multiple conceptions. *British Journal of Educational Studies*, 61, 301–325. <https://doi.org/10.1080/00071005.2013.798393>
- Pais, A., & Costa, M. (2017). An ideology critique of global citizenship education. *Critical Studies in Education*, 61, 1–16. <https://doi.org/10.1080/17508487.2017.1318772>
- Pashby, K., Costa, M., Stein, S., & Andreotti, V. (2020). A meta-review of typologies of global citizenship education. *Comparative Education*, 56, 144–164. <https://doi.org/10.1080/03050068.2020.1723352>
- Peck, A., & Stroud, C. (2015). Skinscapes. *Linguistic Landscape*, 1(1–2), 133–151.
- Pennycook, A. (1999). Introduction: Critical approaches to TESOL. *TESOL Quarterly*, 33, 329–348.
- Pope Francis. (2015). *Encyclical letter Laudato Si' of the Holy Father Francis on Care for Our Common Home*. Vatican Press.
- Prada, J. (2021, 18 January). From landscapes to sensescapes: the implications of translanguaging for Linguistic Landscapes research. Communication presented at the 2nd LoCALL Training week [online]. https://www.youtube.com/watch?v=JW3MCZcft_4&list=PLQr6fAO8AbiaeFOI23ekVpbivB9U1kr45&index=3
- Roos, J., & Nicholas, H. (2019). Using young learners' language environments for EFL learning. Ways of working with linguistic landscapes. *AILA Review*, 32(1), 91–111.
- Rowland, L. (2013). The pedagogical benefits of a linguistic landscape project in Japan. *International Journal of Bilingual Education and Bilingualism*, 16(4), 494–505.

- Santamaría-Cárdaba, N., & Lourenço, M. (2021). Global citizenship education in primary school: a comparative analysis of education policy documents in Portugal and Spain. *Iberoamerican Journal of Development Studies*, 10(2), 130–158. https://doi.org/10.26754/ojs_ried/ijds.585
- Sayer, P. (2020). Ethnographic language learning projects through the linguistic landscape. In D. Malinowski, H. Maxim, & S. Dubrell (Eds.), *Language teaching in the linguistic landscape: Mobilizing pedagogy in the public space* (pp. 327–347). Springer.
- Scarvaglieri, C., Redder, A., Pappenhagen, R., & Brehmer, B. (2013). Capturing diversity: Linguistic land- and soundscaping. In I. Gogolin & J. Duarte (Eds.), *Linguistic superdiversity in urban areas: Research approaches* (pp. 45–73). John Benjamins.
- Schreier, M. (2012). *Qualitative content analysis*. Sage.
- Shohamy, E., & Gorter, D. (2009). *Linguistic landscape: Expanding the scenery*. Routledge.
- Shohamy, E., & Waksman, S. (2009). Linguistic landscape as an ecological arena: Modalities, meanings, negotiations, education. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 313–331). Routledge.
- Tjandra, C. (2021). Supporting newcomer children's language awareness, incidental language learning, and identity negotiation through the multilingual linguistic landscape: An exploratory case study. *The Canadian Modern Language Review*, 77(1), 1–22.
- Torres, C. A. (2018). *Theoretical and empirical foundations of critical global citizenship education*. Routledge.
- UNESCO. (2014). *Global citizenship education: Preparing learners for the challenges of the twenty-first century*. UNESCO.
- UNESCO. (2015). *Global citizenship education: Topics and learning objectives*. UNESCO.
- UN. (2012). *Global Education First Initiative*. United Nations.
- UN. (2015). *Transforming our World: The 2030 Agenda for Sustainable Development*. United Nations.
- van Mensel, L., Vandenbroucke, M., & Blackwood, R. (2017). Linguistic landscapes. In O. Garcia, N. Flores, & M. Spotti (Eds.), *The Oxford Handbook of Language and Society* (pp. 423–449). Oxford University Press.
- Ziegler, E., Schmitz, U., & Uslucan, H.-H. (2018). Attitudes towards visual multilingualism in the linguistic landscape of the Ruhr Area. In M. Pütz & N. Mundt (Eds.), *Expanding the linguistic landscape: Linguistic diversity, multimodality and the use of space as a semiotic resource* (pp. 264–299). Multilingual Matters.

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Linguistic Landscape of Maputo: A Space for a Pedagogical Exploration of Multilingualism



Perpétua Gonçalves and Manuel Guissemo

Abstract Maputo, the capital of Mozambique, is a complex multilingual city where, in addition to Portuguese, the only official language, several Bantu languages and a few foreign languages are spoken. A critical aspect of the city's linguistic situation is the contrast between the low status of Xichangana and Xirhonga, the most widely spoken Bantu languages of the city, and the social prestige of English, a foreign language spoken by a small minority of the population. This contrast leaves visible traces in the city's linguistic landscape (LL), creating opportunities for promising pedagogical approaches. The purpose of this chapter is to propose a pedagogical research project to be implemented in institutions dedicated to language teacher training. The specific issue to be explored is the unequal distribution of local Bantu languages and English in Maputo's public spaces. It is expected that the proposed research experience could alert students attending language teacher training courses to the sociopolitical potential of LLs, and motivate them to design innovative instructional materials for language teaching in the Mozambican context.

Keywords Linguistic landscape · Multilingualism · Pedagogical research · Language asymmetry · English · Xichangana · Xirhonga · Maputo

1 Introduction

The LL of Maputo, the capital of Mozambique and a multilingual city where several languages with different statuses coexist, has great potential for interesting pedagogical approaches. Until now, however, studies on Maputo's LL (all relatively recent) have only described the language scenario of the city, and, as far as the authors are aware, none have explored its pedagogical potential (see Cumbe, 2016; Gonçalves, 2020; Guissemo, 2019; Henriksen, 2015; Maciel, 2021). In all cases, the authors describe the Maputo's LL in official and in private contexts, and in the pre-colonial, colonial and post-colonial periods; in official contexts, the emphasis tends toward

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analyses of toponymy and public monuments (Cumbe, 2016; Guissemo, 2019; Henriksen, 2015); in private contexts, particular attention is paid to the commercial sector, namely advertising boards and names of stores and restaurants (Gonçalves, 2020; Maciel, 2021). All studies address the issue of multilingualism in Maputo's LL, with specific reference to Portuguese, local Bantu languages (Xichangana/Xirhonga) and Indo-Aryan languages. Two prior studies present general overviews either on the city's language landscape (Gonçalves, 2020) or on the use of Indo-Aryan languages (Maciel, 2021), while the other studies explore socio-historical aspects of the urban landscape in a little more depth. For instance, Henriksen points out that recent toponymic changes registered in Maputo city are "an attempt to value, promote and rescue our languages, cultures, traditions, identities, achievements of Mozambicans over time" (Henriksen, 2015, p. 9). Cumbe, in turn, exemplifies how informal toponyms created by the city dwellers reflect Maputo's urban multilingualism, and "neutralise the geographical and administrative boundaries of the urban sphere and deconstruct the centre-periphery dichotomy" (Cumbe, 2016, p. 196). According to Cumbe, the social act of inscribing these informal toponyms that ignore the existence of the official naming system, both in colonial and the so-called 'revolutionary' post-colonial times, allow city dwellers to express themselves in the public space. Guissemo, addressing policy directly in his study on public monuments and toponyms, points out that in postcolonial era, "one of the major priorities of Frelimo's¹ government was to replace all visual elements of the colonial political ideology within the city with celebratory items of the revolution" (Guissemo, 2019, p. 37). In relation to the languages, however, the study points out that in the process of removing and resemiotizing the public space, local African languages nevertheless continued to appear as a penumbra of Portuguese, which remained the most prominent promoted language in the public space.

While previous studies have examined different aspects of Maputo's LL, in this chapter, we propose a classroom mini-project that addresses one critical dimension, namely, the unequal distribution in the city's LL of Xichangana/Xirhonga,² the most important local Bantu languages, and English, a language spoken by a minority of citizens. It is hoped that this approach to Maputo's LL in instructional settings could contribute to raising students' awareness of power relationships within this multilingual society, and highlight the potential of LLs in pedagogy for promoting a critical vision of the social and symbolic values of the different languages spoken in the city.

¹ Frelimo (**F**rente de **L**ibertação de **M**oçambique) is the political party that has led the government of Mozambique since its independence in 1975.

² Xichangana and Xirhonga are very closely-related Bantu languages that belong to the Tsonga language group. Despite the good intelligibility existing between them, there are some differences at the grammatical, lexical, and phonological levels. However, so far, these differences are not detectable in Maputo's LL. For that reason, they will be referred to as "Xichangana/Xirhonga".

2 Language Situation

2.1 Mozambique

Mozambique is a multilingual country, situated in the southeast of the African continent. It shares borders with six countries of which English is the official language: Tanzania, Malawi and Zambia to the north, Zimbabwe to the west, South Africa and Eswatini to the south.

Portuguese and about 20 Bantu languages represent the mother tongues of most of the population: according to the 2007³ national Census, Bantu languages are the mother tongues of around 85% of the population, and around 50% of the population speaks Portuguese as a first or second language. There are also speakers of some South Asian languages (Hindi, Gujarati and Urdu), community languages mainly used by Indian and Pakistani immigrants, and of a few other foreign languages, which include English, Arabic, Chinese, and several African languages spoken by immigrants primarily from Nigeria, Sudan, Somalia, the Democratic Republic of the Congo and Rwanda (Chimbutane, 2015).

Portuguese is typically used as a language of communication in formal and educational contexts, the so-called ‘high’ domains, whereas Bantu languages are mostly used in informal, ‘low’, domains:

Portuguese is assumed as a resource that allows access to formal labour markets and the resulting socio-economic benefits, whereas local Bantu languages are seen as mere vehicles of communication within the family or between members of specific ethnolinguistic groups. In other words, in general, Bantu languages are not associated with capital generation or perceived as resources to be exploited in formal labour markets. (Chimbutane, 2015, p. 65)

Currently, there is evidence that this situation is changing; Portuguese is increasingly used in familiar, ‘low’, domains, and Bantu languages, in turn, are starting to gain ground in some ‘high’ domains such as bilingual education. Nevertheless, the tendency toward Portuguese fulfilling an instrumental role to, and local languages an integrative role, still prevails. In this context, Bantu languages can still be considered “minority languages”, with low status—a result of its limited public functions, rather than its demographic inferiority (see Batibo, 2005, p. 51).

Among the different foreign languages spoken in the country, English is undoubtedly the most prestigious; in addition to its dominance as a global language, and primacy in business and academics, English is used in communication with all bordering states where it is the official language. It is also the lingua franca used by local people with non-native speakers of Portuguese (e.g. tourists and businessmen), and is often chosen as a working language in some cooperation fora and congresses held in the country. As a consequence of this high status, English is being spoken by an increasing number of Mozambicans: Prestige and professional opportunities

³ We use data from the 2007 national Census since a detailed study on the Mozambican language profile based on the results of the 2017 national Census is not yet available (Chimbutane, 2012).

associated with the language appear to be the factors that motivate people to invest in this language (Chimbutane, 2015; Firmino, 2002; Lopes, 1998).

2.2 *Maputo City*

Maputo is located in the extreme south of the country, very close to the borders of South Africa (about 100 km) and Eswatini (180 km), and boasts a population of around 1,100,000. The city has been the capital of Mozambique since the colonial period (1898), as well as the “centre of political and economic power, and often of social and cultural change” (Jenkins, 2011, p. 161).

Like other colonial cities, Maputo is ‘markedly dualistic’, with two distinct zones, the so-called ‘cement city’ and a suburban area, which differ greatly in terms of housing characteristics and the quality and quantity of infrastructure, services and economic activities. The ‘cement city’, carefully planned since the colonial period, is characterised by vertical development, whereas in the non-planned suburban zone, there is less substantial infrastructure and fewer services (Araújo, 2003; Jenkins, 2011; Mendonça, 2014).

Maputo is a complex multilingual city where, in addition to Portuguese, several Bantu languages and a few Asian languages are spoken; according to the 2007 census, Portuguese is the first language of 43% of the inhabitants, and about half the population (53%) speaks Bantu languages (Chimbutane, 2012). Although the city has a significant level of ethnic homogeneity, with two major ethnic groups sharing a similar linguistic and cultural base (Xichangana and Xirhonga), a wider range of Mozambican ethnic groups are also represented (Tshwa, Gitonga, Cicopi, Emakhuwa, etc., see Jenkins, 2011).

Portuguese is the most important language spoken in the ‘cement city’, and the dominant language in public life. It is seen as the “language of the city” and it constitutes the “unmarked choice”, since it is the primary medium of communication in “formal or informal social interactions, such as at home, in the workplace, or in other daily contacts” (Firmino, 2002, p. 132). In the suburban area, in turn, Xichangana/Xirhonga are used as family languages, and also function as the first “unmarked choice” in informal conversations outside the family environment (p. 142). According to Firmino, these languages owe much of their vitality to the role they play in “church organizations, civic and cultural associations, social events like weddings, traditional ceremonies, etc.” (p. 143).

In Maputo, as in the rest of the country, the percentage of foreign-language speakers is quite low (<1.5%, according to Chimbutane, 2012). Among these languages, English stands out as the main language of communication. Besides the reasons already given for its prestige in the country, the use of English in the city also stems from the privileged economic relations with South Africa, and its importance for South African tourists (see Castel-Branco, 2002).

3 The Linguistic Landscape of Maputo

3.1 General Overview

This survey on Maputo's LL is based on a sampling of about 200 photos taken in the period 2015–2021, in the two main zones of Maputo, the so-called 'cement city' and the suburban area.⁴

The LL of the city is characterized by the presence of a wide range of languages, among which Portuguese, Xichangana/Xirhonga and English stand out. In addition, Asian languages like Hindi, Urdu, and Chinese, Arabic, and European languages like French and Italian are also present (see Gonçalves, 2020; Maciel, 2021).

All these languages are predominantly used in the 'cement' zone, whereas, in the peripheral area, Portuguese, Xichangana/Xirhonga and English are used almost exclusively.

As pointed out by Backhaus (2006), in urban LL, "the diversity of languages is greater on 'non-official'/'private' signs, in contrast to the more conservative, less plurilingual 'official' or 'government' signs" (p. 12). This is also true in Maputo's LL, where Portuguese is the language used in almost all government signs and toponymy (see Cumbe, 2016; Guissemo, 2019). By contrast, Xichangana/Xirhonga, despite being the mother tongues of around half of the city's population, have until very recently been almost entirely absent from official usage.

In the private sector, Portuguese, Xichangana/Xirhonga and English are the languages most used. Portuguese is, unsurprisingly, the most widely used language in names of hotels, shops and restaurants, or in advertisements for different types of services and products. On advertising panels where these languages are present, spelling errors may occur. On the one side, these errors seem to be due either to inattention or to ignorance of the spelling conventions of the languages (see Portuguese *alfataria* ('alfaiataria'); English: *qualit* ('quality'); Xichangana/Xirhonga: *Lhamanculo* ('Nhlamankulu')).

With regard to the other foreign languages, some stand out more than others. This is the case of Asian languages like Hindi, Urdu, and Chinese. According to Maciel (2021), Hindi and Urdu often appear in names of shops and products, namely food and cosmetics, and are also visible in religious and cultural spaces belonging to the Indo-Mozambican community, often co-occurring with Portuguese or English. Perhaps due to its growing importance in Mozambique's economy, Chinese is another foreign language with a degree of visibility in the LL of the city, appearing on billboards for stores and on signage of Chinese construction companies.⁵ Scripts in Chinese always co-occur with Portuguese and/or English. Additionally, while maintaining a much

⁴ Most of these photos are available at <https://www.catedraportugues.uem.mz/paisagem-linguistica/1/1>, a webpage that displays photographic LL documentation of cities of several Portuguese-speaking African countries.

⁵ Chinese presence in Mozambique is increasing. Most Chinese companies are linked to the areas of trade and civil construction. The promotion of Chinese language and culture is also gaining traction throughout the country.

smaller presence in the city's LL, French and Italian appear in some fashion stores and hair salons. Finally, Arabic, where it appears, is used exclusively in religious spaces like mosques. Arabic scripts are generally not translated into Portuguese.

Depending on the area where advertisements are found, they are written on different materials; walls of houses or commercial buildings, pieces of zinc, wood or cardboard, cars and even tree trunks. In the 'cement city', an economically stabilized space, higher quality billboards are normally employed. Such "sites of luxury" (Stroud & Mpendukana, 2009, p. 367) are often produced by professionals from certified agencies. In the suburbs, due to economic constraints, precarious panels are often constructed manually with available technologies and materials of poor durability (zinc, wood, cardboard, etc.) that require a low investment, so-called "sites of necessity" (Stroud & Mpendukana, 2009, p. 367).

3.2 Use of Xichangana/Xirhonga

As already mentioned, despite being the mother tongue of around half of Maputo's population, in the official domain, Xichangana/Xirhonga have been almost entirely absent from the city's LL. However, from 2000 onwards, these languages began to be used systematically in the city toponymy (names of streets and neighbourhoods), and, albeit more rarely, they also started to appear in public information produced by the Municipality of Maputo city (see Fig. 1). In the private sector of the 'cement city', these languages are used in names of private schools and hotels, and large shops. In the suburban zone, the use of these languages stands out in the commercial sector, namely in small food and drink shops, liquor stores and hair salons.

Regarding the use of Xichangana/Xirhonga in Maputo's LL, two main linguistic categories can be considered: (i) "Xichangana/Xirhonga-only" (example (1), below) and (ii) bi- or multi-lingual signs "Xichangana/Xirhonga and other language(s)" (example (2) Xichangana/Xirhonga – Portuguese; example (3) Xichangana/Xirhonga – English; example (4) Xichangana/Xirhonga – English and Portuguese). In this case, Xichangana/Xirhonga are normally combined with Portuguese, and, more rarely, with English or even with Portuguese and English.

- (1) a. *Tinhelete* (Lit. 'Stars') (Clothing shop signage in downtown Maputo)
 - b. *Kaya Kwanga* (Lit. 'My home') (Guest house signage in downtown Maputo)
- (2) a. *Teka Famba*—*O que vais tachar hoje?* (Lit. **Take go** ('Take Away') – What will you eat today?) (see Fig. 2)
 - b. *Wanuna Eventos* (Lit. '**Man** events'/'Man's events') (Event decoration services signage in Maputo suburbs)
 - c. *Complexo Ka Falume Restaurante e Disco* (Lit. '**Complex of** Falume Restaurant and Disc'/'Falume's Complex Restaurant and Disc') (Restaurant signage in downtown Maputo)



Fig. 1 Municipality signage in downtown Maputo



Fig. 2 Take Away signage in downtown Maputo

- (3) a. *Nwananga Christian School* (Lit. ‘**My son** Christian School’/‘My son’s Christian School’) (Private school signage in downtown Maputo)
- b. *Ka Beauty* (Lit. ‘At Beauty’/‘Beauty Salon’) (Hairdresser salon signage in Maputo suburbs)
- (4) *Dzudza Fashion Bom Preço & Qualidade* (Lit. ‘**Shake** fashion good price & quality’/‘Second hand fashion clothes. Good Price & Quality’) (Second hand clothing signage in Maputo suburbs’ open air market)

In the texts written in Xichangana/Xirhonga, spelling mistakes often occur, probably due to the fact that most of the population has not been educated in these languages⁶ (e.g. *cola ni cola* (**kola ni kola**); *chonga* (**xonga**)).

In bi- or multi-lingual signs “Xichangana/Xirhonga and other language(s)”, some grammatical strategies of English are used. Some texts adopt the English word order rule used in noun phrases (see *Nwananga Christian School*, example 3a), even in cases where the text has no English words (see *Wanuna Eventos*, example 2b).⁷ In other signs, the locative marker *ka* is used either with Portuguese or English words (see *Complexo Ka Falume*, example 2c, and *Ka beauty*, example 3b).

In general, it can be said that the recent use of Xichangana/Xirhonga in the official sector, more particularly in toponymy, reflects the growing recognition by the government of the importance of Bantu languages in the country. Regarding the use of these languages on private signages of the ‘cement city’, it can be seen as a stylistic resource and also as an evidence of solidarity either with the Xichangana/Xirhonga community or even with the speakers of Bantu community in general (e.g. signages in private schools, hotels, big shops). The use of Xichangana/Xirhonga in the commercial sector of the suburbs, in turn, can be interpreted as evidence of the vitality of these languages within the communities living in these neighbourhoods (e.g. signages in small food and drink shops, hair salons).

3.3 Use of English

As already mentioned, although a foreign language spoken only by a very small minority, the presence of English in Maputo’s LL is “disproportionately dominant” (Kayam et al., 2012, p. 71). It is mostly used in the ‘cement city’, although is also present in the suburban zone, mainly at bus stop terminals where the flow of people engaged in formal or informal trade is greatest.

English is mainly used in the commercial areas, either for names of shops and restaurants,⁸ or for advertisements of different types of services and products. More

⁶ Portuguese was the only language allowed in formal education until 2003, when bilingual education was officially introduced in primary education (see Chimbutane, 2011).

⁷ Translation of *wanuna*: ‘homem’ (Portuguese); ‘man’ (English). According to the syntactic rules of Portuguese, the text should be *Eventos de Homem* (Lit. Events of Man).

⁸ In several cases, these shops and restaurants belong to South African chains.



Fig. 3 Chinese supermarket in downtown Maputo

rarely, it is used for names of schools and churches, and even in street art murals. Supermarkets, liquor stores, fashion and children's shops are those that most often opt for English. Other common services that employ English in signage include hairdressers and barbers, mobile or internet operators and repair, business centers (banks), and car wash and repair shops. English is also used in advertising for some products, such as cosmetics or alcoholic drinks.

Regarding the use of English in Maputo's LL, two categories can be considered⁹: (i) English-only (example 5, below) and (ii) English-and-other-language bi- or multi-lingual signs. In category (ii), most of the advertisements are bilingual English–Portuguese (examples 7–10). English – Xichangana/Xirhonga bilingual signs (example 3b above) and English–Portuguese and Chinese multilingual signs (example 6) are not very common.

- (5) a. *Fried chicken and more* (Take away signage in Maputo suburbs)
 b. *Digital printing service* (Digital service shop signage in downtown Maputo)
- (6) *China City Supermercado* 中国城 中国商品 (Lit. 'China City Supermarket' Chinatown Chinese goods) (see Fig. 3).

Bilingual English–Portuguese signs are particularly interesting due to the great variety of language strategies adopted; some advertisements use both languages (examples 7a/b, below), sometimes in a near-literal translation of sentences or expressions (examples 7c/d). In other cases, code-mixing strategies are employed, in which English words are embedded in a text in Portuguese (example 8). Properties of English grammar like the use of possessive case (example 9a) and word order rules in noun phrases (example 9b) are also adopted in advertisements in Portuguese. Finally, we find spelling mistakes where English words are written according to the spelling rules of Portuguese (example 10). These mistakes do not seem to be due to ignorance of English spelling rules, as they appear in the official signage of professional enterprises such as banks and mobile operators; they rather seem to work as a stylistic device of getting closer to the customers, who are mainly Portuguese-speaking people.

⁹ English words used worldwide are not considered here. Examples: *take away*, *rent-a-car*, *(inter)net*, *software/hardware*, *fast food*.



Fig. 4 Hair salon signage in Maputo suburbs

- (7) a. *Mobile banking – Novas funcionalidades* (Lit. ‘**Mobile banking** – New functionalities’) (Mobile banking services signage in downtown Maputo)
- b. *Daybyday Men/Forte e elegante* (Lit. ‘**Daybyday Men/Strong and handsome**’) (Men’s hygiene products signage in downtown Maputo)
- c. Hollard, a seguradora preferida em Moçambique/**Hollard, Mozambique’s favourite insurer** (Insurance company signage in downtown Maputo)
- d. *Classic Hair Cut/Salão de Corte* (Lit. ‘**Classic Hair Cut/Haircut Salon**’) (see Fig. 4)
- (8) *Tu tens o poder de controlar o **speed** da tua **net*** (Lit. ‘You have the power to control the **speed** of your **net**’) (see Fig. 5)
- (9) a. *Villa’s Bar* (Portuguese: ‘Bar **do** Villa’ (Lit. ‘Bar **of** Villa’)) (Mini bar signage in Maputo suburbs)
- b. *Baronesa Fashion* (Portuguese: ‘Modas Baronesa’ (Lit. ‘**Fashion** Baroness’)) (Clothing shop signage in Maputo suburbs)
- (10) a. *Pay **izi**/Aqui é **izi** pagar* (Lit. ‘Pay **easy**/Here it is **easy** to pay’) (Bank signage in downtown Maputo)
- b. *Qui**Q**mola* (Lit. ‘**Quick** money¹⁰’) (Bank signage in downtown Maputo)

Overall, in addition to simply providing information about types of shops, services and products, the presence of English in Maputo’s LL has also symbolic functions,

¹⁰ In Portuguese, “mola” is considered slang.



Fig. 5 Mobile phone signage in downtown Maputo

and can be associated with technology and modernity (e.g. mobile and internet operators' signages), prestige and wealth (e.g. advertising of banks' signages), style and even western consumerism (e.g. signages of cosmetics, fashion shops, hairdressers).

4 Pedagogical Exploration of Maputo's Linguistic Landscape

4.1 Introduction

As outlined in Sect. 2, Mozambique, like many African countries, and more particularly Maputo, is a complex multilingual society, where several languages with different statuses coexist: Portuguese, the only official language, with a high status; local Bantu languages, mostly used in the so-called 'low' domains, although demographically majority languages; and different foreign languages, among which English stands out. This situation leaves visible marks in Maputo's LL, thus creating opportunities for very promising pedagogical approaches.

In an overview on approaches on LL, Melo-Pfeifer and Lima-Hernandez (2020) highlight that the interest of LLs for sociolinguistic research stems from the wealth of information on the political and social dynamics of societies they provide. More particularly, the authors consider that the unequal distribution of languages in public spaces "provides evidence about the presence of different speech communities, about their hierarchies and statuses, their socioeconomic occupations in the social fabric, their voice and, paradoxically, also their silence or silencing" (p. 1034).

With regard to LLs as a didactic resource, Melo-Pfeifer and Lima-Hernandez (2020) mention several approaches, which demonstrate their advantages in, and contributions to, the development of different skills in the target language, as well as a way of understanding power relationships between languages and literacies within society.

In this chapter, we propose a sociolinguistic approach of Maputo's LL in educational settings, rather than a didactic approach proper, as a resource for language learning and teaching. This approach is given greater consideration since, as already mentioned, consistent information regarding the LL of Mozambique and, more particularly, Maputo, from previous research is not available yet. For didactic purposes, more systematic and extensive information would be needed. For this reason, it appears to be premature to put forward concrete proposals for *ipso facto* teaching of conclusions based on LL research. At this stage of the research on Maputo's LL, it seems more appropriate to propose a classroom mini-project on sociolinguistic aspects, to be implemented in institutions dedicated to language teacher training for primary and/or secondary education. This is a pedagogical option already adopted by several scholars who, despite recognising that using LL research as a tool in the classroom is not without its limitations, consider that creating opportunities for students to study their own LL could serve pedagogical purposes (see Chesnut et al., 2013, for an overview). Rowland (2013), for instance, supports the idea that pedagogical linguistic landscape projects can be valuable to students in a variety of ways, particularly in the development of students' symbolic competence, i.e. their aptitude to identify not only linguistic or pragmatic features of the languages used in the advertisements, but also to analyse the symbolic meanings they transmit.

The topic proposed for this mini-project is a critical examination of Mozambican society, which leaves visible marks on Maputo's LL, more particularly, the asymmetry between the prestige associated with English, and the low status of local Bantu languages, Xichangana/Xirhonga. This is a thought-provoking issue that should encourage interesting debates and foster in learners a critical awareness of the social and symbolic value of the different languages spoken in the city.

We believe that, by alerting students attending teachers training courses to the sociopolitical potential of LLs, this research experience might motivate them to explore the pedagogical opportunities arising from LLs in their future professional activity, and to design innovative instructional materials for language teaching in the Mozambican context.

4.2 General Outline of the Mini-Project

The implementation of the pedagogical research mini-project could proceed according to the following steps:

- Framing the research
- Collecting data

- Data handling
- Brainstorming
- Final report.

Framing the research

In order to make students aware of the wealth of information transmitted through the languages used in the city's public space, a handout with background information on sociopolitical and sociolinguistic dimensions of the use of Xichangana/Xirhonga and English can be provided. Such handouts could be based upon the brief analyses of Sects. 2 and 3.

Collecting data

In order to collect data for the mini-project, students could go for a walk into the city, being directed to pay special attention to the use of Xichangana/Xirhonga and English in public spaces.

The information provided by the handout can guide the students on the aspects to be observed, photographed, and analyzed. Examples of information to be gathered on the target languages of the project, as suggested by Rowland (2013):

- Are Xichangana/Xirhonga and/or English used in private and/or official domains?
- Is there any relationship between the zone of the city where the advertising is exhibited and the language used?
- In what types of commercial establishments Xichangana/Xirhonga and English are used? Examples: fashion shops, hairdressers, restaurants, etc.
- Which products and services are advertised in these languages? Examples: food, drinks, beauty products; mobile phone or banking services.
- Where are the advertising panels written (walls, pieces of zinc, cardboards, etc.)? Is there a relationship between the languages used and the type of material on which they are written?

Data handling

The data collected, photos of signs and field notes taken during the tour, can be organized according to different categories. The summary report prepared by the students can then be used as a basis for the following brainstorming session. In the categorizing, students should be directed to revisit the questions posed in the previous section.

Brainstorming

In this phase, students, eventually organized into groups, first present a summary report based on their observation of the use of Xichangana/Xirhonga and English in the city's LL. Then, under the guidance of the professor, a debate can be organized in order to draw some conclusions about the status of Xichangana/Xirhonga and English in Maputo's society. The following issues could be addressed:

- In which sectors of economic life are these languages most present?

- Where does their vitality stand out the most?
- Which are the symbolic values communicated by these languages?
- How do students perceive the status of Xichangana/Xirhonga and English in the Mozambican society?
- What role can play the use of Xichangana/Xirhonga in public spaces regarding their social enhancement?
- How the use of code-mixing strategies in advertising panels can be interpreted?

Final report

As an output of this research project, students can produce a short report in which, in addition to descriptions of their fieldwork, they express their ideas about the possible reasons for the unequal distribution of Xichangana/Xirhonga and English in Maputo's LL. For instance, bearing in mind that the language choice in the LL can index linguistic ideologies (see Vandembroucke, 2015), it could be interesting to investigate to what extent the use of Xichangana/Xirhonga and English in Maputo's LL are intended as a reinforcement of ethnicity, nationalism, globalization, or other social factors. From another angle, it could also be interesting for students to put forward proposals on strategies to promote Xichangana/Xirhonga in Maputo's LL. Finally, following the narrative research methodology track of Chesnut et al. (2013), it could also be worthwhile for students to engage in a classroom debate where they give feedback either about what they have seen and learned from this exploratory research on Maputo's LL, or about the difficulties they encountered in doing this project.

5 Conclusion

In this chapter, as an example of the pedagogical potential of Mozambican LL, a classroom mini-project was proposed to support critical inquiry into one dimension of Maputo's LL; the asymmetry between the prestige associated with English, and the low status of local Bantu languages, Xichangana/Xirhonga.

With the purpose of framing this mini-project, we provided general information about the language situation of Mozambique and Maputo, as well as about the LL of this city. The multilingualism of the country was highlighted, and after a short presentation of the different statuses of Portuguese, special reference was made to local Bantu languages, Xichangana/Xirhonga, and English foreign language. More particularly, we stressed the fact that these local Bantu languages can be considered 'minority languages' (Batibo, 2005), not by demographic inferiority, but mainly by their limited public functions. On the contrary, although a foreign language, English is a very prestigious language in the Mozambican society.

In regards to Maputo's LL, we first presented a general overview of the languages most used in official and private domains. Then, we addressed in some detail, several aspects of the use of Xichangana/Xirhonga and English in the city's LL, the languages

chosen for the mini-project. Among others, we displayed a range of code-mixing strategies used in advertising boards where these languages are present, and pointed out some of their social and symbolic functions.

In the absence of studies on Mozambican LL as a pedagogical resource, it seemed more appropriate to propose a classroom mini-project, to be implemented in teacher training institutions. On the one side, we considered that, through this research experience, students could gain insight on how multilingualism is contextualized in public spaces. On the other side, it is also expected that, by alerting the students to the pedagogical potential of Mozambican LLs, this research experience might motivate them to explore this innovative approach of languages in their future professional activity.

Ultimately, it would be desirable that, after this research experience on Maputo's LL, students develop insights into how languages project social meaning and values beyond just literal denotational meaning (Rowland, 2013).

References

- Araújo, M. (2003). O espaços urbanos em Moçambique. *GEOUSP—Espaço e Tempo*, 14, 165–182.
- Backhaus, P. (2006). Multilingualism in Tokyo: A look into the linguistic landscape. In D. Gorter (Ed.), *Linguistic landscape. A new approach to multilingualism* (pp. 52–66). Multilingual Matters.
- Batibo, H. (2005). *Language decline and death in Africa: Causes, consequences and challenges*. Multilingual Matters.
- Castel-Branco, C. (2002). *Economic linkages between South Africa and Mozambique*. See <https://www.iese.ac.mz/lib/cncb/AI-2002a-SA-Mozambique-linkages.pdf>.
- Chesnut, M., Lee, V., & Schulte, E. (2013). The language lessons around us: Undergraduate English pedagogy and linguistic landscape research. *English Teaching: Practice and Critique*, 12(2), 102–120.
- Chimbutane, F. (2011). Uso da língua materna como recurso no processo de ensino e aprendizagem de/em língua segunda. In F. Chimbutane & C. Stroud (Eds.), *Educação bilingue em Moçambique: Reflectindo criticamente sobre políticas e práticas* (pp. 75–104). Texto Editores.
- Chimbutane, F. (2012). *Panorama linguístico de Moçambique: Análise dos dados do III Recenseamento Geral da População e Habitação de 2007*. Instituto Nacional de Estatística.
- Chimbutane, F. (2015). Línguas e educação em Moçambique: Uma perspectiva sócio-histórica. In P. Gonçalves & F. Chimbutane (Eds.), *Multilinguismo e multiculturalismo em Moçambique: Em direção a uma coerência entre discurso e prática* (pp. 35–75). Alcance Editores.
- Cumbe, C. (2016). Formal and informal toponymic inscriptions in Maputo: Towards socio-linguistics and anthropology of street naming. In L. Bigon (Ed.), *Place names in Africa. Colonial urban legacies, entangled histories* (pp. 195–205). Springer.
- Firmino, G. (2002). A “questão linguística” na África pós-colonial: O caso do português e das línguas autóctones em Moçambique. Promédia.
- Gonçalves, P. (2020). Paisagem linguística da cidade de Maputo (Moçambique). See <https://localproject.eu/2020/11/28/paisagem-linguistica-da-cidade-de-maputo-mocambique-por-perpetua-goncalves/>.
- Guissemo, M. (2019). Orders of (In)Visibility: Colonial and postcolonial chronotopes in linguistic landscapes of memorization in Maputo. In A. Peck, C. Stroud, & Q. Williams (Eds.), *Making sense of people and place in linguistic landscapes* (pp. 29–48). Bloomsbury Academic.
- Henriksen, S. (2015). *Da tradição a modernidade e de volta novamente—O caso da toponímia da Cidade de Maputo*. [Paper presentation] “Conference “Alberto Viegas”—Modernizando as

- Tradições”, Nampula, May 27–29. See https://www.academia.edu/40054212/Da_tradi%C3%A7%C3%A3o_a_Modernidade_e_de_volta_Novamente_-_O_Caso_da_Topon%C3%ADmia_da_Cidade_de_Maputo.
- Jenkins, P. (2011). Maputo and Luanda. In G. Therborn & S. Bekker (Eds.), *Capital cities in Africa: Power and powerlessness* (pp. 142–166). Human Science Research Council.
- Kayam, O., Hirsch, T., & Galily, Y. (2012). Linguistic landscape: Investigation of linguistic representations of Cape Town. *International Journal of Linguistics*, 4(3), 71–77.
- Lopes, A. (1998). The language situation in Mozambique. *Journal of Multilingual and Multicultural Development*, 19(5/6), 440–486.
- Maciel, C. (2021). As línguas indo-arianas nas paisagens linguísticas da cidade de Maputo, Moçambique. See <https://localproject.eu/2021/04/30/as-linguas-indo-arianas-nas-paisagens-linguisticas-da-cidade-de-maputo-mocambique/>.
- Mendonça, I. (2014). Mobilidade urbana na área metropolitana de Maputo: Análise dos órgãos de gestão do planeamento e mobilidade urbana, arranjos institucionais e insumos para a sua efectiva articulação. *Journal of Transport Literature*, 8(2), 244–270.
- Melo-Pfeifer, S., & Lima-Hernandez, M. (2020). Paisagens Linguísticas: Ideologias, discursos e práticas multilingues nos espaços sociais. *Domínios da Linguagem*, 14(4), 1024–1058.
- Rowland, L. (2013). The pedagogical benefits of a linguistic landscape project in Japan. *International Journal of Bilingual Education and Bilingualism*, 16(4), 494–505.
- Stroud, C., & Mpendukana, S. (2009). Towards a material ethnography of linguistic landscape: Multilingualism, mobility and space in a South African Township. *Journal of Sociolinguistics*, 13, 363–386.
- Vandenbroucke, M. (2015). Language visibility, functionality and meaning across various timespace scales in Brussels’ multilingual landscapes. *Journal of Multilingual Development*, 36(2), 163–181.

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The LoCALL App: A Mobile Tool to Promote Learning from and About Linguistic Landscapes



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Abstract Educational research has been showing a growing interest in the field of Linguistic Landscapes (LL) with numerous studies highlighting the pedagogical potential of LL in developing pupils' and teachers' competences at different levels. Yet, despite the pervasive role new technologies are taking in Education, research bridging LL and digital tools is slim and mostly focused on the use of mobile devices for methodological purposes. Considering this background, this chapter reports on the results of a basic qualitative study conducted with a group of seven teachers from a school in Ílhavo, Portugal, who developed an interdisciplinary project around the LoCALL App. The App is an educational resource that invites pupils, teachers and the community to document and critically reflect upon LL through a multiple-choice question game to be played outdoors. In particular, the study explores teachers' perceptions regarding the competences developed by a class of 20 pupils, aged 11–13, while participating in the project. Data was collected through a group interview conducted with the teachers after the conclusion of the project, which was transcribed and treated using inductive content analysis. Results show that, according to the teachers, the project was successful in developing pupils' awareness to language and linguistic diversity, in promoting critical thinking, autonomy and

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engagement, as well as in activating and developing (prior) knowledge in different curricular and non-curricular subjects. Surprisingly, digital skills were not mentioned by the teachers, a result that needs careful interpretation. These findings are relevant for the international audience of teachers, who may explore LL with this mobile tool in their teaching practice and in their own language, and for researchers, as more studies on this innovative approach to LL in education are required.

Keywords Linguistic landscapes · Interdisciplinary learning · Mobile learning · Game-based learning · Lower secondary education · Basic qualitative research

1 Introduction

Linguistic Landscapes (LL) have been emerging as a significant research field in Education, given their potential to value linguistic and cultural diversity inside and outside the classroom and their unique contribution in fostering pupils' competences at different levels. Indeed, research in language didactics has highlighted the effective role of LL in developing critical language awareness and multilingual and plurisemiotic literacies, which are fundamental in language learning and teaching processes (Dagenais et al., 2009; Gorter, 2013; Rowland, 2013). Studies have also identified significant effects of the use of LL in promoting multimodal/sensory learning experiences and text-to-world connections (Li & Marshall, 2018), and in developing pupils' soft skills, such as critical thinking or intercultural awareness (Clemente et al., 2012). More recent research has also shown that LL-related tasks can be a powerful starting point to reflect upon issues of linguistic inequality, inclusion and social justice in school and in the community, as LL allow teachers and pupils to rethink multilingualism as an even more inclusive concept and to think of languages attached to issues of power, equity and sustainable human development (Lourenço & Melo-Pfeifer, 2021).

Since the first attempts to define the concept from an educational perspective (Landry & Bourhis, 1997), there has been a considerable amount of research focusing on the didactic potential and on the possibilities of working with LL with pupils and teachers. Traditional ways of exploring LL in Education include, for instance, taking photographs of the LL in the city or in the home, completing observation grids (identifying, counting and comparing languages), reading maps and interpreting geographic coordinates to reach points of interest, interviewing people (shop owners, tourists, members of the city council or other members of the community), writing reports or personal opinion essays, drawing or crafting an imagined of real LL (Clemente, 2017; Dagenais et al., 2009; Santos & Pinto, 2019). However, the emergence of new technologies and their increasing pervasiveness makes the integration of such technologies into teaching and learning processes, in general, and into teaching and learning about and from LL, in particular, the next logical step to take.

Mobile devices, particularly smartphones, are an example of such technologies. It is estimated that, in 2020, there were 105 mobile-cellular subscriptions per 100

inhabitants worldwide (ITU, 2020). Still, not many studies have analysed the role of these devices in developing pupils' knowledge, attitudes and skills through LL. Research bridging LL and digital tools is slim and most studies focus on the methodological side of using mobile devices to document (i.e., collect and analyse) LL, rather than on the pedagogical benefits of using these tools. Such is the case of studies that describe specifically designed software that allow users explore the distribution of languages in the LL by linking images to their geographical location and adding analytical descriptors according to a predefined framework (Barni & Bagna, 2009; Gaiser & Matras, 2021; Ziegler, 2013).

The literature has been demonstrating that mobile devices are familiar to students (Mascheroni & Ólafsson, 2016) and that they have positive perceptions regarding the use of mobile devices to learn (Pollara & Broussard, 2011). Considering these findings, if these technologies are properly used, they intrinsically motivate students and promote positive learning outcomes (Chee et al., 2017; Crompton et al., 2017; Pombo et al., 2019). Additionally, a mobile device is portable, readily available and relatively cheap; hence, learning through mobile applications provides easy access to learning materials, individual place and time of study, immediate feedback, and self-testing. It is an attractive and dynamic process, which increases students' motivation and encourages them to study (Gafni et al., 2017).

Given those results, teachers are seeking to use the present technology (with its capabilities and limitations) in the most effective ways, while computer science specialists are trying to advance the technologies, providing more options for their practical use (Purgina et al., 2020). For example, through 4G Internet access, which has 84.7% of the world's population coverage in 2020 (ITU, 2020), and Wi-Fi, modern mobile devices provide learners with opportunities to be involved in meaningful real-context interactions, which are often lacking in traditional learning environments. Moreover, the use of mobile devices can lead to high cognitive and affective outcomes in educational contexts, whilst leveraging learning relevant to a wide range of subject areas, thus supporting interdisciplinary teaching approaches (Pombo & Marques, 2019). The literature has already revealed that interdisciplinary mobile apps may have high educational value, particularly for 10–15-year-old pupils, who reported feeling more motivated to learn with this approach (Pombo & Marques, 2020). In what concerns language learning, empirical studies have found that the use of mobile devices and applications as tools for learning foreign languages is efficient, contributing, for instance, to the improvement of students' listening comprehension skills (Azar & Nasiri, 2014).

In addition to these new trends of teaching languages and other subjects through mobile devices is the rising interest in the gamification of learning. Gamification does not imply mobile learning, as it integrates a set of technical concepts (such as points, badges, and leaderboards) in the learning process, which can take place outside or inside the classroom. However, mobile digital games integrated in an app combine those two features that enable users to engage in a game-playing behaviour and in a real outdoor environment supported by simple observation and benefiting from game elements to motivate learners and from immediate feedback for learning purposes.

In line with this background, this chapter presents the LoCALL App, an educational resource that was conceived in the scope of a European Erasmus + project named “LoCALL: Local Linguistic Landscapes for global language education in the school context”, which aims to develop multilingual pedagogies for the school context based on pupils’ and teachers’ lived experiences with multilingualism outside school. The LoCALL App invites pupils, teachers and the community to ‘read’ and explore LL, while playing a multiple-choice question game. The App is available in English and in the languages of all LoCALL project partners, and all games can be freely accessed by everyone. In contrast to other digital tools developed within LL-research, the LoCALL App is not mainly targeted for researchers or university students, but for primary and secondary school pupils and teachers who co-create games in an online platform according to a project-based didactical approach. The App allows pupils not only to document and discover LL, but to critically reflect upon their findings, linking curriculum content to the ‘real’ world.

The aim of this chapter is thus to present the results of a basic qualitative study that was carried out with a group of seven teachers and an 8th grade class of 20 pupils, aged 11–13, from Ílhavo (Portugal), who used the LoCALL App in an LL interdisciplinary project during academic year 2020–2021. In particular, the study aims to identify teachers’ perceptions regarding the contribution of the project in developing pupils’ competences in different domains, such as language awareness, curricular content knowledge, soft skills or digital competences.

The next section of this chapter outlines the genesis and features of the LoCALL App and the associated web-platform. This is followed by the presentation of the empirical study, namely the methodological design, the educational context and participants, and the methods for data collection and analysis. Finally, the results are presented and discussed followed by a conclusion highlighting the main findings, presenting study limitations and suggesting avenues for future research.

2 The LoCALL App and the Web-Platform: Development and Features

The LoCALL App and associated web-platform were conceived with the aim of supporting learning from and about LL. For the characterisation and development of the App and platform, principles of pedagogical usability were taken into account. Pedagogical usability refers to the way learning content is made available by the software and to its usefulness for teachers and students in achieving learning goals.

Some principles that served as the basis for the App and platform design are briefly summarised:

- Teachers can use the created software to encourage active learning, following a project-based approach to build new knowledge from and about LL;
- The work to be developed can be individual or in groups, encouraging collaborative learning;

- Learning objectives must be clear and the activity should be results-oriented;
- The acquired skills must be transferable to other contexts, to have practical application;
- By introducing a technological tool into the pedagogical activity, it must add value to learning, due to its creative potential, its flexibility and adaptation to learners (Nokelainen, 2006).

2.1 The LoCALL App

The LoCALL App provides games to explore the LL of multiple cities in multiple languages (currently, in Dutch, English, French, German, Portuguese and Spanish). It is available on App Store and Google Play for installation on iOS and Android devices. Its use is free and it does not require user registration.

Upon entering the App, the user selects a language and a city. Then, a list of all the games available in the selected location and language is displayed. Figure 1 shows some screenshots of the App from the starting screen until game selection.

The games are made up of city paths, which are marked on a Google map. Each path consists of a set of points of interest that depict the LL of a city. Each point of interest is associated with multiple choice questions, which may include text and multimedia elements, such as images, audios and videos of the LL.

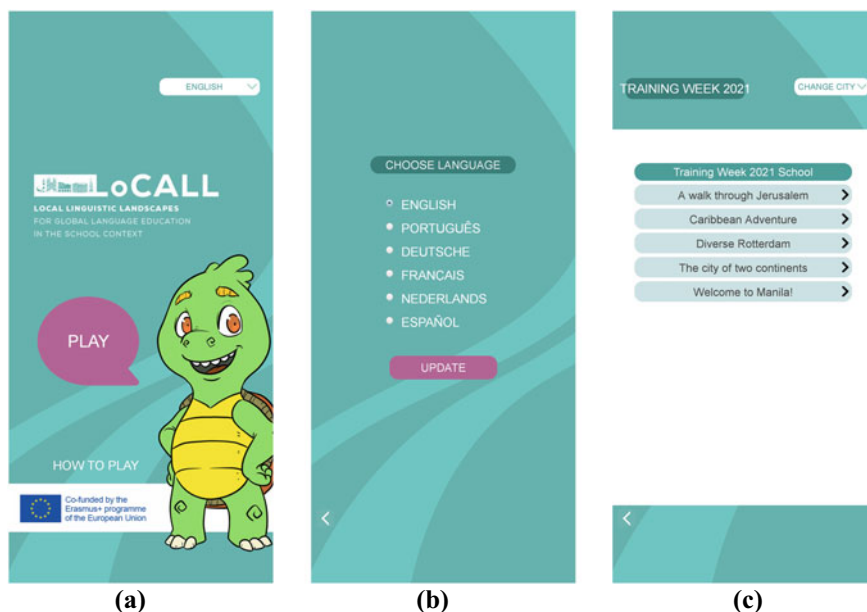


Fig. 1 Initial screens of the LoCALL App: **a** starting screen; **b** language selection; and **c** game selection

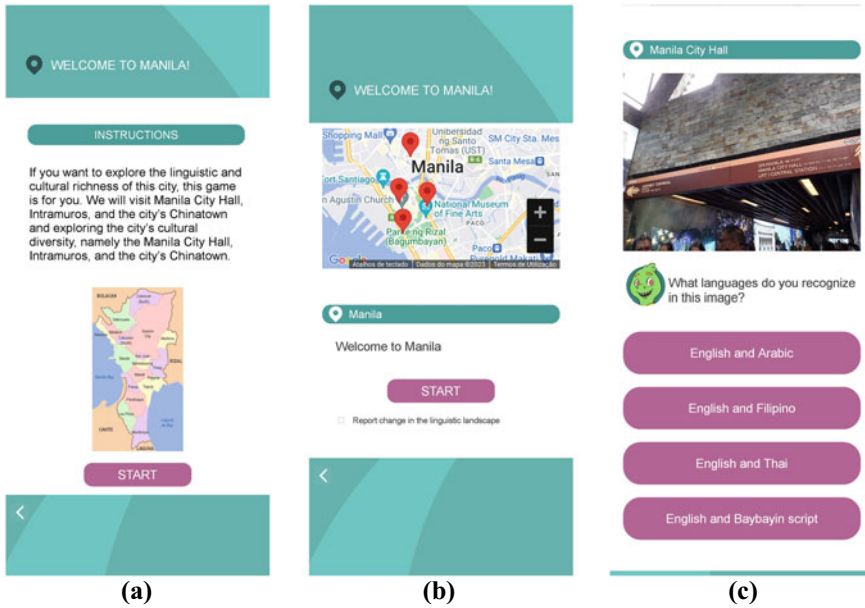


Fig. 2 Screenshots of the game “Welcome to Manila”: **a** Introduction; **b** Map with points of interest; **c** Example question at a point of interest

Upon entering the game, the user accesses the map which marks the points of interest and is prompted to follow the instructions to reach the first point. Then, (s)he will have to answer questions about the LL in that location (Fig. 2).

Every time a user answers a question, a feedback message is displayed, indicating that the user selected a correct or incorrect answer. When the user finishes answering the questions related to that point of interest, it is possible to move on to the next question, until the end of the path. At the end of the game, the user can see the score and can choose to play again to improve the results, therefore learning more about the LL explored. Figure 3 shows the feedback and scoring mechanisms of a game.

In short, App users enjoy activities which are simultaneously digital and analogic, hence promoting engagement and motivation to achieve learning goals and encouraging healthy behaviors (Chassiakos et al., 2016). The mobile game provides guidance and information that is combined with the exploration of the outdoor environment, which is necessary to complement knowledge and successfully play the game (Kim, 2015).

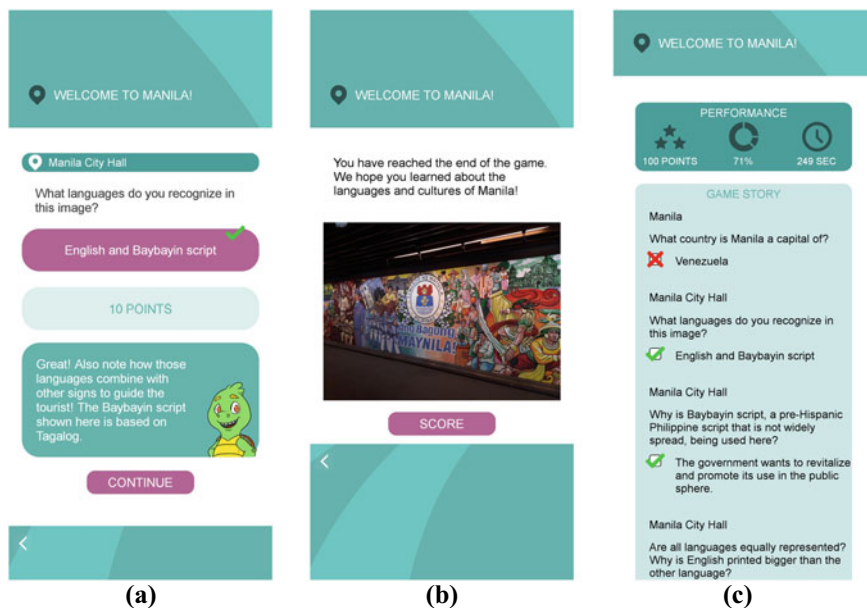


Fig. 3 Screenshots of the game “Welcome to Manila”: **a** Example feedback message; **b** End of game screen; **c** Score screen

2.2 Web-Platform

The platform brings together features that allow the management of the content of the LoCALL App, the management of user accounts, access to App usage statistics and also the possibility of adding new languages, countries, cities and schools, as a way of expansion and future sustainability of the project.

Regarding content management, the platform allows students and teachers to create games exploring the LL of their city, which are to be available on the LoCALL App. As a preliminary task, it is necessary to find and select points of interest displaying the LL in the city, and to produce multimedia content, in order to build a game path.

To create a point of interest in the platform, the user chooses a name and a location, associating it with a geographical coordinate by writing the latitude and longitude or by clicking on a map point. The next step is to create questions about the LL related to that point of interest. In this feature, the user fills in several fields: (a) Writes an (optional) introduction to which media elements can be added; (b) Writes the question and up to four answer options, indicating which one(s) is/are correct; (c) Writes two feedback messages, one associated to the correct answer(s) and another to the incorrect one(s), and adds media elements (optional); (d) Links the question to a point of interest. Questions can be edited and translated into other languages.

The game is built following four steps: (1) Initial settings, such as the language, the name of the game and a game introduction with text and media elements; (2) Selection and ordering of points of interest composing the game path, and writing instructions to reach each point; (3) Selection and ordering questions for each point of interest; and (4) Final game message, composed by text and media elements. Figure 4 illustrates Step 1—Initial settings with a specific game.

Regarding user management, the platform integrates four access profiles with different permissions in the creation of games and management of the App content:

- Student Profile—the student registers a new account, associates it with a school and a teacher, which validates his/her access. Once validated, (s)he can create points of interest, questions, and upload media elements to the platform.
- Teacher Profile—the teacher registers a new account, associates it with a school and the account is validated by the national LoCALL coordinator of his/her country. The teacher is responsible for a group of students, being able to view and edit their content. The teacher creates the games by joining points of interest and questions. The teacher has access to anonymous statistics about the usage of games created in his/her account.

The screenshot displays the 'Edit game path' interface for the 'Welcome to Manila' game. The interface is divided into a left sidebar and a main content area. The sidebar, titled 'LOCALL', contains a navigation menu with options: Dashboard, Countries, Cities, Schools, Users, Game paths (selected), Points of interest, Questions, Statistics, and Media. The main content area has a title 'Edit game path' and a progress indicator consisting of four numbered circles (1, 2, 3, 4), with circle 1 highlighted. Below the progress indicator are settings for 'Active' (On/Off), 'Language' (English), 'Game id code' (Welcome to Manila), 'Game name' (Welcome to Manila), 'Message at the beginning' (a paragraph about exploring Manila's linguistic and cultural richness), and 'Insert media for introduction' (a map of Manila). At the bottom are 'Back' and 'Next' buttons.

Fig. 4 “Welcome to Manila” game on the platform, Step 1—Initial settings

- **National Coordinator**—is responsible for the LoCALL project in a partner country. (S)he manages the teacher accounts in one country and may validate, view, edit and delete teacher profiles. (S)he can view, edit and delete all games created by users associated with schools in his/her country and access the anonymous usage statistics of those games in the App.
- **Administrator**—Accesses all games, points of interest, questions, anonymous statistics and media elements created by users from all countries. (S)he can add new languages, countries, schools and users to the platform. (S)he has the maximum platform access permissions, not only for managing and maintaining the App, but also for accessing anonymous data.

Summing up, the features available for content creation and student access management on the platform allow teachers to develop pedagogical activities related to LL. This way they can actively involve their students in the construction of knowledge around LL to create digital games for the LoCALL App, using a technological tool that does not require coding skills.

3 The Empirical Study

This chapter reports on the results of a basic qualitative study (Merriam & Tisdell, 2015) that aimed to identify teachers' perceptions regarding the competences their pupils developed while participating in an interdisciplinary project on LL that used the LoCALL App and platform. Basic qualitative studies are usually interpretative and data is collected through interviews, observations, or document analysis, and analysed to identify recurring patterns. This form of research is one of the most common qualitative research designs in the field of Education, and it is considered to be suitable to uncover the meaning of a phenomenon for those involved in it (*idem*).

The study was developed in an urban school in Central Portugal, and the participants were seven teachers who lectured a class of 20 8th grade pupils. The sample of this study is small, non-random, and purposeful, which is frequent in qualitative research (*idem*). Section 3.1 provides a detailed description of the context and the participants, while Sect. 3.2 presents the project developed by the teachers and the pupils.

In order to access teachers' perceptions regarding the effects of the project in the development of pupils' competences, a group interview (GI) was conducted with the teachers at the end of the project. The instrument and procedures for data collection and analysis are detailed in Sect. 3.3.

3.1 Context and Participants

The Erasmus + LoCALL Project launched a challenge to schools in the Aveiro region (Portugal) to develop an interdisciplinary project to ‘read’ and explore LL, including the creation of an interactive game for the LoCALL App. One school in Ílhavo, in the vicinity of Aveiro, embraced the challenge and became this study’s educational context.

The school is located in an urban setting and offers education and training to pupils from 3 years old (preschool education, not compulsory) up to 18 years old (secondary teaching, compulsory), and also to adults. In the school year 2020–2021, the student population was around 1628. From these, 73 were foreign students (about 4.5%).

As previously mentioned, seven teachers participated in the project:

1. “Charlotte”,¹ 49 years, Portuguese and French teacher, with 26 years of teaching experience. Has a Masters in Supervision;
2. “Finn”, 47 years, Moral Education and Catholic Religion teacher, responsible for the Citizenship and Development component, with 22 years of teaching experience;
3. “Amelia”, 55 years, English teacher, with 32 years of teaching experience;
4. “Mia”, 59 years, Portuguese and French teacher, with 34 years of teaching experience.
5. “Violet”, 58 years, Geography teacher, with 34 years of teaching experience;
6. “Ivy”, 50 years, Physics and Chemistry teacher, with 23 years of teaching experience;
7. “Abigail”, 54 years, teacher of History and of Citizenship and Development, with 20 years of teaching experience.

This was a set of very experienced teachers, all having in common the teaching of the same group of pupils with whom the interdisciplinary project was developed. These consisted of an 8th grade class of 20 pupils, aged between 11 and 13 years-old (mean age = 13). Thirteen pupils were girls and 8 were boys. This class was studying both English and French as foreign languages. Regarding nationalities, the class included one Brazilian female pupil, one pupil with Tunisian origins, and another with Venezuelan origins. Two pupils had special education needs and six came from disadvantaged socioeconomic backgrounds. Most pupils’ parents had an academic qualification of Secondary Education or higher, and most of them had an employment contract. Neither teachers nor pupils had any coding skills.

To support teachers in the development of the project, two 3 h-workshops were conducted online by the five researchers in April 2021. The first workshop presented teachers with a theoretical background on LL and its educational potential, a first contact with the App and platform, and the negotiation of the project’s challenge. The second workshop provided an opportunity for teachers to explore the technology by themselves, with the support of the researchers. Additional support was offered

¹ All participant teachers were given fictitious names, to keep anonymity.

by email, namely by providing a planification template and giving feedback on the initial version of the lesson plans collaboratively produced by the teachers. Teachers kept their curricular autonomy, by selecting and adapting educational aims, activities or resources. Due to the COVID-19 pandemic, no classroom observations were made by the research team.

3.2 *Interdisciplinary Project*

The teachers defined the following main objectives for the interdisciplinary project on LL: (a) to raise awareness to linguistic and cultural diversity; (b) to develop critical thinking and autonomy; and (c) to promote reflection upon the local surroundings, building links with curricular content. According to the teachers, the main idea was to provide learning experiences that promote the school's openness to its local surroundings. These objectives are aligned with Portuguese education policy documents, namely with the *Students' Profile by the End of Compulsory Schooling* (Ministry of Education Portugal, 2017a), which defines as competences to be developed by the students at the end of grade 12 (18 years old) an acknowledgement of the local linguistic and cultural diversity, critical and creative thinking, communication and information processing skills, interpersonal relationship skills, and aesthetic and artistic sensitivity. These objectives also meet the three axes of the *National Strategy for Citizenship Education* (Ministry of Education Portugal, 2017b), namely individual civic attitude; interpersonal relationship, and social and intercultural relationship. Finally, it is worth mentioning that the project was integrated within the school's educational project, which aims to promote inclusion through the recognition and valorisation of people from other countries and cultures.

The project was organised around five sessions, which can be grouped in three categories: analysing the LL at home, analysing the LL in the school, and analysing the LL in the local community. The following school subjects were involved in the project: Portuguese, English, French, Citizenship and Development, Information and Communication Technologies (ICT), History, Geography, and Physics and Chemistry. Each of the sessions had previously defined aims, a topic and specific activities, as can be seen in Table 1.

The work with the App and its platform resulted in the creation of a game, titled "The sea starts here". The game starts with a brief text and video introduction that presents the points of interest, providing some context to the user. The game consists of ten points of interest and 60 questions: Ílhavo Museum (11 questions), Municipal Library (6 questions), Ílhavo Scientific Station Shipyard (3 questions), Ílhavo Culture House (1 question), Vista Alegre² (12 questions), Oudinot Garden (6 questions), Santo André Ship-Museum (6 questions), Aveiro's Port (6 questions), Costa Nova³ (5 questions), Barra Lighthouse (4 questions). Points of interest include questions

² Famous porcelain clay factory.

³ Famous tourist area.

Table 1 Overview of the interdisciplinary project (sessions, aims, main activities and subjects involved)

Title	Sessions	Main aims	Main activities	Subjects involved
The linguistic portrait of our school community	1–3	Raise pupils' awareness of the project's topic	Dialoguing with pupils; writing emails to the whole school community	Portuguese
		Identify pupils' and their parents' mother tongues	Processing gathered information; identifying the pupils' mother tongues; elaborating and carrying out a questionnaire	Citizenship & Development History Geography
		Promote critical thinking; raise pupils' awareness of linguistic and cultural diversity	Collecting photos taken in pupils' homes, in the school and in the streets, which illustrate the LL of these places	Portuguese English French
Linguistic portrait: at home	4	Develop knowledge about other social, cultural and political realities	Organising the gathered information for dissemination; creating an interactive world map with the pupils' countries of origin	Portuguese Citizenship & Development ICT
"Hands on" work with the App	5	Organise information; define questions for the App; develop attitudes of openness towards others and their culture(s); Develop and use knowledge about the local surroundings	Selecting points of interests; producing questions; defining the itinerary; testing the game	All

related to LL (e.g., "In how many languages is the word cod written in?"), but also questions from other disciplinary areas such as Biology (e.g., "What is the purpose of the cod sensory line?"), Physics (e.g., "What construction material is used in the market of Costa Nova to increase sound reverberation?"), Chemistry (e.g., "What kind of transformation occurs when ships acquire a reddish color?"), History/Arts (e.g., "Who was the sculptor who authored the tomb of the bishop who ordered the construction of the chapel of Nossa Senhora da Penha de França inside the church?"), Geography (e.g., "In which ocean is *Gadus morhua* found, the species of cod consumed in Portugal?"), local culture (e.g., "There is a typical Ílhavo figure

represented in the tomb. Which one?”), Tourism (e.g., “Which tourist activity takes place annually in August in the garden?”). The class chose to create questions with three response options and text feedback messages, without resorting to photographs, videos or audio.

3.3 *Data Collection and Analysis*

As semi-structured interviews are suitable for studying people’s perceptions and the ways they make meaning of their experiences (Kallio et al., 2016; Merriam & Tisdell, 2015; Rabionet, 2011), data collection in this study relied on a semi-structured group interview (GI) that was conducted with the teachers at the end of the school year. The overall aims of the interview were the following:

1. To characterise teachers from a professional point of view and to understand their motivations and prior knowledge on LL
2. To become more familiar with the project and context in which it was developed
3. To identify the reactions of the pupils to the project and the competences they developed
4. To identify the main difficulties experienced by the teachers in the development of the project
5. To understand the effects of the project on teachers’ professional development and their future intentions

This study focused specifically on aim 3, as it sought to understand teachers’ perceptions regarding the competences the pupils developed during the project. Yet, it is worth highlighting that aims 1 and 2 were also relevant, as they allowed the researchers to describe the educational context of the study.

In line with these aims, a preliminary semi-structured interview guide was developed by one of the authors of this study. There was a concern to formulate clearly worded open-ended questions that were single-faceted, participant-oriented and also not leading (Kallio et al., 2016). Ethical issues related to interviewing were taken into consideration, such as asking for informed consent, informing the use and scope of the results, ensuring confidentiality, and providing options to withdraw (Rabionet, 2011). Pilot testing comprised internal testing (Kallio et al., 2016), as the preliminary guide was critically analysed by the remaining authors of this study. The document was discussed and changes for improvement were negotiated. Changes included reformulating some items for greater clarity and adding more questions. Appendix 1 presents the resulting interview guide, concerning aims 1–3.

The GI was conducted through a video communications service. Consent was also asked for video and audio recording of the interview. Five researchers and five teachers participated in the GI, which lasted about 1 h and 15 min. The interview was transcribed and anonymised. Interviewed teachers were offered the opportunity to review the transcripts. The two participant teachers who could not participate in the GI were given the opportunity to read the transcripts and add their thoughts on

the topics discussed: one mentioned she had nothing to add and the other reinforced what her colleagues said. The anonymized transcripts are provided on request.

Inductive coding was used to categorise the data (Bardin, 2016). This meant that the interview transcripts were read and tentative codes were created, drawing on the data and bearing in mind the aims of the study. These codes were later refined to create categories and subcategories for more efficient analysis. The coding process for each category was manually conducted by one researcher and then checked for validity by the other researchers through a peer debriefing process.

4 Results and Discussion

Inductive content analysis of the GI resulted in the identification of four main categories related to the effects of the project on pupils' learning, as perceived by the teachers. These pertain to the development of pupils' knowledge, attitudes and skills, namely in what concerns: (1) language-related knowledge and skills; (2) soft skills; (3) attitudes and dispositions and (4) content/world knowledge. Table 2 provides an overview and a description of each category that emerged from the data.

As expected, and in line with prior research on LL (Cenoz & Gorter, 2008; Li & Marshall, 2018; Rowland, 2013; Tjandra, 2021), teachers made extensive references to the effects of the project in developing pupils' awareness of language and linguistic

Table 2 Categories of analysis that emerged from the data

Categories	Description
(1) Language-related knowledge and skills	References to incidental language learning instances, as well as to a heightened awareness to language(s), including, for instance, the development of decoding, transfer, analytical and (multi)literacy skills by the pupils
(2) Soft skills	References to the development of cross-curricular skills required for learners' holistic development and adaptation to change, such as critical thinking, autonomy, collaboration, organisational skills, digital skills, or social responsibility
(3) Attitudes and dispositions	References to the socio-affective dimension of learning, including pupils' interest, engagement and participation in the activities
(4) Content/world knowledge	References to the development or activation of (prior) knowledge by the pupils related to (curricular) subjects, disciplines or knowledge areas not necessarily linked to languages, such as history or geography

diversity, as well as in fostering incidental language learning. Recalling an event that took place in an end-of-the-year party, the French teacher mentions:

At the end of the year, in the last lesson, we had a small snack and each student brought a food or drink to share with others. (...) Then, one of the pupils said: “Do you know how to say *sumo de pêssego* (peach juice) in French? Look at the bottle here. There it is, in French it is *jus de pêche* and in English *peach juice*”. That was really funny!⁴ (Mia, GI, p. 7)

Mia explains that, as a result of the project, pupils became more attentive to the languages that surround them in their immediate environment and realised that landscapes are not only physical but also linguistic. This was also promoted by one of the activities conducted during the project—The linguistic portrait of our school community. This consisted in a survey to all the students attending the school in order to unveil their mother tongues. According to Charlotte, pupils were suddenly amazed when an infographic with all their nationalities and home languages was shared, revealing that the school was a more diverse place than they had initially anticipated.

Apart from promoting pupils’ awareness of linguistic diversity, the project also developed pupils’ awareness of language itself in what concerns word formation processes and word loans. As true language detectives, pupils explored shop signs to discover patterns and trends in word formation and also the reasons for selecting a specific name or designation for a store. They also realised that language boundaries are very slim and that languages are permeable to others. Mia stressed that the pupils found out and that some words they thought were Portuguese, are actually loans from other languages (such as *pizzaria* from the Italian word *pizzeria*, or *sandúiche* from the English word *sandwich*). This is corroborated by research conducted by Gorter and Cenoz (2008), who postulate that LL can provide important insights and a different perspective on our knowledge about language(s).

Research has also put forward the relevance of LL-related activities in developing sensitivity to connotational aspects of language and semiotic knowledge (Rowland, 2013). This was evident in an episode narrated by Finn, the Citizenship and Development teacher:

In the first session of the project, I noticed that all pupils were wearing a T-shirt with something written on it, mostly in English. So, we decided to take pictures of each individual T-shirt and then a group photo, and it was very nice. They realised that we also speak, we also affirm ourselves through what we wear. This was perhaps one of the situations I found most curious, because I realised that they were able to really pay attention to what they see and not just simply seeing without realizing what is going on. After all, we are what we wear (Finn, GI, p. 17).

Therefore, it is not surprising that teachers highlighted critical thinking as one of the main outputs of the pupils’ participation in the project, in what soft skills is concerned. While analysing the photographs they took of the LL of Ílhavo, pupils were compelled to move beyond mere language identification and counting to reflect critically about the presence and absence of some languages. As summarised by

⁴ Statements were translated from Portuguese into English for purposes of clarity.

Charlotte: “They developed an ability to look at reality and discover the meaning beyond what they see, ‘Why are things like this?’, ‘Why these languages?’, ‘What are they doing there?’, and, above all, a critical positioning towards things” (Charlotte, GI, p. 17).

In particular, pupils reflected about the predominant role of the English language in this touristic region. As Mia recalls: “Along the most emblematic places of Ílhavo, they noticed that, next to Portuguese, English is the second most prevalent language and that some things are written almost exclusively in English” (Mia, GI, p. 17). As a result of this discovery, pupils were adamant in questioning the (omni)presence of English, as they realised that the main migratory groups in Ílhavo and the tourists that normally visit Ílhavo are not English-speaking, but rather French or Spanish-speaking. Indeed, following the political and economic crisis in Venezuela in 2010, many Venezuelans came (or returned) to Ílhavo, most of them due to family ties, as their ancestors had moved from the Ílhavo and Aveiro regions to Venezuela in the 1950 and 1960s. Concerning the visitors of the region, these come mostly from Spain or France due to geographical proximity. So, the inclusion of English in the LL of Ílhavo was met with some surprise by the pupils.

According to the teachers, this led them to develop a more engaged and committed attitude towards their community, sustained by the need to promote and value linguistic diversity. Violet notices that pupils “suggested that the information boards appeared in other languages”, mentioning that they could “take this idea to the City Council” (Violet, GI, p. 18). This is in line with prior studies that suggest that LL may function as a “pedagogy of engagement” (Pennycook, 1999) and activism, making pupils more aware about their role and responsibilities in building (or writing) cities that are more inclusive and socially just (Clemente, 2017; Lourenço & Melo-Pfeifer, 2021; Lourenço et al., 2023).

Apart from critical thinking and engagement, the teachers also emphasized that the project, particularly the creation of a game for the LoCALL App, played a very important role in developing pupils’ autonomy and organisational skills. The teachers were eager to present anecdotal evidence, reporting specific episodes that support their claims. Violet, for instance, described the time when the pupils were elaborating the questions for the game, and she had to momentarily leave the classroom. When she returned, the pupils had prepared an additional set of questions, ranging from three to four. Mia, on her part, recalled a moment when the pupils decided to write a script in both French and English with questions they would like to pose to the fish sellers in Costa Nova to record their reaction to linguistic diversity, when the initial task was to write a script in French only. Charlotte also added that she had her email being constantly flooded with pictures the pupils had taken of the city’s LL, and that they were very independent in arranging transportation to visit the different points of interest selected for the game. These results are somehow novel in comparison to prior LL research. Indeed, to our knowledge, there are no studies reporting the development of pupils’ autonomy and organisational skills as a result of engaging with publicly displayed texts. Therefore, we assume that these findings are an outcome of the use of mobile devices in education. In fact, mobile learning literature (Alzieni, 2020; Alzubi, 2021) has shown that mobile devices may play a

vital role in impacting learner autonomy in foreign/second language contexts in a positive sense.

This might also be one of the reasons behind pupils' enthusiasm and active participation in the project. As reported by the teachers, once they discovered they were going to create a game that would be available in the LoCALL App for other people to explore, they became very excited. According to Amelia, "all pupils were very much interested and engaged in the project. Even pupils who are often shy, and do not get involved as much, ended up being influenced by the enthusiasm of others" (Amelia, GI, p. 16). Hence, teachers considered that the project was also important in developing positive attitudes and dispositions towards learning itself. This is in line with existing literature which shows that mobile learning affects self-motivation, networking and socialization, and encourages pupils to learn (Chee et al., 2017; Crompton et al., 2017; Gafni et al., 2017).

Finally, the interdisciplinary nature of the project and the fact that the activities the pupils undertook were rooted in the school curriculum also led them to develop knowledge of other content areas that are not within the (foreign) languages realm, such as physics' principles and concepts related to the use of light, sound and colour, or the types of economic activities that are included in the Geography 8th grade Portuguese curriculum. As Violet explains:

In the case of Geography, a specific topic in the curriculum is economic activities. And at that time, we were talking about the primary sector, so fishing has everything to do with this region and it was easy [to link the project with the curriculum]. Pupils, therefore, acquired theoretical knowledge and later, when they presented the pictures they took related to economic activities, they were able to fully integrate the prior knowledge they had. So, I used much of what they took to the classroom and moved forward to introduce other economic activities as well (Violet, GI, p. 13).

The activities they undertook also helped pupils to get to know (and appreciate) their community a little bit better, discovering famous (and less visible) people, historical sites, customs and traditions, and unknown locations. Charlotte recalls that when pupils visited the kaolin deposits that were at the origin of the porcelain clay factory of Vista Alegre "they were very astonished, they were born here and didn't know about it". (Charlotte, GI, p. 14). So, in short, the project developed by the teachers around LL and the LoCALL App played a crucial role in helping pupils to successfully create links between the school and the "real" world, which is one of the aims of the LoCALL project as a whole. As summarised by Mia,

I think these projects are an asset for pupils as they allow them to leave the classroom and bring other realities into the classroom. They also take what they learn in the classroom and apply it to real practice later on. They get really involved in the activities, they enjoy learning more, and learn much more easily (Mia, GI, p. 6).

5 Conclusion

The study reported in this chapter aimed to identify teachers' perceptions regarding the contribution of an interdisciplinary project on LL, which involved the exploration

of the LoCALL App and its associated web-platform, in the development of competences by a group of pupils aged 11–13. For that purpose, a semi-structured group interview was conducted with seven teachers from Ílhavo (Portugal), who developed a project with their 8th grade class around the LoCALL App. The interview was transcribed and treated using inductive content analysis.

The results indicate that, from the teachers' point of view, the project was successful in developing pupils' language-related knowledge and skills, namely in what concerns (incidental) language learning, language awareness (related, for instance, with the discovery of loan words and word formation processes), semiotic knowledge, and awareness of linguistic (and cultural) diversity. For the teachers, the project was also important in promoting pupils' soft skills, in particular, their critical thinking. Indeed, the opportunity to explore LL through the lenses (i.e., screen) of the LoCALL App helped pupils look beyond what they see to question the reasons behind the presence/absence of certain languages in the LL.

Apart from critical thinking, working with mobile devices was fundamental in creating a sense of novelty and excitement among the pupils, which triggered positive attitudes towards learning, more participation and autonomy. Teachers also mentioned that their pupils appeared to have become more engaged and committed citizens. For example, pupils considered the need to value linguistic and cultural diversity more, both inside and outside the school walls, in order to build more inclusive communities.

Finally, in line with the teachers' goals when developing this project, pupils also benefited from the opportunities provided by the LoCALL App to explore (and appreciate) their local surroundings, and to develop (curricular content) knowledge in "real life" contexts, thus successfully bridging indoor and outdoor learning.

Concerning expected results that were not confirmed, especially if we consider that this was a project involving the use of digital tools (the App and web-platform), it would be anticipated that teachers made references to the development of pupils' digital competences. Still, there was a lack of explicit references to this type of competences, which may be interpreted in two different ways. For instance, it is possible that digital competences were so obvious that they were not considered to be worth mentioning by the teachers. In alternative, the pupils may have developed these skills previously, as a result of participating in other online activities in two school years marked by remote learning due to the COVID-19 pandemic, which made digital competences a necessity. Hence, teachers might have chosen to give room in the interview to express more surprising findings, particularly those related to pupils' autonomy and participation.

These findings seem to be relevant for teachers and researchers alike. Firstly, for teachers, this study reveals empirically based claims regarding the interdisciplinary competences, specific knowledge and social and soft skills pupils may develop when participating in an innovative project-based didactic approach to LL exploration, one that involves the use of an app and associated web-platform to co-create games. Secondly, it points at the work with and about the local LL as a means to link pupils' lifeworld outside school with the learning that is promoted in school. Thirdly, the

work with a mobile tool seems to foster engagement of non-participating pupils. Finally, the creation of a game seemed to be perceived by pupils and teachers as something fun, making collaborative learning processes more appealing and developing positive attitudes towards it. These may be only a few arguments for the adoption of this type of approach in educational settings, which, according to teachers, promotes a set of curricular and LL-related competences and skills. On another level, researchers have access to a study of pertinence for an international audience due to the novelty of studying the relationship between LL, mobile learning and game-based approaches, especially from an educational point of view. Nevertheless, there are some study limitations and future perspectives of work to consider, as the following paragraphs highlight.

The study's limitations can be found at different levels. One aspect to consider pertains to the aims of qualitative research in providing a deeper understanding of phenomena. In a study focusing on the identification of the competences developed by pupils while taking part in innovative learning experiences, such as the one reported in this chapter, the observation of the learning activities in the field would have been a valuable data source. This would have allowed data triangulation and would potentially provide stronger empirical evidence. However, limitations related to the pandemic made this data collection technique impracticable. Another study limitation is the lack of data regarding pupils' perceptions about the interdisciplinary project, once again as a result of the pandemic. As main actors and relevant stakeholders in the educational innovation that took place in their school, pupils could reveal new insights on the development of their competences.

Considering the above, further research is needed to more clearly elucidate the pedagogical benefits and constraints of learning from and about LL with mobile learning tools, such as the LoCALL App. This could focus on observations in situ (in the classroom and outdoors), while pupils create games and explore them, to investigate the effects of this teaching approach in their learning skills. Additionally, studies could be conducted addressing the challenges teachers' find when implementing mobile learning and games in the classroom, or investigating the effects of these types of interdisciplinary projects around LL and mobile devices in their professional development.

Appendix 1 Semi-structured Group Interview Guide

Purpose: To understand teachers' perceptions on the competences their pupils developed while participating in an interdisciplinary project on LL that included creating content for the LoCALL App.

Aims (analysed for this study):

1. To characterise teachers from a professional point of view and to understand their motivations and prior knowledge on LL

2. To become more familiar with the project and context in which it was developed
3. To identify the reactions of the pupils to the project and the competences they developed.

Interviewees: *[teachers names were removed for anonymity]*

Interviewers: Mónica Lourenço, Filomena Martins, Alexandra das Neves, Lúcia Pombo, Margarida M. Marques

Date: 21st July 2021.

Guide

Interview stages	Aims	Information/Questions
Introduction	To explain the aims and the conditions in which the group interview takes place	<ul style="list-style-type: none"> • Thanking teachers for their availability to participate in the interview and in the study, and reminding participants of the possibility to withdraw at any time • Explaining the interview's purpose and aims, as well as how the results will be used • Explaining this is a group interview, where all participants can present their views or complete their colleagues' intervention, if they feel it is needed • Asking for informed consent and permission to audio and video record the interview • Allowing teachers to ask any questions or express any concerns regarding the interview and the study
Development	1. To characterise teachers from a professional point of view and to understand their motivations and prior knowledge on LL	<ol style="list-style-type: none"> 1. Firstly, we would like each one of you to introduce himself or herself briefly, indicating name, age, working years, academic background and subject(s) you teach 2. Why did you decide to get involved in the LoCALL project? What led you to participate in the project? 3. Before this project, were you aware of the concept of Linguistic Landscapes? In which context(s) did this occur?

(continued)

(continued)

Interview stages	Aims	Information/Questions
	2. To become more familiar with the project and context in which it was developed	4. In which context(s) was the project developed? Could you characterise the school and the class or classes involved? 5. Why did you select this group of pupils? 6. Besides the classroom/class, was the project developed in other curricular spaces? 7. Which subjects were involved? How was this selection made? 8. How were they articulated from a disciplinary point of view? 9. What were the main aims you defined for your project? 10. What activities did you develop? Can you give us some examples?
	3. To identify the reactions of the pupils to the project and the competences they developed	11. How did the pupils react to project activities? Which activity(ies) did they like the most/least? Why? 12. What did the pupils gain from participating in the project? Which competences (knowledge, skills, attitudes) did they develop?
	(...)	(...)
Conclusion	To let teachers add information they deem pertinent	19. Would you like to add something else or make any comments or suggestions?
	To thank teachers for their collaboration and to finish the interview	<ul style="list-style-type: none"> • Thank you very much for your cooperation! • We will send you the interview transcripts for you to validate and add any information or comments that you consider relevant

References

- Alzieni, H. (2020). The effect of mobile learning on learner autonomy in the United Arab Emirates. In P. Vinogradova & J. K. Shin (Eds.), *Contemporary foundations for teaching english as an additional language. Pedagogical approaches and classroom applications*. Routledge.
- Alzubi, A. A. (2021). The role of mobile technologies in impacting learner autonomy in an EFL context: A systematic review. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, 11(3), 56–73. <https://doi.org/10.4018/IJCALLT.2021070104>

- Azar, A. S., & Nasiri, H. (2014). Learners' attitudes toward the effectiveness of mobile assisted language learning (MALL) in L2 listening comprehension. *Procedia Social and Behavioral Sciences*, 98, 1836–1843.
- Bardin, L. (2016). *Análise de Conteúdo* (p. 70). Edições.
- Barni, M., & Bagna, C. (2009). A mapping technique and the linguistic landscape. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 126–140). Routledge.
- Cenoz, J., & Gorter, D. (2008). The linguistic landscape as an additional source of input in second language acquisition. *IRAL—International Review of Applied Linguistics in Language Teaching*, 46(3).
- Chassiakos, Y. L. R., Radesky, J., Christakis, D., Moreno, M. A., & Cross, C. (2016). Children and adolescents and digital media. *Pediatrics*, 138(5).
- Chee, K. N., Yahaya, N., Ibrahim, H., & Hasan, M. N. (2017). Review of mobile learning trends 2010–2015: A meta-analysis. *Educational Technology and Society*, 20, 113–126.
- Clemente, M. (2017). *Paisagem linguística urbana—o caso de Aveiro e sua relevância educativa*. Ph.D. thesis, University of Aveiro, Aveiro. <https://ria.ua.pt/handle/10773/22801?mode=full>
- Clemente, M., Andrade, A. I., & Martins, F. (2012). Learning to read the world, learning to look at the linguistic landscape: A primary school study. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 267–285). Peter Lang.
- Crompton, H., Burke, D., & Gregory, K. H. (2017). The use of mobile learning in PK-12 education: A systematic review. *Computers & Education*, 110, 51–63.
- Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F. (2009). Linguistic landscape and language awareness. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 253–269). Routledge.
- Gafni, R., Achituv, D. B., & Rachmani, G. J. (2017). Learning foreign languages using mobile applications. *Journal of Information Technology Education: Research*, 16, 301–317. <http://www.informingscience.org/Publications/3855>.
- Gaiser, E. G., & Matras, Y. (2021). Using smartphones to document linguistic landscapes: The LinguaSnapp mobile app. *Linguistic Vanguard*, 2021(7), 1–18. <https://doi.org/10.1515/lingvan-2019-0012>
- Gorter, D. (2013). Linguistic landscapes in a multilingual world. *Annual Review of Applied Linguistics*, 33, 190–212. <https://doi.org/10.1017/S0267190513000020>
- Gorter, D., & Cenoz, J. (2008). Knowledge about language and linguistic landscape. In N. H. Hornberger (Ed.), *Encyclopedia of language and education*. Springer.
- ITU [International Telecommunication Union]. (2020). *Measuring digital development: Facts and figures 2020*. <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2020.pdf>
- Kallio, H., Pietilä, A.-M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, 72(12), 2954–2965. <https://doi.org/10.1111/JAN.13031>
- Kim, B. (2015). The popularity of gamification in the mobile and social era. *Library Technology Reports*, 51(2), 5–9.
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology*, 16(1), 23–49.
- Lourenço, M., & Melo-Pfeifer, S. (2021, June 7). *Linguistic landscapes as a pedagogical tool for plurilingual education and global citizenship*. Paper presented at the I International Conference on Foreign Language Learning. University of Lisbon, Portugal.
- Lourenço, M., Duarte, J., Silva, F. P., & Batista, B. (2023). Is there a place for global citizenship education in the exploration of linguistic landscapes? An analysis of educational practices in five European countries. In S. Melo-Pfeifer (Ed.), *Linguistic landscapes in language and teacher education: Multilingual teaching and learning inside and beyond the classroom* (pp. 93–121). Springer.
- Li, J., & Marshall, S. (2018). Engaging with linguistic landscaping in Vancouver's Chinatown: A pedagogical tool for teaching and learning about multilingualism. *International Journal of Bilingual Education and Bilingualism*. <https://doi.org/10.1080/13670050.2017.1422479>

- Mascheroni, G., & Ólafsson, K. (2016). The mobile Internet: Access, use, opportunities and divides among European children. *New Media & Society*, 18, 1657–1679. <https://doi.org/10.1177/1461444814567986>
- Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation* (4th ed.). Wiley.
- Ministry of Education Portugal. (2017a). *Students' profile by the end of compulsory schooling*. Ministry of Education, Lisbon. <https://cidadania.dge.mec.pt/sites/default/files/pdfs/students-profile.pdf>
- Ministry of Education Portugal. (2017b). *National strategy for citizenship education*. Ministry of Education, Lisbon. <https://cidadania.dge.mec.pt/sites/default/files/pdfs/national-strategy-citizenship-education.pdf>
- Nokelainen, P. (2006). An empirical assessment of pedagogical usability criteria for digital learning material with elementary school students. *Educational Technology & Society*, 9(2), 178–197.
- Pennycook, A. (1999). Introduction: Critical approaches to TESOL. *TESOL Quarterly*, 33(3), 329–348.
- Pollara, P., & Broussard, K. K. (2011). Student Perceptions of mobile learning: A review of current research. In *Proceedings of the Society for Information Technology & Teacher Education International Conference* (pp. 1643–1650). Association for the Advancement of Computing in Education.
- Pombo, L., & Marques, M. M. (2019). An app that changes mentalities about mobile learning—The EduPARK augmented reality activity. *Computers*, 8(2), 37. <https://doi.org/10.3390/computers8020037>
- Pombo, L., & Marques, M. M. (2020). The potential educational value of mobile augmented reality games: The case of EduPARK App. *Education Sciences*, 10(10). <https://doi.org/10.3390/educsci10100287>
- Pombo, L., Marques, M. M., & Oliveira, S. (2019). *Lessons learned—EduPARK*. UA Editora. <http://hdl.handle.net/10773/26979>
- Purgina, M., Mozgovoy, M., & Blake, J. (2020). WordBricks: Mobile technology and visual grammar formalism for gamification of natural language grammar acquisition. *Journal of Educational Computing Research*, 58(1), 126–159.
- Rabionet, S. E. (2011). How I learned to design and conduct semi-structured interviews: An ongoing and continuous journey. *The Qualitative Report*, 16, 563–566. <http://www.nova.edu/ssss/QR/QR16-2/rabionet.pdf>
- Rowland, L. (2013). The pedagogical benefits of a linguistic landscape project in Japan. *International Journal of Bilingual Education and Bilingualism*, 16(4), 494–505.
- Santos, S., & Pinto, S. (2019). Languages in the Avenida Lourenço Peixinho in Aveiro: Educational potential to raise awareness of linguistic and cultural diversity. *Indagatio Didactica*, 11(4), 241–260. <https://ria.ua.pt/handle/10773/27512>
- Tjandra, C. (2021). Supporting newcomer children's language awareness, incidental language learning, and identity negotiation through the multilingual linguistic landscape: An exploratory case study. *The Canadian Modern Language Review*, 77(1), 1–22.
- Ziegler, E. (2013). Metropolenzeichen: Visuelle Mehrsprachigkeit in der MetropoleRuhr. *Zeitschrift für germanistische Linguistik (Forschungsnotiz)*, 299–301.

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Teachers' and Students' Voices on Linguistic Landscapes

Mediation of Language Attitudes Through Linguistic Landscapes in Minority Language Education



Joana Duarte, Sibrecht Veenstra, and Nelly van Dijk

Abstract The province of Fryslân is home to a complex language ecology. The majority language Dutch and the regional language Frisian are the two only official languages in the region, but there is also a strong presence of English as well as an increasing number of migrant languages. Within this context, the province of Fryslân has the responsibility to maintain the Frisian minority language. Improving Frisian's societal position through education may be necessary, as students currently have rather negative attitudes towards Frisian, which decreases motivation and performance. It has been suggested that language awareness approaches that connect the language to society can improve language attitudes and influence language behaviour. One way in which language awareness may be raised, is by using the linguistic landscape (LL). In the current mixed-method study, the affordances of the LL in the Frisian context of minority language education identified by three different stakeholder groups will be explored. Survey data showed that secondary school students indeed held negative attitudes towards Frisian, but that they were also most positive about seeing the language in the LL. Incorporating an experts' viewpoint, interviews showed that both teachers and provincial policymakers identified the potential of LL for the mediation of pupils' language attitudes. All stakeholders therefore believed that while there are some obstacles to overcome, LL-interventions can be a useful way to improve minority language education and the position of the minority language itself. In combining data from all three perspectives, this study offers an in-depth understanding of the interrelation between various stakeholders, their beliefs and how the LL may be useful in a minority language context.

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Keywords Minority languages · Linguistic landscape · Mediation · Language attitudes · Frisian

1 Introduction

In general, language has always been viewed as the “key component for nation building” (Kelly, 2015, p. 65). This belief has been deeply rooted in the language policies in European education, and monolingual ideologies have been influencing teaching practices for decades. This means that school languages are often taught separately (Cummins, 2017) and therefore that implicit language hierarchies make teaching languages with a higher status more urgent than focusing on languages with a lower status, such as minority languages. Regarding the situation in minority language regions, it has been argued that these minority languages must be preserved due to their cultural, linguistic and local economic value (Sallabank, 2012). To protect and improve proficiency in minority languages, schools tend to maintain the ideology of keeping languages strictly separated so as to maximise input (Cenoz & Gorter, 2017), which has been found to cause “emotional disempowerment” of young learners (Osterkorn & Vetter, 2015). West Frisian (henceforth Frisian) is one example of such a minority language.

The current study was conducted in the bilingual province of Fryslân, where Dutch and Frisian are official languages. Frisian is the mother tongue of approximately 65% of the province’s population, while 30% has Dutch as their mother tongue and 15% speaks other languages (Provinsje Fryslân, 2015). Frisian is primarily an oral language, and all Frisian speakers are also proficient in Dutch (Hilton & Gooskens, 2013). Attitudes towards Frisian are rather negative, particularly in urban areas (Hilton & Gooskens, 2013). However, the language is protected under (inter)national treaties and law (Council of Europe, 1992, 1995; Provinsje Fryslân, 2019), and the regional government actively encourages the use of the language in a variety of domains, including literature and arts (Kuipers-Zandberg & Kircher, 2020). As Duarte & van der Meij (2018) point out, Fryslân is in the process of consolidating the position of Frisian in education. Over the last decades, there has been increasing attention to improving Frisian education (Gorter et al., 2008). However, several difficulties were identified: teachers lack materials and time to improve the quality of education (Egaña et al., 2015), and they are confronted with somewhat negative attitudes towards Frisian, as a language and as a subject (Duarte, 2020). This demotivates students and causes the subject to be regarded as a burden in the curriculum.

This is where linguistic landscapes (henceforth LL) may become a valuable resource in minority language education. LLs describe the visibility of languages in physical public space and are thought to influence the perceived vitality of minority languages like Frisian (Kuipers-Zandberg & Kircher, 2020). The LL signals to passers-by which languages are valuable in a specific context, and which are not. Consequently, this influences speakers’ language attitudes and use (Landry & Bourhis, 1997). As a tool in language management, LLs may be used as educational strategies (Hewitt-Bradshaw, 2014). Engaging students with the LL helps them

become aware of the language structures and language use in their surroundings. While it provides a good example of how a language can be used in common situations, it may also teach pupils about criticality: the societal influence and importance of languages (Hancock, 2012). This may help students' linguistic development and creates more positive attitudes towards the language. Improving attitudes is important in the Frisian context, as Makarova (2020) found that secondary school pupils have more negative attitudes towards learning Frisian than towards learning other languages. Such results reinforce the need to focus on attitudinal aspects when investigating issues of minority language education.

Teachers' ideologies and beliefs also play a crucial role in pupils' attitudes towards languages (Lasagabaster & Huguët, 2006). As teachers' beliefs are directly linked to their pedagogical practices in the class, their choice of teaching strategies and approaches plays a vital role in the development of pupils' motivation and attitudes towards learning the minority language (Pajares, 1992). As mentioned in previous studies (Hélot, 2017; Ibarraran et al., 2008), acknowledging pupils' linguistic backgrounds as resources for learning can increase their positive attitudes and motivation (Duarte & van der Meij, 2018). A tool that can be used in working towards this is mediation. As one of the four modes of communication, mediation has been embedded in the *Common European Framework of Reference for Languages: Learning, teaching, assessment* (Council of Europe, 2018). It does not only focus on cross-linguistic mediation, but also entails general communication, learning and social and cultural mediation. Mediation in this sense means that ideas and inputs are shared, information is explained, and collaborative work is done in the classroom to achieve a certain goal (Council of Europe, 2018); in this case increasing positive attitudes and motivation towards the Frisian language and Frisian as a course within the curriculum.

Implementing such a language education strategy involves three different types of stakeholders, whose perception of LLs and Frisian are crucial in determining the applicability and value of the strategies. The first stakeholders concerned are pupils, whose current language attitudes must be charted to determine whether negative attitudes are indeed an obstacle for learning Frisian. Secondly, the beliefs of teachers of Frisian are important, as they can indicate what the aim of Frisian education is and what is needed to improve it. The third stakeholders concerned are policymakers at the provincial level, who are involved in shaping education policy as well as the LL. Identifying the attitudes and beliefs of these three stakeholder-groups may explain how the LL can influence language attitudes and behaviour, and it sheds light on how the LL could be used in education. This study will therefore attempt to answer the following question: To what extent and in which ways can LL be implemented in Frisian minority language education? Three sub-questions can be posed in order to find an answer to this question. Firstly, we ask what the students' current attitudes towards the Frisian language and Frisian in the LL are, as they will identify the necessity of LL-implementation in Frisian education. Secondly, the topic of mediation will be discussed: this section will particularly focus on the teachers' attitudes towards Frisian minority education, the use of the LL in this and how they use mediation to improve the language attitudes of their students. Finally, the affordances explicitly identified by policymakers will be discussed. This reflects

the perceived implications of using the LL in minority education from various points of view.

These research questions will be addressed by implementing a questionnaire with 17 secondary-school students and by interviewing 11 secondary school language teachers and 2 provincial policymakers.

2 The Role of LL in Minority Language Education

2.1 *Linguistic Landscapes in Education in Minority Language Regions*

In regions with a minority language, the survival of these languages is often not the *status quo*: they must be actively protected. This is the case as minority languages are often perceived to have little economic and societal value when compared to majority languages and lingua francas such as English, as the latter languages offer access to wider economic and cultural opportunities (Grin, 2003). As a result, negative attitudes may exist towards minority languages: languages such as Frisian are often perceived as ‘backwards’ or ‘rural’ (Makarova et al., 2021). As language attitudes influence language use and language transmission, it is crucial that minority language attitudes are positive if the language is to be maintained (Knops & van Hout, 1988).

Within Fryslân, Frisian itself is often still regarded negatively. This is problematic in education, as it is suggested that a positive attitude boosts motivation and facilitates the learning of a language leading to improved academic performance (Krashen, 1982). Especially students who do not speak the minority language often have a negative attitude towards it (Ibarraran et al., 2008), as was confirmed to also be the case in the Frisian context (Makarova et al., 2021). Overall, secondary school students in Fryslân were found to be most positive towards English, probably due to its high status as an international language within Dutch society (Gorter, 2008), followed by the majority language Dutch. The students were least positive towards Frisian and other minority languages (Makarova et al., 2021). This suggests that home-language significantly influences language attitude. Teachers’ beliefs and attitudes are also found to influence the students’ attitudes, due to their exemplary role in the classroom and their influence on implementing educational policies.

Education is thought to be important for minority language maintenance as it improves students’ language proficiency, as well as that it is a space in which the students encounter the language regularly, increasing the prestige of the language in question (Sallabank, 2012). Therefore, education is often used as a vehicle to improve language position in minority language regions such as the Basque-country, Wales and Fryslân (Ytsma, 2006). However, it has proven essential that attention must be paid to the teaching approaches used in minority language education: a lack of time, a persisting monolingual bias (Gogolin, 2013) and the limited availability of skilled teachers and quality material have shown to be obstacles in improving

students' attitudes towards minority languages as a language and as a subject. The LL may be a tool in minority language education, as it may offer a source of raw material that can be used as examples in minority language education, and as it may increase the students' language awareness and intercultural competence.

LL refers to "the language on public road signs advertising billboards, street names, place names, commercial shop signs and public signs on government buildings [that] combines to form the linguistic landscape of a given territory, region, or urban agglomeration" (Landry & Bourhis, 1997, p. 25). Language use in public spaces has two main functions: a LL can be a marker of, and a contributor to the ethnolinguistic vitality of a language (Edelman, 2014; Kuipers-Zandberg & Kircher, 2020). A LL provides a passer-by with information about the linguistic composition in a particular region, as well as that it symbolises the value of a particular language in that region. Through these functions, the LL can influence beliefs regarding the worth and vitality of a language, and thus may influence language behaviour (Baker, 1992). A low perceived vitality may decrease minority language transmission, causing language shift and potentially language loss or death (Fishman, 1991).

In Fryslân, speakers do not perceive Frisian to be particularly present in the LL (Kuipers-Zandberg & Kircher, 2020). This belief echoes data showing that Frisian is included in as little as 5% of signs in Ljouwert, Fryslân's capital, while Dutch appears in 90% and English in 37% of signs (Cenoz & Gorter, 2006). Frisians have claimed that they would like to see more Frisian (Kuipers-Zandberg & Kircher, 2020). Frisian is thought to be more visible in rural areas than in urban spaces. This reflects the high number of speakers in rural as opposed to urban areas. This variability may be reflected in commercial as well as institutional signs: based on the Act on the Use of the Frisian Language, each municipality in Fryslân can devise their own rules and regulations regarding LLs (Kuipers-Zandberg & Kircher, 2020). Therefore, some municipalities have monolingual Frisian signage, while others use bilingual signs.

Awareness of such facts regarding the LL in Fryslân may be used in education to highlight the social functions of language, and is based on the students' abilities to reflect on their own dispositions regarding languages and language management processes (Duarte & van der Meij, 2018). Bringing students actively and openly into contact with their LL can develop students' linguistic and cultural sensitivity (Hélot et al., 2018). Language variations, their origin and implications may be explored and discussed. The LL may be incorporated in one of two ways: by learning in the LL, such as when students are sent onto the streets to document what they find in the LL (Dagenais et al., 2009), or by learning through the LL, such as when the LL is used as an example in a classroom setting (Cenoz & Gorter, 2006). Using the LL in education allows students to actively reflect on their sense of identity, as well as on their language use, which may influence their language attitudes and use (Hewitt-Bradshaw, 2014). Therefore, using the LL to raise language awareness and improve language attitudes is particularly important in a minority language setting, such as in Fryslân.

2.2 *Mediation in Minority Language Education*

A suitable framework regarding language education in general, and minority language education in particular, is the emphasis on mediation. Within the *Common European Framework of Reference for Languages: Learning, teaching, assessment* (Council of Europe, 2020, p. 13) a larger emphasis has been put on modes of communication that lie outside of the four traditional spoken and written respective and production skills (speaking, writing, listening and reading). One of these ‘non-traditional’ modes of communication is *mediation* (Piccardo, North & Goodier, 2019). Mediation skills are said to be important in classrooms that are continuously becoming more ‘dynamic, iterative, contextually and socially driven’ (Piccardo et al., 2019, p. 20). It can enable and support the user/learner as a social agent in its personal development (*idem*, p. 20). The importance of mediation derives from the fact that it can help construct ‘new meaning, in the sense of understanding, new knowledge and concepts’ (*idem*, p. 21).

There are three strategies of mediation identified in the CEFR; mediating text, mediating communication and mediating concepts. Mediating texts includes expressing a personal response, analysing and criticising any type of text, including literature. Findings need to be brought to class and discussions should be held. As for mediating communication, the aims are to facilitate a pluricultural space, to act as an intermediary in informal situations and to facilitate communication in delicate situations and disagreements. Mediating concepts focusses on facilitating a collaborative interaction with peers in order to construct meaning and to manage these interactions. In addition, users/learners are encouraged to engage in conceptual talk (CEFR Descriptors, 2020).

Research into minority language teaching has provided another important aspect that can be added to these mediation descriptors, namely *mediating attitudes*. In the Frisian case, it has been found that in general, Frisian-speakers hold negative attitudes towards their Frisian language (Gorter, Jelsma, Plank, & Vos, 1984; Hilton & Gooskens, 2013). Research into the language attitudes of older learners of Frisian (Belmar, 2019) found that learners have a more positive attitude towards Dutch and English. The more negative attitudes towards Frisian also resulted in the fact that the classroom was the only setting where Frisian was used to some extent (Belmar, 2019, p. 83). Improving attitudes could lead to using the language in more settings throughout the day. Teachers’ language attitudes can greatly influence the development of and attitudes towards both home and school languages. Adding a space of mediation where both teachers and learners speak openly about language attitudes will be beneficial for language education in general and minority language education specifically (Duarte & van der Meij, 2018).

In our study we will analyse how LL can mediate language attitudes of secondary school pupils, teachers and policy makers in the officially bilingual region of Fryslân.

3 Methodology

To identify the perceptions of the various stakeholders regarding LL in education, a mixed-method study was employed (Creswell, 2013). This design was used as it allows the study to be adapted to the needs of the various stakeholder-groups. Students’ perception of Frisian and the LL was measured through a questionnaire, while the teachers’ and the policymakers’ attitudes were investigated using semi-structured interviews (Galletta & Cross, 2013).

3.1 Instruments

An online questionnaire was used to determine the students’ attitudes towards English, Dutch and Frisian and the LL in Fryslân. The questionnaire was administered in a school setting and was designed in Dutch, as all students were fully proficient and familiar with the language in a school setting. The questionnaire consisted of 41 items, which were divided into 8 subsections (Table 1).

In addition, qualitative research methods were used to study the perceptions and beliefs of teachers and policymakers. Online semi-structured interviews were conducted with both groups to gather in depth-data (Galletta & Cross, 2013). The

Table 1 Overview of questionnaire

Sections	Aim	No. of items	Type of question	Sources
1	Overt attitude Frisian subject	2	Multiple choice & open answer	Marakova et al. (2021)
2	Language attitudes Frisian, Dutch & English	7	5-point Likert scale	Marakova et al. (2021)
3	Attitudes towards Frisian, Dutch & English in the LL	5	5-point Likert scale	Landry and Bourhis (1997)
4	Degree of cosmopolitanism	2	5-point Likert scale	Edwards (2016)
5	Language background	10	Multiple choice & open answer	Anderson et al. (2018)
6	Language proficiency in Frisian, Dutch, English & possible 4th language	5	5-point Likert scale	Anderson et al. (2018)
7	Language	2	Multiple choice matrix table	Anderson et al. (2018)
8	Personal background	8	Multiple choice & open answer	Anderson et al. (2018)

Table 2 Overview of interview guides

Sections	Topic	Teachers	Policy makers	No. of questions
1	Language background	✓	✓	3
2	Professional background	✓	✓	6
3	Language attitudes students	✓		3
4	Attitudes towards Frisian		✓	6
5	Teaching approaches	✓		6
6	Linguistic landscapes	✓		2
7	Language policy		✓	3
8	Linguistic landscapes (in education)	✓		10

teachers' data was gathered using two similar interview guides and was collected based on two studies (Makarova et al., 2021; van Dijk, 2021). While the focus of the interviews was slightly different, similar topics such as language attitudes, the role of LL and language awareness were addressed (see Table 2).

3.2 Sample

The first research question addressed students' attitudes towards their languages and the LL in Fryslân. The sample consisted of 17 students from various secondary schools in Fryslân (Table 3). All students were enrolled in Senior General Secondary Education (HAVO) or Pre-Academic Education (VWO). These are the two most academic tracks of secondary education in the Netherlands, eventually leading to higher education. A purposive sampling method (Wilmot, 2005) was used to select a homogenous group of participants consisting of students who chose to study Frisian in upper secondary education.

The second and third research questions studied teachers' and policy makers' attitudes towards Frisian and LLs in education. Eleven secondary school teachers of Frisian and two policy makers were interviewed for this purpose (Table 4).

3.3 Data Analysis

To answer the first research question, the data of the survey were entered into JASP (0.12.2), so that the dependent variables of language attitude and attitude towards languages in the LL could be analysed in light of the independent variables such as the students' language background, use, proficiency as well as identification and gender. A Cronbach's Alpha test showed that scales were sufficiently reliable (Table 5).

Table 3 Students' sample

Measure	Item	Count	Percentage (%)
School	School 1 (Leeuwarden)	15	88
	School 2 (Leeuwarden)	1	6
	School 3 (Leeuwarden)	1	6
Academic track	HAVO	6	35
	VWO	11	65
Age	14	1	6
	15	10	59
	16	5	29
	17	1	6
Gender	Male	6	35
	Female	9	53
	Other	2	12
Highest educational level parents	Vocational training (MBO)	7	41
	Applied university (HBO)	4	24
	University (WO)	6	35
Country of birth	The Netherlands	17	100
First language	Dutch	3	18
	Frisian	4	41
	Dutch/Frisian	6	35
	Dutch/Russian	1	6

To address the second research question, as to what the teachers' attitudes towards the Frisian minority language education are, how they make use of LL and how they use mediation in order to improve the language attitudes of their students, the 11 interviews were analysed in Atlas.ti 8 using an inductive method of analysis in qualitative research proposed by Boeije (2010). Boeije pictures data analysis as a spiral. In the initial stage of analysis, open coding was used, meaning that there are no predetermined categories in which the segments must be put. In the second stage of axial coding, categories were created with loose segments. Finally, the data was reassembled through the process of selective coding. In this stage, the categories found in the data are related to each other to create a full image of the information gathered. In total, 198 codes were used for the teachers' interviews for the categories 'students' attitudes' (27.9% of codings), 'teaching approaches' (40.4%) and 'LL' (31.7%). In addition, the category of 'mediation of attitudes' was analysed a posteriori. The transcripts of the interviews were read again in detail with a new focus on mediation with relation to texts, communication, concepts and in addition to this language attitudes. Assignments provided and activities done by the teachers were analysed and where possible placed within the categories of mediation. A second

Table 4 Interviewee sample

Participant number	Gender	Function	Years of experience in this function	Duration of the interview
T.1	Female	Frisian teacher	6	46:02
T.2	Female	Frisian teacher	20	29:16
T.3	Female	Frisian teacher	9	43:03
T.4	Male	Frisian teacher	3	43:15
T.5	Female	Frisian teacher	3	55:01
T.6	Male	Frisian teacher	42	58:15
T.7	Female	Frisian teacher	5	75:41
T.8	Male	Frisian teacher at the university	40	32:35
T.9	Female	Frisian teacher	30	52:38
T.10	Female	Frisian teacher	19	45:49
T.11	Female	Frisian teacher	11	31:20
A.1	Female	Policy advisor language and education	6	43:48
A.2	Female	Policy advisor language	1	43:48

Table 5 Reliability of scale

Topic	Language	Cronbach's alpha
Language attitudes	Dutch	0.828
	English	0.824
	Frisian	0.847
Language proficiency	Dutch	0.789
	English	0.740
	Frisian	0.763
Attitudes towards language in the LL	Dutch	0.807
	English	0.847
	Frisian	0.919

focus was put on the motivation of teachers as to why these acts of mediation are implemented in their classroom.

The third research question, aimed at unveiling what policymakers identify as affordances of the LL, was also addressed by analysing the interviews using Boeije's (2010) inductive method of qualitative analysis. A total of 113 codes were attributed to the transcribed corpus of the interviews with the following main categories: 'attitudes towards Frisian' (23.9% of codings), 'visibility of Frisian' (47.8%) and 'Frisian in education' (28.3%).

4 Results

4.1 Students' Attitudes Towards Frisian and Frisian in the LL

The questionnaire showed that the students held the most positive attitudes towards the Dutch majority language, followed by English. The students were least positive towards Frisian (Table 6). The attitudes towards the separate languages were found to be unrelated to each other.

Further, a Kendall's correlation coefficient showed that gender, socioeconomic status, educational level and language background were not significantly correlated to the students' language attitudes. Only language proficiency in Frisian seemed to significantly impact language attitudes ($b = 0.46, p = 0.01$): students with a high proficiency in Frisian generally held more positive attitudes towards Frisian.

Contrary to the general language attitudes, when it comes to the LL, the students were most positive towards seeing Frisian, followed by English and finally Dutch (Table 7). A Kendall's correlation coefficient and a paired samples T-test showed that the attitudes towards each language in the LL were independent.

Gender, language background or educational level of the parents did not significantly influence the pupils' attitudes towards any language in the LL. Socioeconomic status did appear to be influential in the attitudes towards Dutch ($b = 0.52, p = 0.01$) and Frisian ($b = -0.51, p = 0.01$): the higher one's socioeconomic status, the more likely one was to have a positive attitude towards Dutch in the LL, while, the less likely it was to have a positive attitude towards Frisian. Language proficiency in both Dutch and Frisian were also positively related to positive attitudes towards Frisian in the LL; this may be explained by the fact that Dutch language proficiency and Frisian language proficiency were strongly correlated in this sample ($b = 0.54, p = 0.01$). Finally, a Kendall's Tau test revealed a significant correlation between the students' attitudes towards the Frisian language and their attitudes towards Frisian in the LL ($b = 0.74, p = 0.001$). No significant correlations were found between the students'

Table 6 Students' language attitudes

Attitudes towards language	Mean attitudes (scale 1–5)	N
Attitudes towards Dutch	4.10	17
Attitudes towards English	3.50	17
Attitudes towards Frisian	3.23	17

Table 7 Attitudes towards languages in LL

Attitudes towards language	Mean attitudes (scale 1–5)	N
Frisian in LL	3.98	17
English in LL	3.02	17
Dutch LL	2.76	17

attitude towards English ($b = 0.16, p = 0.39$) or Dutch ($b = 0.18, p = 0.33$) and their appearance in the LL.

4.2 Mediation and Teachers' Attitudes Towards the Use of LL in Frisian Minority Education

A few general tendencies were found across the Frisian teachers in relation to the role of mediation of attitudes within minority language education. All teachers acknowledged the importance of providing space for other (home) languages in the classroom, as this enhances motivation to work on the Frisian language. As T.2 indicates, providing this space comforts the students and makes them at ease with all their languages. It also heightens the interest in languages in general which can lead to more positive attitudes and higher motivation for the Frisian class:

Students are interested in that, also in each other. Yeah, they like it when they can speak in another language. And sometimes they are proud, and they tell me about it. Yes ... or Chinese or English or French... (T.2).

To achieve these positive attitudes several different types of activities can be carried out, however, most teachers opt for an assignment where students need to find differences and similarities between their languages and Frisian or between typologically similar languages such as German. The findings are then later discussed in class, providing the opportunity to mediate concepts and also communication.

Students that are in the Frisian classes have highly heterogeneous attitudes towards the language. During the first year of high school, Frisian is compulsory. This has an influence on the attitude of students. They ask themselves why the language is needed as Dutch is the lingua franca in which they already know how to read and write. Therefore, teachers highlight the importance of working on attitudes and other aspects of the language that are not directly related to, for example, spelling and grammar. As T.11 indicates:

In the first year there is a lot of focus on language skills, while I think the focus should be much more on attitudes.

In addition, T.4 highlights that practical assignments, such as reading a play or exchanging experiences with languages, help to take the prejudice towards Frisian away and attitudes become more positive. When students have opted for Frisian in the last years of high school, attitudes become more positive. However, the levels of proficiency can still highly differ within one class.

Besides the actual learning of the Frisian language, there is also a significant amount of time that needs to be dedicated to Frisian culture, history and identity. Teachers mention that going on excursions to, for example, important landmarks helps with enlarging students' motivation for the course in general. In addition, LLs are used to show that the Frisian language is indeed used as a written form of communication by the community outside of the classroom. Making use of LL

exercises is found to be important by the teachers. Being able to see the language around you is highly motivating. T.9 puts it like this:

If they don't come across it, then it also isn't important and when you come across it here or there then unconsciously students, and people in general, notice that. And that it matters after all, and that it is there.

After using LL within their classes, teachers found that students' language awareness improved and that their negative attitudes changed towards being more positive. In addition, analytic research skills are developed during LL assignments as a small research project needs to be executed and the findings need to be interpreted. Next to this, overtly talking about and discussing what it means to be Frisian, to speak Frisian and to having Frisian around as a minority language throughout the course is crucial for the Frisian courses to succeed and for the language attitudes to become more and more positive. Students need to become actively aware of when they use Frisian and how this influences behaviour and attitudes.

All of the items described above contribute to showing that Frisian is not just a foreign language but a language that can be productive and that can be used in every aspect of daily life within the province of Fryslân. As T.11 puts it:

It's mostly the attitudes and trying to get them to use the language a bit, and also to realise that it is normal that other people use the language here in the province so that they should be able to understand the language.

All actions that are done in this context can be placed within the field of mediating attitudes. As a result, it can be concluded that teachers agree that general language attitudes will improve by engaging with LL and that Frisian courses will become more significant within the school curricula.

4.3 Policy Makers

Several affordances were identified by the policymakers in relation to the LL in Fryslân and its use in education. Firstly, it must be noted that the policymakers expressed very positive attitudes towards the Frisian language and felt personally responsible for maintaining the language. They felt that the language should not be policed, but rather that enthusiasm should be generated among citizens to speak the language.

The policymakers believe that they have a duty to represent the Frisian language. Furthermore, they argue that the external visibility of Frisian in the LL should stress the 'Frisianness' of the region towards visitors, as it may benefit Fryslân's image. More importantly though, the presence of Frisian was thought to be important for the maintenance of the Frisian language as it improves attitudes. As advisor 2 states:

I think it is all connected, when you see it more, then your attitude towards Frisian may change, but also the other way around: when your attitude improves then you probably will see it more too, because people will use it more (A2).

When it comes to education, the policymakers vigorously supported the improvement of Frisian education across all levels and forms of education. The particularities of the school, such as its location, number of students and their home languages are considered when creating educational policy, as the policy advisors believed such factors can greatly influence language attitudes and thus the students' approach to Frisian education. Other factors influencing the students' language attitudes are believed to be their parents' attitudes. Considering the students' background and attitudes is thus regarded as essential in improving the quality of Frisian education, while education is also regarded as a tool to improve such attitudes. According to the policymakers, increasing awareness of the value of languages is an important aspect of minority language education, as they thought that the functional economic value of Frisian is higher than most students believe. According to advisor 1:

Awareness has two sides: it is being aware that it is the language of a lot of people here, and also knowing the background of the language a bit. [...] But there is a big component of how functional it really is if you later encounter it in practicing your job" (A1).

The policymakers also recognised the importance of language visibility in increasing language awareness and improving attitudes and advocated an increased presence of Frisian inside schools and their communication.

5 Discussion and Conclusion

The aim of this study was to determine to what extent and in which ways the LL can be implemented in Frisian minority education. This was done by considering various points of view. Our first objective was to determine students' attitudes towards Frisian and its presence in the LL. Secondly, minority language teachers' attitudes were discussed to determine how mediation is used in combination with the LL in Frisian education. The third objective was to determine the affordances of the LL identified by policymakers.

5.1 *Explaining Students' Attitudes Towards Languages and the LL*

The current study showed that students had the most positive attitudes towards Dutch, followed by respectively English and Frisian. The students' positive views regarding Dutch may be explained by the perceived high social status and functional value of the language in the Frisian context (Knops & Hout, 1988; Landry & Bourhis, 1997; Nettle & Romaine, 2000). It must be considered that location may be relevant: as Belmar (2018) stated, Dutch is overwhelmingly dominant and Frisian is regarded quite negatively in the city of Leeuwarden, where the students studied. Their attitudes may thus have been more positive towards Dutch and more negative towards Frisian

than students in a school in a rural town. English' second position reflects its global status as a *lingua franca*, as well as its strong role in media (Ytsma, 2006).

Interestingly, language background was not found to be a determining factor: students rated Dutch most positive regardless of their first language. This confirms previous findings that while Frisians are generally more positive towards their own mother tongue than non-Frisians, all have rather negative attitudes towards Frisian (Hilton & Gooskens, 2013; Ytsma, 2006), and shows that societal factors may be more influential than language background. Language proficiency was also not found to be influential, contradicting previous findings that positive attitudes are interrelated with higher performance through motivation (Krashen, 1982). However, this may be explained by the sample-bias: all students were quite proficient and motivated to begin with. Factors such as gender, cosmopolitan identity, educational level, and language use were not found to be relevant either, indicating that societal value of the languages does not differ across these groups.

Furthermore, the students' positive attitudes towards Frisian in LLs reflects Kuipers-Zandberg and Kircher's (2020) finding that Frisians want to see more Frisian reflected in the LL; Students with a high proficiency in Dutch and Frisian were particularly positive towards Frisian in the LL: this may be explained by the fact that Dutch correlated strongly with Frisian proficiency. Students with high proficiency in Frisian are likely to be positive towards visibility in the LL, as it may increase the use and value of the language in which the student is proficient (Bourhis, 1992). The negative attitudes towards Dutch in the LL, as compared to those towards English, may be explained by the fact that Dutch texts are regarded as standard, while those in English appeal to the teenagers' identities (Edwards, 2016). Finally, students with a higher socio-economic status were more likely to be positive towards Dutch in the LL, and more likely to be negative towards Frisian. This suggests that Frisian is still associated with lower socio-economic standards, especially by non-speakers (Hilton & Gooskens, 2013).

The fact that the student's attitudes towards Frisian in the LL were the polar opposite of their general language attitudes is particularly interesting. General attitudes may reflect the current LL (Shohamy, 2006), in which Frisian is scarcely present (Cenoz & Gorter, 2006). Furthermore, it may reflect a difference between cognitive and affective attitudes (Baker, 1992): the students may believe logically that Dutch is more valuable than Frisian, while they would feel it would be nicer to see Frisian in their LL. It may also show the power of awareness: by drawing the students' attention to language visibility, they may have examined their attitudes more closely, evaluating the languages differently. If this is indeed the case, increasing Frisian's visibility is crucial, as it would improve the perceived importance of the language.

5.2 *Explaining Teachers' Beliefs and Attitudes Towards Frisian and the LL*

As previously suggested, teachers' beliefs are incredibly influential on teaching approaches (Menken, Funk, & Kleyn, 2011), and by extension on the attitudes and beliefs of students (Byrnes, Kiger, & Manning, 1997). Therefore, this section discusses Frisian teachers' beliefs regarding the role of LL in mediating attitudes towards the language. Overall, it was found that teachers believe that language visibility can influence attitudes, in line with previous studies (Bourhis, 1992). This explains why the teachers are predominantly positive about including the LL in education. Implementing LL-interventions may improve the students' attitudes as it familiarises students with the language and increases language awareness by highlighting social functions of Frisian (Dagenais et al., 2009), so that students may reflect on their own dispositions, behaviours, and beliefs regarding languages (Duarte & van der Meij, 2018; Hewitt-Bradshaw, 2014). This type of reflection provides an excellent starting point for teachers and students to engage in the act of mediation. Not only the three fields of mediation provided by the CEFR (Council of Europe, 2018) can be touched upon, namely mediating texts, communication and concepts. Also attitudes can be mediated consciously within the classroom following a critical LL-assignment. As the teachers in this study mentioned, it was important for them to actively touch upon the subject of language awareness and language attitudes. This should therefore be incorporated into all Frisian language and culture courses throughout all types of education.

The teachers were particularly positive about learning in the LL rather than learning in a classroom-setting: all teachers highlighted that project- and inquiry-based assignments work best to engage and motivate students, as suggested by Hélot et al. (2018). Furthermore, active LL-assignments were believed to enhance analytic, teamwork, and writing skills as well. This was deemed important to maintain the relevance of Frisian as a subject and the motivation of the students.

However, the teachers named several obstacles for LL-implementation. They highlight that the beliefs of the school's management are often negative. This negatively impacts the quality of minority language education: little time is allocated to Frisian lessons, leading to a lack of time and inconvenient group sizes especially for first-year students; Frisian is often not included in overarching activities such as language squares, undermining the position of Frisian in the school; as such, Frisian is barely visible in the school. This is in line with previous research (Gorter et al., 2008; Johnson, 1996; Sallabank, 2012), but highlights the importance of management rather than of teachers.

5.3 Explaining Policymakers' Beliefs and Attitudes Towards Frisian and the LL

The policymakers identified increasing awareness and positive attitudes as affordances of the LL, reflecting Bourhis & Landry's theory (1997). The policymakers argued that such positive attitudes are necessary for language protection, making LLs a vehicle for language maintenance. Moreover, the policymakers stressed their duty to represent Frisian regardless of effects of the LL, which may be explained by the provinces' responsibility for protecting and maintaining Frisian as according to the BFTK (Provinsje Fryslân, 2019). Therefore, the advisors actively work on increasing the presence of Frisian in their external communication.

Like Landry and Bourhis (1997), the policymakers stressed that visibility and positive attitudes are interrelated. As was suggested by Gorter et al. (2008), the policymakers work towards improving the quality of Frisian education, especially across different levels and types of education. Again, much attention was paid to particular differences, such as location and background of students, so that policy could be effectively carried out across Fryslân. Furthermore, the policymakers were positive regarding language awareness techniques in education. They especially stressed the importance of functional awareness, as they believe that the economic value of the Frisian language is larger than students often believe.

To fully grasp the affordances of the LL, the theory explaining the function of LL-interventions in education must be confirmed. It is therefore proposed that in future research, the students' attitudes towards languages and the LL be tested before and after an LL-intervention. The students' attitudes towards the assignments may then also be included to document how such approaches are received. Future research may also include tests of language proficiency or more implicit language attitudes. Furthermore, the teachers' implementation of the LL-approach must be documented, as their cognitive, affective and behavioural attitudes may differ (Baker, 1992; Makarova et al., 2021). The policymakers' perspective could also be studied more by comparing the policymakers' attitudes to the actual policy plans and their execution. Finally, the topic of this study should be extended to include other languages that are part of the Frisian context, in order to investigate what the influence of the inclusion of such languages would be on the students' attitudes and the teachers' teaching approaches. While this study is limited in its extent, its suggestions and findings may prove useful for further research in the field of multilingual pedagogies and the LL.

6 Conclusion

The current study addressed the issue of LL in minority language education. The three perspectives analysed are closely interrelated. Effectively, the perspectives of the students, teachers, and policymakers can be placed on a continuum of influence and perspective. While the students' perspective represents a documentation of current

language attitudes and the direct implications of LL-intervention on their daily lives, the policymakers are not confronted with direct implications, but take a broader perspective in which they consider the vitality of languages. Furthermore, they have a more active role to play, as they are constantly exerting influence. The teachers' perspective mediates between these two, as it implements language and education policy designed by the policymakers, but must consider the students' perspective to teach successfully (Menken et al., 2011). It is crucial to realise that all perspectives are valuable, and that the perspectives are interdependent.

The relation between the various perspectives is evident when we think of the degree to which both policymakers and teachers consider the particular circumstances of schools and students in their actions. Students' attitudes therefore indirectly influence teaching approaches and language policies, both in the LL and in education. This is also where the influence of LL-approaches can be beneficial: by introducing language awareness into the curriculum, improving the students' knowledge & attitudes, the attitudes of the broader public can be changed, improving subjective and possibly objective ethnolinguistic vitality. In turn, this would alter educational and policy perspectives. Figure 1 depicts the interactions between the various stakeholders and influential factors suggested by this study.

Furthermore, it seems that the knowledge and attitudes of the three stakeholder groups mostly converge. Data from all groups confirm that Frisian is perceived negatively when compared with Dutch and English, and that language proficiency and familiarity may be influential in this. All groups would also like to see an increase in Frisian's visibility in the LL, although other languages must also be included according to teachers and policymakers. This reflects awareness of the complexity of the linguistic composition of Fryslân (Duarte, 2020). Furthermore, the results from all three groups supported the implementation of LL-assignments within broader multilingual pedagogies.

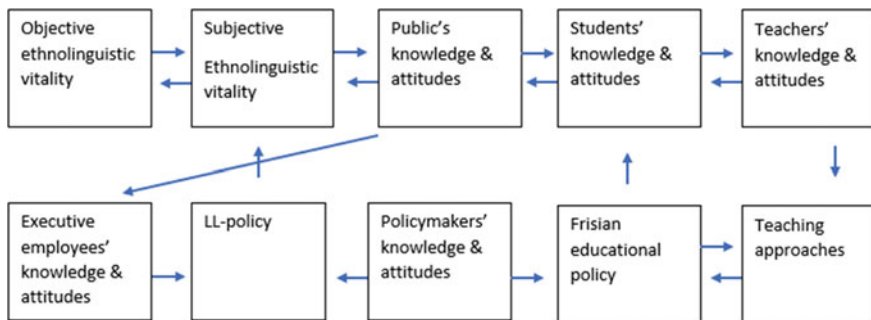


Fig. 1 The interactions between stakeholders

References

- Anderson, J. A., Mak, L., Keyvani Chahi, A., & Bialystok, E. (2018). The language and social background questionnaire: Assessing degree of bilingualism in a diverse population. *Behavior Research Methods*, 50(1), 250–263.
- Baker, C. (1992). *Attitudes and languages*. Multilingual Matters.
- Belmar, G. (2018). *New speakers of a minoritized language: Motivation, attitudes and language use of 'Nije Sprekkers' of West Frisian*. Master's Thesis, Rijksuniversiteit Groningen.
- Belmar, G. (2019). Attitudes and language use of (potential) new speakers of a minoritized language: The case of adults learning west frisian in formal courses. *Sustainable Multilingualism*, 15(1), 70–88.
- Boeije, H. (2010). *Analysis in qualitative research*. Sage.
- Bourhis, J. (1992). Communication apprehension and academic performance. *Journal of Communication Studies*, 10, 90–98.
- Byrnes, D. H., Kiger, G., & Manning, M. L. (1997). Teachers' attitudes about language diversity. *Teaching and Teacher Education*, 13(6), 637–644.
- CEFR Descriptors. (2020). *CEFR descriptors (Searchable)* <https://www.coe.int/en/web/common-european-framework-reference-languages/the-cefr-descriptors>
- Cenoz, J., & Gorter, D. (2006). Linguistic landscape and minority languages. *International Journal of Multilingualism*, 3(1), 67–80.
- Cenoz, J., & Gorter, D. (2017). Minority languages and sustainable translanguaging: Threat or opportunity? *Journal of Multilingual and Multicultural Development*, 38(10), 901–912.
- Council of Europe. (1992). *European charter for regional or minority languages. European treaty series* (p. 148). Council of Europe. <https://www.coe.int/en/web/conventions/full-list/-/conventions/rms/0900001680695175>
- Council of Europe. (1995). *Framework convention for the protection of national minorities. European treaty series* (p. 157). Council of Europe. <https://www.coe.int/en/web/conventions/full-list/-/conventions/rms/090000168007cdac>
- Council of Europe. (2018). *Common European framework of reference for languages: Learning, teaching, assessment. Companion volume with new descriptors*. Council of Europe. <https://rm.coe.int/cefr-companion-volumewith-new-descriptors-2018/1680787989>
- Council of Europe. (2020). *Common European framework of reference for languages: Learning, teaching, assessment—Companion volume*. Council of Europe Publishing. www.coe.int/lang-cefr
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed method approaches*. Sage.
- Cummins, J. (2017). Teaching for transfer in multilingual school contexts. In: O. García, A. Lin, & S. May (Eds.), *Bilingual and multilingual education. Encyclopedia of language and education* (pp. 103–115). Springer.
- Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F. (2009). Linguistic landscape and language awareness. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 253–270). Routledge.
- Duarte, J., & Van Der Meij, M. (2018). A holistic model for multilingualism in education. *EuroAmerican Journal of Applied Linguistics and Languages*, 5(2), 24–43.
- Duarte, J. (2020). *Troef of trend? Actuele ontwikkelingen in de meertaligheidsdidactiek*. NHL Stenden.
- Edelman, L. (2014). The presence of minority languages in linguistic landscapes in Amsterdam and Friesland (the Netherlands). *International Journal of the Sociology of Language*, 228, 7–28.
- Edwards, A. (2016). *English in the Netherlands: Functions, forms and attitudes*. John Benjamins.
- Egaña, E. E. A., Gorter, D., & Cenoz, J. (2015). Teachers' beliefs in multilingual education in the Basque country and Friesland. *Journal of Immersion and Content-Based Language Education*, 3(2), 169–193.
- Fishman, J. A. (1991). *Reversing language shift: Theoretical and empirical foundations of assistance to threatened languages*. Multilingual Matters.

- Galletta, A., & Cross, W. E. (2013). *Mastering the semi-structured interview and beyond: From research design to analysis and publication*. New York University Press.
- Gogolin, I. (2013). The “monolingual habitus” as the common feature in teaching in the language of the majority in different countries. *Per Linguam*, 13(2), 38–49.
- Gorter, D., Jelsma, G. H., van der Plank, P. H., & de Vos, K. (1984). *Taal yn Fryslân - ûndersyk nei taalgedrach en taalhâlding yn Fryslân*. Fryske Akademy.
- Gorter, D. (2008). Developing a policy for teaching a minority language: The case of Frisian. *Current Issues in Language Planning*, 9(4), 501–520.
- Gorter, D., van der Meer, C., & Riemersma, A. (2008). Frisian in the Netherlands. *AILA Review*, 21, 87–103.
- Grin, F. (2003). Language planning and economics. *Current Issues in Language Planning*, 4(1), 1–66.
- Hancock, A. (2012). Capturing the Linguistic Landscape of Edinburgh: A pedagogical tool to investigate student teachers’ understandings of cultural and linguistic diversity. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 249–266). Peter Lang.
- Hélot, C. (2017). Awareness raising and multilingualism in primary education. In J. Cenoz, D. Gorter, & S. May (Eds.), *Language awareness and multilingualism. Encyclopedia of language and education* (pp. 247–261). Springer.
- Hélot, C., Frijns, C., Gorp, K. & Sierens, S. (2018). *Language awareness in multilingual classrooms in Europe*. De Gruyter Mouton.
- Hewitt-Bradshaw, I. (2014). Linguistic landscape as a language learning and literacy resource in Caribbean creole contexts. *Caribbean Curriculum*, 22, 157–173.
- Hilton, N., & Gooskens, C. (2013). Language policies and attitudes towards Frisian in the Netherlands. In C. Gooskens & R. van Bezooijen (Eds.), *Phonetics in Europe: Perception and production* (pp. 139–157). P.I.E. - Peter Lang.
- Ibarraran, A., Lasagabaster, D., & Sierra, J. M. (2008). Multilingualism and language attitudes: Local versus immigrant students’ perceptions. *Language Awareness*, 17(4), 326–341.
- Johnson, K. E. (1996). The role of theory in L2 teacher education. *TESOL Quarterly*, 30(4), 765–771.
- Kelly, S. (2015). Educating to secure the national interest. Paper presented at the Australian Association of Research in Education Annual Conference. Retrieved July 29, 2021, from <https://eprints.qut.edu.au/93351/1/Educating%20to%20secure%20the%20national%20interest%20AARE%202015.pdf>
- Knops, U., & Hout, R. V. (1988). Language attitudes in the Dutch language area: An introduction. In *Language attitudes in the Dutch language area* (pp. 1–24). De Gruyter Mouton.
- Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Pergamon Press.
- Kuipers-Zandberg, H., & Kircher, R. (2020). The objective and subjective ethnolinguistic vitality of West Frisian: Promotion and perception of a minority language in the Netherlands. *Sustainable Multilingualism*, 17, 1–25.
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology*, 16(1), 23–49. <https://doi.org/10.1177/0261927X970161002>
- Lasagabaster, D., & Huguët, A. (2006). Introduction: A transnational study in European bilingual contexts. *Multilingualism in European bilingual contexts* (pp. 1–14). Multilingual Matters.
- Makarova, I., Duarte, J., & Huilcán Herrera, M. (2021). Experts’ views on the contribution of language awareness and translanguaging for minority language education. *Language Awareness*. <https://doi.org/10.1080/09658416.2021.1963976>
- Menken, K., Funk, A., & Kleyn, T. (2011). Teachers at the epicenter: Engagement and resistance in a biliteracy program for “Long-Term English Language Learners” in the U.S. In C. Hélot & M. Ó Laoire (Eds.), *Language policy for the multilingual classroom: Pedagogy of the possible* (pp. 81–106). Multilingual Matters.
- Nettle, D., & Romaine, S. (2000). Chapter Six: The economic wave. In: *Vanishing voices: The extinction of the world’s languages*. Oxford University Press.

- Osterkorn, P., & Vetter, E. (2015). Le Multilinguisme en Question? The case of minority language education in Brittany (France). In C. Kramsch & U. Jessner (Eds.), *The multilingual challenge: Cross-disciplinary perspectives* (pp. 115–139). Mouton de Gruyter.
- Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, 62(3), 307–332.
- Provinsje Fryslân. (2015). *De Fryske Taalatlâs 2015: Fryske taal yn byld*. Provinsje Fryslân.
- Provinsje Fryslân. (2019). *Bestjoersôfspraak Fryske Taal en Kultuer 2019–2023 (BFTK)*. Provinsje Fryslân.
- Piccardo, E., North, B., & Goodier, T. (2019). Broadening the scope of language education: Mediation, plurilingualism, and collaborative learning: The CEFR companion volume. *Journal of e-Learning and Knowledge Society*, 15(1), 17–36.
- Sallabank, J. (2012). Diversity and language policy for endangered languages. In B. Spolsky (Ed.), *The Cambridge handbook of language policy (Cambridge Handbooks in Language and Linguistics)* (pp. 100–123). Cambridge University Press.
- Shohamy, E. (2006). *Language policy: Hidden agendas and new approaches*. Routledge.
- van Dijk, N. (2021). *The linguistic landscape in minority language education: Evaluating perspectives. Determining what students, teachers and policymakers identify as affordances of the linguistic landscape*. BA Thesis, Rijksuniversiteit Groningen.
- Wilmot, A. (2005). Designing sampling strategies for qualitative social research. *The Survey Methodology Bulletin*, 56, 53–65.
- Ytsma, J. (2006). Language use and language attitudes in Friesland. In D. Lasagabaster & Á. Huguete (Eds.), *Multilingualism in European bilingual contexts. Language use and attitudes* (pp. 144–162). Multilingual Matters.

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Teacher and Student Perspectives on the Use of Linguistic Landscapes as Pedagogic Resources for Enhancing Language Awareness: A Focus on the Development of Cognitive and Affective Dimensions



Lisa Marie Brinkmann and Sílvia Melo-Pfeifer

Abstract In this contribution, we compare teachers' and students' perspectives on the use of linguistic landscapes (LLs) as resources for language education in general, and for the development of language awareness in particular. As non-participant observers, we analyse how two French-language teachers integrate LL modules at the secondary level in two different classes in Germany (one in an urban centre, the other in a peri-urban location) and compare teacher and student perspectives on the advantages of that integration. In order to carry out this comparative study, we performed in-depth semi-structured interviews with the two teachers, constructed a questionnaire for students, and complemented teacher and student answers with our thick description of classroom happenings. This study illustrates the pedagogical potential of using LLs in formal language education settings, namely to develop the affective and cognitive dimensions of language awareness. The positive effects seem to be valid for both students with and without migrant background, as well as for both those living in urban and non-urban settings. The study also shows how students and teachers scaffold each other on their path towards a more reflective relationship with societal multilingualism and individual plurilingualism.

Keywords Language awareness · Affective and cognitive dimensions · Formal language learning · French classroom

1 Introduction

The use of Linguistic Landscapes (LLs) as resources for the classroom can be seen as part of the growing “visual turn” (Kalaja & Pitkänen-Huhta, 2018; see the introduction to this volume) in education and studies on multimodal translanguaging (see

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Seals, in this book). They can also be understood in more traditional terms, as means for conveying authenticity to classroom activities, thus bridging the gap between in and out of the classroom. According to Pasewalck (2018), LLs are particularly suitable to promote student criticality and reflexivity, through projects based on creative and discovery tasks.

As signs constructing and indexing social, cultural, material, and ideological contexts (Blommaert, 2013), languages in students' LLs are indeed of high interest and pedagogical value for language awareness (LA) research, as they could be used to question power dynamics across languages and communities, attitudes, and norms surrounding linguistic use (Hatoss, 2018). In the field of foreign language education and teacher training, the use of LL is still under-researched, both in terms of practices and representations (Badstübner-Kizik & Janíková, 2018; Pasewalck, 2018). In terms of practices, some accounts have shown that LL can promote language and critical awareness (Brinkmann et al., 2022; Clemente et al., 2012; Dagenais et al., 2009; Tjandra, 2021). The available literature also reveals language teachers' positive attitudes regarding the integration of LLs in the classroom, both for enhancing target language learning and for developing students' plurilingual competence (Brinkmann et al., 2021), while others focus on how students react, usually positively, to LL integration in classroom activities (Roos & Nicholas, 2019).

In this chapter, we focus on the potential of integrating LLs as resources in the foreign language classroom to develop students' LA, analysed under five dimensions. More particularly, following a previous study which focused on the power, performance and social dimensions of LA (Brinkmann et al., 2022), we now analyse the outcomes of classroom activities around the collaborative description and analysis of LLs in terms of the affective and cognitive dimensions of LA. Our research questions are: "How do teachers and students assess the use of LLs as multilingual resources in the foreign language classroom?" and "What evidence of the development of the cognitive and affective dimensions of LA can be reconstructed from the multi-method approach adopted?". We begin by discussing the concept of LA and its five dimensions, before describing the literature analysing the impact of pedagogical work with LLs on students' LA. Subsequently, we present the methodological design of the empirical study, describing the implementation settings, participants, tasks, and instruments for data collection. We then move on to present the data analysis, commenting on the major findings.

2 The Development of Language Awareness and Critical Language Awareness Through the Use of Linguistic Landscapes in Education

From its inception in the early 1980s, language awareness (LA) was a concept framing multilingual education (James, 1999). However, it did not, initially, envision foreign language education from a holistic perspective, as the pedagogies for

language education at the time were kept separate (namely the mother tongue and the foreign languages). LA was born from the acknowledgement that the lack of literacy in the first language is related to a lack of proficiency in foreign languages. Through the introduction of the concept, James (1999) makes it clear that languages cannot be reduced to linguistic features and grammar. Through its lifetime, the term LA became a “cover term for almost everything to do with language” (Donmall, 1992, p. 1), being used to describe, research and interpret a very diverse setting of contexts and actors that are somehow connected to language learning, teaching and use (see the heterogeneity of contributions in Garrett & Cots 2013). Over time, language awareness became a *Leitmotiv* in language education, integrated in many national and regional curricula (Schmenk et al., 2019). For the purposes of this paper, we will adopt the definition by the Association for Language Awareness (n.d.), which defines LA as “explicit knowledge about language, and conscious perception and sensitivity in language learning, language teaching and language use”. According to James and Garrett (2014), developing LA would entail the development of five interconnected dimensions:

- cognitive dimension: knowledge about language in general, its functions and fields of application as well as metalinguistic skills. This dimension, which is related to explicit knowledge about language and focus on form is very present in literature on foreign language learning;
- affective dimension: development of curiosity and positive attitudes towards and motivation to learn languages;
- social dimension: awareness of the importance of language and different cultures in society, to foster good social relations in diverse contexts;
- performance dimension: reflection on language learning processes and on their interfaces with LA, meaning the interrelation between declarative knowledge about languages and its procedural use;
- power dimension: awareness of the power (relations) of languages in terms of ideologies and their impact in subjects’ lives; this dimension is closely related to critical LA, which will be addressed below.

Following the prodigality of the concept and its effervescence in the literature (which always entails some “conceptual straining” and stretching, according to Sartori, 1970), James (1999) introduced the distinction between LA and “consciousness raising”. The first, he claims, refers to “having or gaining explicit knowledge about and skill in reflecting on and talking about one’s own language(s), over which one hitherto has had a degree of control and about which one has also a related set of intuitions” (p. 102). The second concept refers rather to “becoming able to locate and identify the discrepancies between one’s present state of knowledge or control and a goal state of knowledge or control” (James, 1999, p. 103). The first thus relates to explicit and declarative knowledge about languages, displayed for example through the use of specific metalanguage; the second engages with closing the gap between real and intended goals and being able to notice linguistic phenomena that are still unknown to the learner. As we will see in the empirical study, both concepts, which we see as extremely entangled, can be served by the introduction of LLs as

pedagogical resources: declarative knowledge about languages and metalanguage can be used during noticing experiences that can be initiated either by teachers or by students themselves.

Recent developments (Hélot et al., 2018) acknowledge the need to highlight LA's critical dimension, echoing Fairclough's (1992) call to pay more attention "to important social aspects of language, specially aspects of the relationship between language and power, which ought to be highlighted in language education" (p. 1). This implies the need to pay attention to the role languages play in contemporary social life, as "the development of a critical awareness of the world, and of the possibilities for changing it, ought to be the main objective of all education, including language education" (Fairclough, 1992, p. 7).

Following this reasoning, we can understand how working with LLs in the foreign language classroom might contribute to the development of students' critical LA.¹ As the results of empirical studies acknowledge, working with LLs as pedagogical resources does not merely mean identifying and documenting the presence of different languages in the landscape, as if these were objects to be named, counted, and described. In fact, the presence of languages in the LL is not to be taken at face value, but as an indexicalisation of societal, political and ideological values and positionalities. Languages might be or become signs of empowerment and disempowerment, of ethnolinguistic visibility or invisibility, of processes of creating linguistic minorities and majorities, of legitimation or illegitimation of linguistic diversity and practices in given sociohistorical spaces and contexts. Introducing LLs in language education is thus a strategy towards the development of such critical LA. According to Hélot et al. (2012):

learning to read the LL can be used as a means to understand power relationships between languages and literacies within society and to drive the attention of teachers who will necessarily operate in multilingual and multicultural schools not only to the material world of signs, but also to the symbolic meaning communicated by them (p. 22).

In the following, we review the studies found to connect the use of LLs to the development of (critical) LA, focusing on their outcomes. As we can see from these studies, LLs can be integrated into the curriculum to foster LA in a variety of contexts (from primary to higher education), and with a variety of pedagogical designs (from indoor to outdoor contexts or mixing both) or classroom settings (foreign language classroom or interdisciplinary content building).

Dagenais et al. (2009) investigate how the use of LLs can contribute to the development of students' linguistic awareness through pedagogical work in the classroom. Dagenais et al. (2013) and Caillis-Monnet (2013) proposed the didactisation and curricularisation of LLs. Working in immersive settings in Canada, Dagenais et al. (2013) use LL in order to develop: (i) an ecological perspective of languages from the individual and family level to the community, national and global level; (ii) a valuing awareness of individual plurilingual repertoires and social multilingual resources; (iii) synergies between curricular languages, namely the languages of instruction

¹ For a description of how LLs have been introduced in language education settings, particularly in terms of linguistic *foci* and indoor or outdoor learning, see Brinkmann et al. (2022).

and foreign languages, and the other languages of students' plurilingual repertoires and the social fabric.

Clemente et al. (2012), in a predominantly monolingual community in Portugal, attempted "to increase knowledge of endangered languages and cultures, to promote the discovery of hidden and distant LL" (p. 268), by engaging a first year Primary School classroom in meaningful discovering and interpreting activities around the idea of endangered world landscapes. Another main feature of this project was that activities were embedded in an interdisciplinary holistic approach to teaching and learning, leading to the development of a "continuum of literacies" (Clemente et al., 2012, p. 273), ranging from reading and writing in several languages, to technological, artistic or environmental literacies. In the project conclusion, the authors recognise children's ability to perceive and understand the connection between human activity (namely languaging) and natural phenomena, also fostering the comprehension of diversity as a common feature of the world (and not as an exception).

More recently, Elola and Prada (2020) acknowledge, in their study on the use of LLs in Spanish classes in the state of Texas, U.S.A., based on an immersive "action-research" approach, that "LL-based pedagogies may provide students with a toolkit to enhance their sociolinguistic awareness, develop a critical perspective on local/community languages in their area, and how these languages coexist alongside official/majority languages" (p. 223). In terms of LA, students could reflect on moments of flexible language choice, relativising notions of linguistic purity and norm, hybridity, and the native speaker.

Within the context of classes to welcome migrant and refugee children in Canada, Tjandra (2021) worked with pupils on their analysis and interpretation of the LL they newly inhabited. The author analyses how certain activities anchored on the analysis of these landscapes influence learners' linguistic awareness and language learning, through authentic and situated scaffolding, and their sense of belonging to a new social space. In the context of the advantages of using linguistic and semiotic landscapes in language teaching, we consider, with Tjandra (2021), that "the functions of LL not only provide pedagogical benefits but also facilitate one's awareness regarding power issues related to languages and how its representation or lack of representation may affect one's sense of identity and belonging" (p. 3).

Finally, in a study by Brinkmann et al. (2022), the authors also adopt a critical perspective on the use of LLs for language education, in Germany and the Netherlands. Analysing how the use of LLs as resources for the French and Frisian classroom, respectively, can enhance LA, the authors conclude on their positive effects on the social, power, and performance dimensions of LA. The authors (2022) state that "the pedagogical introduction of LLs in the (language) classroom enabled plurilingual students' repertoires to be activated, be legitimized, shared, and (re)constructed by means of engagement in plurilingual practices" (p. 107), with positive outcomes for students having grown both monolingually or bilingually.

As we saw from this review of the state of the art, all dimensions of LA are implicitly or explicitly addressed in studies dealing with the pedagogical use of LL for language education purposes. What all these studies have in common is the

explicit reflection in which students and teachers collaboratively engage, using the linguistic and semiotic clues present in the LL as prompts for reflecting about the roles and status of languages in the daily life of societies and individual persons. With more or less scaffolding provided by the teachers, students recognise and interpret the sociolinguistic realities they inhabit and notice patterns of language use and abuse in the LL. Having said this, and recalling James' (1999) dichotomy, LLs are used both to develop LA and to raise consciousness of how languages around us (re)produce and fashion linguistic ideologies and (dis)orders and also to foster students' contact with (still) unknown languages.

3 Empirical Research

This empirical study adopts a multi-method approach that aims to compare the perspectives of teachers and students on the implementation of LL-based approaches in the French (as a foreign language) classroom. We used interviews to explore the teacher perspectives; questionnaires and individual reflections were collected to explore student perspectives; through classroom observations, the interplay of students and teachers could be explored.

3.1 *Design of the Study: Context and Participants*

We conducted the empirical study in the French classroom in March 2021 in one school in Hamburg and one school in the city periphery. At that time, the covid-19 pandemic situation allowed for face-to-face teaching with half of the class on one day and half of the class on another day. The linguistic context is slightly different between the two locations,² although both schools have plurilingual students.

Data was gathered on one lesson in four classes, but only three were observed directly, with two different teachers (for details see Table 1). The aim of the lesson was to raise students' LA. A dynamic presentation (using the software Prezi), co-developed by the teachers and the researchers, served as material and structured the classroom activities. In the presentation, a young character presents her hometown Hamburg in French and describes her day. The description focuses on what she sees and thinks at the places she goes to; these parts of the story are illustrated with photos (Figs. 1 and 2). After reading and visually perceiving the presentation, the students discuss together with the teacher questions about the text and further ideas on language(s), cities and LLs.

² The school in Hamburg is located in a neighbourhood with 18.7% migration background (Statistisches Amt für Hamburg und Schleswig-Holstein 2020), whereas the school in the periphery is located in a region with 12.2% migration background (Landesamt für Statistik Niedersachsen 2014).

46 Students, aged 11 and 12, (four classes, from two different schools) and two teachers participated in the study, as represented in Table 1.

3.2 *Data Gathering Instruments and Data Analysis*

The same methodological procedures were used to collect data in both research settings, following a mixed-method approach combining quantitative and qualitative data (see Brinkmann et al., 2022 for multisite research design). The following four data gathering methods were used in the four settings (except in S2 where no human resources were available for classroom observation):

- Classroom observation: The complete lesson of 90 min (S3, S4) and 45 min (S1) was observed by at least one researcher as non-participant observer sitting next to the teacher. The transcription was done directly (no recordings were allowed) through a pre-categorized observation table. The observation table is divided into macro-(the number of students, etc.), meso-(task instruction, etc.), micro-observations (student and teacher statements, etc.), and a reflection on micro-, meso- and macro-levels that includes observations and comments by the teacher after the class. Furthermore, the micro-observations were categorized according to the five language awareness dimensions developed by James and Garret (2014);
- Teacher interviews: an in-depth semi-structured interview was led by one of the researchers with each teacher; one with a duration of 24 min and the other 43 min. The interview structure focused on the teacher's perspective on the lesson, on the students' engagement to the class, and the achievement of the lesson aims.
- Student questionnaires: 44 students replied to the questionnaire in all settings (data for S1 and S2 (i.e., the school in Hamburg) were collected on the same day, whereas data for S3 and S4 (i.e., the school in the periphery) were collected on another). Using a five point Likert-scale, the questionnaire contains 18 items on the cognitive (5), social (2) and affective (4) dimensions of language awareness, the methods used (6) and one free item for additional impressions (1) (Prompt: "Do you have any other comments on how the presentation affected you? If so, please enter them here."). Finally, the questionnaire included one free text field: "Summarise in a language (or languages) of your choice what you have learned in class."
- Student reflections: After completing the questionnaire, the students were asked to write a reflection as homework. The task description was: "You write an e-mail to a student in the parallel Spanish class. You explain what you did in French class today. You describe what you have read and what pictures you looked at. You say what you thought and what you learned. (30–50 words in your chosen language(s))."

The data was analysed in two steps and in terms of the cognitive and affective dimensions of language awareness in turn. The quantitative data from the items of the questionnaire will be presented first, and then completed by qualitative data from the

classroom observations, teacher interviews, student reflections and student comments in the free text field from the questionnaire. This means that, after a quantitative and descriptive data presentation, a second step is based on the discourse and/or interaction analysis of selected excerpts of classroom interaction, teacher interviews or student reflections. The structure of the data analysis is divided into the two contexts Hamburg and periphery, as well as into teacher and student perspectives. Since the teachers each used the same material in both classes, the results will be presented together always indicating the setting for the qualitative data.

4 Results

The results are divided into two categories: the cognitive and the affective dimension of LA. To recall, we understand the cognitive dimension as being related to knowledge about language in general, its functions and fields of application as well as metalinguistic skills. The affective dimension refers to the development of (positive) attitudes towards languages.

4.1 *Cognitive Dimension of Language Awareness*

Student perspective

The results from the five items in the questionnaire related to the cognitive dimension are displayed in Fig. 3 through the calculated mean of each. The general mean between 2 and 2,6 represents students' agreement with the increase of their cognitive dimension.

This average agreement appearing in the quantitative data is in line with the qualitative data. In their reflections and questionnaires, in both settings, more than ten students mentioned the acquisition of new vocabulary and facts in/about other languages, as shown in the following example:

Ich habe gelernt, dass ich mit Hilfe anderer Sprachen, die ich schon kannte, mir Wörter erschließen konnte. Außerdem, dass ich auch in der Stadt sprachlich was lernen kann.³ I learned that I can explore the languages. Other languages help me to understand languages. (S3/4)

This student alternates between German and English to express becoming aware of the usefulness of language learning. It is noteworthy that this student applies translanguaging strategies to stress the knowledge and use of several languages on a practical and theoretical, metacognitive level. The same translanguaging practices were observed in both contexts.

³ (Our translation) "I learned that I could discover the meaning of words with the help of other languages that I already know. I also learned that I can learn languages in the city".

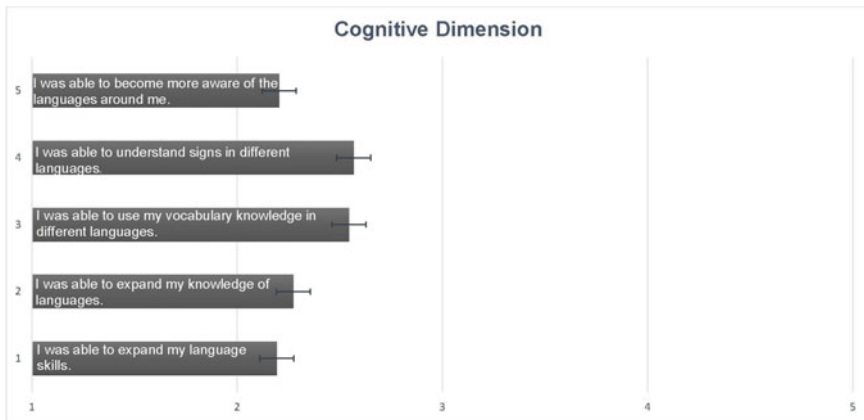


Fig. 3 Results from the items of the cognitive dimension (1 = strongly agree; 2 = agree; 3 = neither agree nor disagree, 4 = disagree; 5 = strongly disagree)

Some students also describe developing awareness of their city’s language diversity. One student from the periphery (setting S3/4) declared “During the presentation I realised that we have so many languages around us in everyday life” and another, from the city (setting S1/2), conceded that “I would never have thought that so many languages live in such a small space”. This student ascribes a life, an autonomy to languages that is particularly interesting in the formal language-learning context. Students also mention that they learned about reasons for language diversity referring to migration and globalisation. They highlight that they learned how culture and language are connected. Another student from S1/2 explained:

Then we talked about which shop comes from which country and what you could derive it from. I also didn’t realise that so many famous brands come from France, like *Hermes*. I learned that there are many different cultures in Germany even though not everything comes from Germany. I find that very cool and also interesting.

Some students explained that they also expanded their French language skills, especially reading skills. Particularly, some refer to intercomprehension skills and the usefulness of knowing other languages as in the first quotation in the section. In terms of intercomprehension between romance languages, some students understood languages as systems with similarities: “I now know that Portuguese and French are similar and I can derive some of the language. I also liked that the lady⁴ read out the [Portuguese] sentence” (S1/2). From this encounter of the student with an intercomprehension situation, it is possible to observe the interplay between LA’s cognitive and affective dimensions: the student understood how intercomprehension works and showed positive attitudes towards it, especially at the level of comparing Portuguese and French pronunciation (oral comprehension). This also implies that

⁴ The “lady” refers here to one of the researchers that was observing the classroom via on-line streaming and was spontaneously called by the teacher to take an active role and read the sentence in Portuguese out loud.

other languages are welcome by the students to the space of the foreign language classroom, either visually or in terms of “soundscape”.

Students thus acknowledged the usefulness of developing a plurilingual repertoire in order to enhance their understanding of how languages work, thus fostering their metalinguistic awareness. This metalinguistic awareness might then be reinvested in formal language learning. The use of the plural form in the previous statement by the student (“Other languages help me to understand languages”) makes this claim tangible: “languages” as resources and languages as “goals” are both formulated in ways that make them more organic and not as discrete entities, thus also implying some porosity between formal and informal language learning.

Teacher perspective

Both teachers mention that students identified the reasons for having different languages in a city. T1 comments: “many of them had something to say about that” and they “found a lot of things on such a small picture where basically only two shops or something were to be seen”. T2 believes that “they [will] walk through the city [and] suddenly look at certain linguistic documents with different eyes or [...] hear a language or a dialect or an accent”. In the last two comments, the link between indoor and outdoor learning is clear. T2 specifies that students can make sense outside of the school of what they learned in the school and vice versa. They can say to themselves “the experiences I have gained there, I can then integrate them back into the language lessons”. Additionally, one of the teachers refers to the meaning and function of language and its diversity in general:

I believe or hope that they have learned on a methodical level that they can rely on their feeling for language when it comes to infer the meaning of unknown words or even small sentences. They have learned that they can use similarities from other languages to understand French.
(T2)

Metalinguistic awareness, as we also saw in the students’ perspective, is referred to as an integral part of the cognitive dimension of language awareness. The teacher clearly refers to the awareness of similarities in languages and how students can profit from this. The same teacher also highlights intercomprehension practices: “they have learned that there are similarities between the languages and that you can really use these similarities actively, for example for reading comprehension” and “they can rely on their feeling for language when it comes to opening up unknown words or even small sentence contexts [...] for understanding French” (T2). She also provides an example: “I’m thinking of *supermarket* and *supermarché*. They very quickly saw that the German and English words are almost identical and then the step to the French *supermarché* was, I think, a very obvious one” (T2). The phenomenon of similarities of languages and its practical use was also discussed in S1:

Example 1:

St 4: Well, I think if you know French, well I don’t know how that is now because I don’t know it (laughs.), then you can probably understand Portuguese.

T1: That’s the case! Especially in writing.

St 6: Do you understand Portuguese?

T1: In writing, yes. I was on holiday in Portugal for two months and what was written there, on information boards or something, I could read it. And the same goes for Spanish, of course. (All students look at her and seem interested.)

Student 9: That means, if you are in Madeira or something and there is a quarantine, you could tell them that you have to go out with the dog for a while?

T1: No, I can't say that.

St 9 and at the same time St 1: But you could write it in French or something.

T1: Oh, yes.

St 9: And then they would understand.

T1: Yes, then we could understand each other like that via the writing.

St 4: With as many Germans as there are, you can just speak German.

Example 1 shows the teacher's engagement in raising students' language awareness by making them see the benefits of language learning by referring to a personal experience. In this specific case, teacher and students discuss the cognitive value of intercomprehension across languages of the same linguistic family. They interact around the cross-comprehension possibilities that linguistic transparency can offer in order to convey meaning. Interestingly, the potential of intercomprehension is recognised for receptive and productive skills, but its success is associated to receptive competences only, something that is thematised in the literature on intercomprehension (Araújo e Sá & Melo-Pfeifer, 2021).

As already seen from the students' perspective above, work on LL seems, for both students and teachers, to foster awareness of intercomprehension across different languages. This opens up spaces for discussing multilingual interaction and, by this means, for mainstreaming multilingual pedagogies based on intercomprehension (Melo-Pfeifer, 2020).

4.2 *Affective Dimension of Language Awareness*

Student perspective

The results from the four items in the questionnaire relating to the affective dimension of LA are displayed in Fig. 4. The general mean between 1,8 and 2,3 represents students' even stronger agreement with the increase of their affective dimension than the increase found for the cognitive dimension. When assessing the classroom activities in the two open questions of the questionnaire, they used terms such as "interesting", "exciting" and "fun". Importantly, students assessed the use of already known and unknown languages in the classroom positively, even if those already

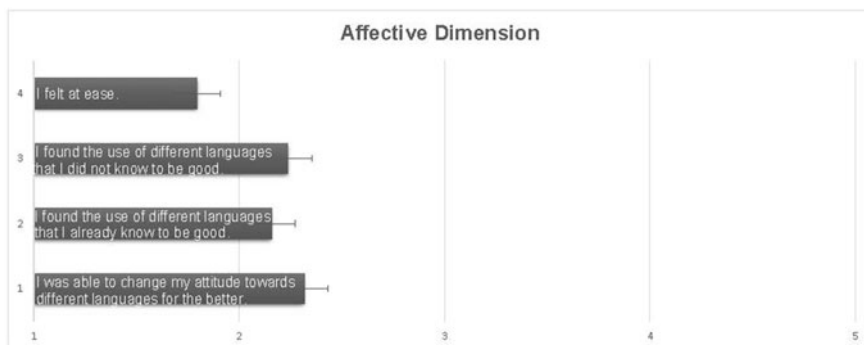


Fig. 4 Results from the items of the affective dimension (1 = strongly agree; 2 = agree; 3 = neither agree nor disagree, 4 = disagree, 5 = strongly disagree)

known were valued more. Such results would be an argument to use other languages in the foreign language classroom, disrupting monolingual ideologies and practices.

These insights from the quantitative data can be found in the qualitative data as well. One student denotes positive attitudes towards the English language: “My dad has three relatives in the U.S.A. and then we always get letters from the three of them and it’s kind of cool English” (S2). The use of “cool” to refer to English coming from America might be seen as contrasting with the less “cool” English learnt in the classroom, possibly meaning that students recognise the different uses of the same language, outside and inside the classroom.

In the final reflections, some students mentioned aspects about their affection towards languages because they like to link (a) culture(s) to (a) language(s). One student from the surrounding areas of Hamburg wrote: “I thought it was really great that we also learned something about other cultures”. Other insights into the affective dimensions of LA can be found in sentences such as: “We studied languages and found out interesting things”, indicating a general curiosity towards foreign languages, or “It was very interesting to learn that so many languages are in Hamburg”, showing a positive attitude towards linguistic diversity.

Six students decided to write their reflection in another language (English, French, Hindi, Plattdeutsch or Russian) and one student used translanguaging strategies (including the languages Chinese, Dutch, Italian, Japanese and Portuguese) to write the reflection. As in Elola and Prada (2020), students also challenged the linguistic boundaries; in our case, they also actively adopted more flexible linguistic practices. Figure 5 reproduces the final task written in the minority language Plattdeutsch.

As referred by Brinkmann et al. (2022),

[students] felt free to express [themselves] resorting to a variety of languages, engaging in multilingual practices. Even though the instruction for the task referred to the possibility of choosing the language(s) of production, the fact that the students accepted the call to transgress the monolingual communicative stance is a sign that they felt they could perform more adequately, when speaking about multilingualism, using different languages (p. 103).

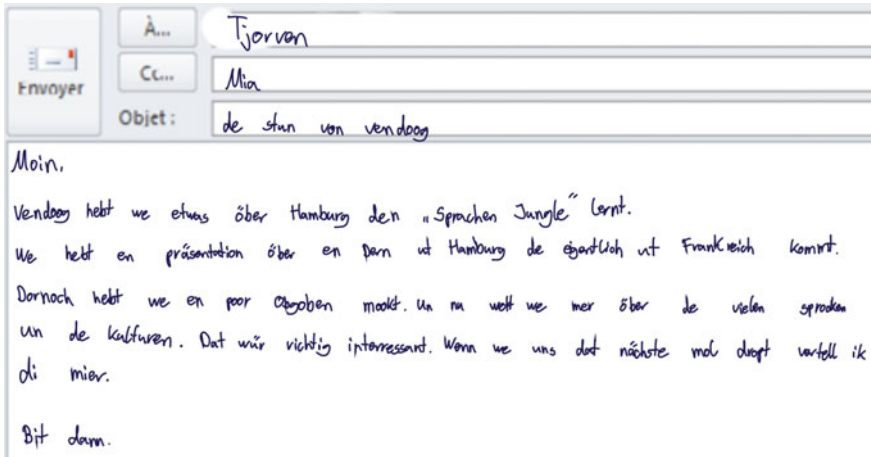


Fig. 5 Evaluation task by a student⁵ (S3/4)

Teacher perspective

The role of the affective dimension in language awareness is clearly highlighted by T2: “language, or thinking about one’s own language, is really a key to promoting emotional or social aspects”. T2 stresses the affective dimension in the interview, but more examples of how the teachers raise the students’ language awareness at an affective dimension can be found in class settings. Most occurrences refer to one question in the presentation about the minority Northern German language Plattdeutsch that led to a discussion about preferred language and reasons for their preference. T2 comments: “they understand that such a language or a dialect has something to do with their own identity or with their own childhood or with certain family members”.

There are different examples in all the settings that illustrate this understanding. In S3, T2 invites all the students to explain why they like English, a language most of them are in contact with, shown in the following example:

Example 2:

St 8: I like English

T2: Okay, can you explain why?

St 8: No, not really, it’s always been like that. I like the country.

T2: Oh so England.

⁵ (Our translation) Subject: The lesson of today.

Hello,

Today we learned about Hamburg, the “language jungle”. We had a presentation about a girl from Hamburg who is actually from France. Afterwards we did a few tasks. And now we know more about cultures. That was really interesting. Next time we meet, I’ll tell you more.

See you then.

St 8: Well yes and America.

St 2: I like English because you hear it everywhere and because it's familiar.

T2: Where do you hear English?

St 9: On TV and in series or something.

St 1: At school.

T2: I suppose you also listen to English music?

Students: Yes.

T2: Where else?

St 2: Tourists, you hear English all the time there too.

Whereas T2 had to initiate the questioning about reasons for preferring a language, in S1, T1 could build on the conclusions of a student, illustrated in the example below.

Example 3:

T1: Who else loves a language?

St 10: Polish [...] I grew up speaking it.

T1: Ah, because your parents speak it and you speak it with them too, because it's familiar to you.

Example 3 shows teachers emphasising the depth of one's affection to a language based on home languages' emotional weight. The teacher values the affective dimension attached to the student's biography and making this value a theme for the classroom also legitimises it, at least as a valuable theme that can be collaboratively discussed and not left outside the classroom. In this way, the foreign language classroom opens up to discussions about multilingualism and plurilingualism and not only about one target language and one target culture.

T2 also acts in a similar fashion while talking about Plattdeutsch in S4, as illustrated in the example below:

Example 4:

St2: Maybe he lived there somewhere and is happy to see it again.

T2: Yes, maybe he knows it from his grandparents and it reminds him of them and that's a positive feeling.

Referring to this situation in S4, T2 states: "I found this [question] particularly successful because two students reported that they had Croatian as their family language [...] and another student, whose family comes from Zimbabwe, said that the Shona language is spoken at home". She highlights her interest in the class by ending the section about the Plattdeutsch question: "Suddenly I notice all the languages that are present in the classroom. We will have to go into that in more detail at some point" (T2 in S4). In general, she sees a positive effect in raising students' LA in the

affective dimension since: “I observed with the pupil from Zimbabwe that she was particularly awake and pleased to talk about it” (T2). Importantly, the implementation of classroom activities based on the discussion of LLs helped the teacher to discover and uncover the diversity of languages present in the classroom and made her aware of the need to keep discussing students’ linguistic biographies in a safe space. Seen from this perspective, it could be argued that working with LLs can foster teachers’ reflexivity around the value of implementing multilingual pedagogies and therefore contribute to their professional development.

5 Conclusion

Our study has showed the entangled nature of two dimensions of LA (the affective and the cognitive), that we trace back to the complexity of LA itself. The increase in students’ cognitive and affective dimensions, attested by students themselves and by the teachers, refers to becoming aware of the connection between language and culture, linking indoor and outdoor learning, or the learning potential of intercomprehension and translanguaging strategies. Concerning the cognitive dimension, it is referred to in terms of interlinguistic comparison (a sign of focus on form) and the usefulness of speaking different languages, but hardly in terms of declarative knowledge. This might be due to a lack of tasks focusing on this aspect. We also noticed, mainly from the presentation of classroom interaction excerpts, how signs of students’ LA are combined with and dependent on teachers’ own assumptions about languages and multilingualism. Indeed, even if in both sites the classroom tasks are led by the teacher, students and teachers nonetheless co-construct knowledge about linguistic diversity, languages and LA.

We can thus conclude on the double value of using LLs as means to introduce the theme of linguistic diversity in the target language classroom. On the one hand, LLs provide teachers and students with prompts to designate and comment on linguistic phenomena; on the other, they create a positive atmosphere of discovery, sharing and co-interpretation of those and other phenomena, which are mutualised and used as “funds of experiences” of the group. By doing so, not only the boundaries of expert and novice are blurred, but also equal opportunities are given to teachers and students to develop their LA. Through eliciting and commenting on each other’s examples and lived experiences with multilingualism and plurilingual repertoires, students and teachers scaffold each other’s reflections.

This study provides elements to question two important assumptions present in the literature on multilingual pedagogies and on the pedagogical use of LLs. One assumption relates to multilingual pedagogies being particularly adequate to meet the needs of plurilingual students (meaning generally with a migrant background) and the second assumption relates to the work around LLs as particularly suitable for urban and superdiverse contexts. The first assumption could be debunked as follows: students growing up both monolingually and plurilingually benefit from tasks on LLs,

valuing the different components of their repertoires. Students growing up monolingually acknowledged the added-value of language learning in the school contexts while those growing up plurilingually value both languages learnt at school and at home. We can conclude that pedagogical work with LLs brings students closer to societal linguistic (super)diversity, even if this diversity is not immediately apparent or recognisable in the surroundings, and also promotes multilingual pedagogies for all. All students become experts of their linguistic environments, potentially blurring the lines between students with and without a migrant background. The second assumption can be challenged as well: bringing students from “less urban and more peri-urban” spaces (Blommaert, 2013, p. 1) into contact with superdiverse LLs, the study shows that children living in the periphery of urban centres also benefit from the reflections prompted by urban LLs examples. Results from urban and peri-urban cohorts show that students benefit from the work on LLs, at both the affective and cognitive levels.

References

- Araújo e Sá, M. H. & Melo-Pfeifer, S. (2021). Online plurilingual language interaction: identity construction and the development of the plurilingual competence of students and teachers. A focus on intercomprehension. In E. Piccardo, A. Germain-Rutherford, & G. Lawrence (Eds.), *Routledge handbook of plurilingual language education* (pp. 276–295). Routledge.
- Association for Language Awareness. (n.d.). *Association for language awareness—about*. Retrieved from https://www.languageawareness.org/?page_id=48.
- Badstübner-Kizik, C., & Janfková, V. (2018). Linguistic landscapes und Fremdsprachendidaktik. Eine Einleitung. In C. Badstübner-Kizik & V. Janfková (Eds.), *Linguistic landscape und Fremdsprachendidaktik. Perspektiven für die Sprach-, Kultur- und Literaturdidaktik* (pp. 7–19). Peter Lang.
- Blommaert, J. (2013). *Ethnography, superdiversity and linguistic landscapes*. Multilingual Matters.
- Brinkmann, L. M., Gerwers, F., Melo-Pfeifer, S., & Androutsopoulos, J. (2021). Einstellungen angehender Französisch Lehrkräfte zum Einsatz von *Linguistic Landscapes* im Fremdsprachenunterricht: Un objet pédagogique non identifié ? *Zeitschrift Für Romanische Sprachen Und Ihre Didaktik*, 15(1), 39–68.
- Brinkmann, L. M., Duarte, J., & Melo-Pfeifer, S. (2022). Promoting plurilingualism through linguistic landscapes: A multi-method and multi-site study in Germany and the Netherlands. *TESL Canada Journal*, 28(2) (Special Issue titled Plurilingualism and Translanguaging: Pedagogical Approaches for Empowerment and Validation), 88–112. <https://doi.org/10.18806/tesl.v38i2.1358>
- Caillis-Monnet, F. (2013). Exploiter le paysage linguistique dans le cadre des programmes scolaires: exemple d’une école bilingue de Perpignan (Catalogne-Nord/Roussillon). In C. Cortier & M. Cavalli (Eds.), *Langues régionales/minoritaires dans l’éducation bi-/plurilingue. Langues d’ici, langues d’ailleurs* (pp. 29–33). ECML.
- Clemente, M., Andrade, A. I., & Martins, F. (2012). Learning to read the world, learning to look at the linguistic landscape: A study in the first years of formal education. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 167–285). Peter Lang.
- Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F. (2009). Linguistic landscapes and language awareness. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 253–269). Routledge.

- Dagenais, D., Moore, D., & Sabatier, C. (2013) Lire la ville. Exploiter le paysage linguistique pour une approche plurilingue intégrée. In C. Cortier & M. Cavalli (Eds.), *Langues régionales/minoritaires dans l'éducation bi-/plurilingue. Langues d'ici, langues d'ailleurs* (pp. 25–28). ECML.
- Donmall, G. (1992). Language awareness: Wat is dat? *Language Awareness*, 1(1), 1–3.
- Elola, I., & Prada, J. (2020). Developing critical sociolinguistic awareness through linguistic landscapes in a mixed classroom: the case of Spanish in Texas. In D. Malinowski, H. Maxim & S. Dubreil (Eds.), *Language teaching in the linguistic landscape. Mobilizing pedagogy in public space* (pp. 223–250). Springer.
- Fairclough, N. (ed.) (1992). *Critical language awareness*. Longman.
- Garrett, P., & Cots, J. (2013). Language awareness. In M. Byram & A. Hu (Eds.), *Routledge encyclopedia of language learning and teaching* (2nd ed., pp. 383–386). Routledge.
- Hatoss, A. (2018). Language awareness in diasporic contexts. In P. Garrett & J. M. Cots (Eds.), *The Routledge handbook of language awareness* (pp. 418–434). Routledge.
- Hélot, C., Barni, M., Janssens, R., & Bagna, C. (2012). Introduction. In C. Hélot, M. Barni, R. Janssens & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 17–24). Peter Lang.
- Hélot, C., Frijns, C., Van Gorp, K., & Sierens, S. (Eds.) (2018). *Language awareness in multilingual classrooms in Europe*. De Gruyter Mouton.
- James, C. (1999). Language awareness: Implications for the language curriculum. *Language Culture and Curriculum*, 12(1), 94–115. <https://doi.org/10.1080/07908319908666571>
- James, C., & Garrett, P. (2014). The scope of language awareness. In C. James, P. Garrett, & C. N. Candlin (Eds.), *Language awareness in the classroom* (pp. 3–20). Routledge.
- Kalaja, P., & Pitkänen-Huhta, A. (Eds.) (2018). Double special issue ‘Visual methods in applied language studies’. *Applied Linguistics Review*, 9(2–3), 157–176. <https://doi.org/10.1515/applirev-2017-0005>
- Landesamt für Statistik Niedersachsen (LSN). (2014). *Zensus 2011: Bevölkerung in den Landkreisen und kreisfreien Städten am 9. Mai 2011 nach Migrationshintergrund*. Retrieved from https://www.statistik.niedersachsen.de/startseite/themen/zensus/zensus_2011/themenbereich-zensus-2011-tabellen-115194.html
- Melo-Pfeifer, S. (2020). Intercomprehension in the mainstream language classroom at secondary school level: How online multilingual interaction fosters foreign language learning. In J. Duarte & C. Kirsch (Eds.), *Multilingual approaches for teaching and learning—from acknowledging to capitalising on multilingualism in European mainstream education* (pp. 94–113). Routledge.
- Pasewalck, S. (2018). Linguistic landscapes im Fremdsprachenunterricht—Perspektiven für die Sprach-, Kultur und Literaturdidaktik. In C. Badstübner-Kizik & V. Janfková (Eds.), *Linguistic landscape and Fremdsprachendidaktik. Perspektiven für die Sprach-, Kultur- und Literaturdidaktik* (pp. 349–354). Peter Lang.
- Roos, J., & Nicholas, H. (2019). Linguistic landscapes and additional language development. In M. Dressman, & R. Sadler (Eds.), *The handbook of informal language learning* (pp. 243–255). Wiley-Blackwell. <https://doi.org/10.1002/9781119472384.ch16>
- Sartori, G. (1970). Conceptual misformation in comparative politics. *American Political Science Review*, 64(4), 1033–1053. (republished by David Collier/John Gerring. 2009. op. cit.).
- Schmenk, B., Breidbach, S., & Küster, L. (2019). Slogonization in language education discourse: Introduction. In B. Schmenk, S. Breidbach, & L. Küster (Eds.), *Slogonization in language education discourse* (pp. 1–18). Multilingual Matters.
- Statistisches Amt für Hamburg und Schleswig-Holstein (Ed.). (2020). *Statistisches Jahrbuch Hamburg 2019/2020*. Statistisches Amt für Hamburg und Schleswig-Holstein.
- Tjandra, C. (2021). Supporting newcomer children’s language awareness, incidental language learning, and identity negotiation through the multilingual linguistic landscape: An exploratory case study. *The Canadian Modern Language Review / La Revue Canadienne Des Langues Vivantes*, 77(1), 1–22.

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Educational Possibilities of Linguistic Landscapes Exploration in a Context of Pre-service Teacher Education



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Abstract In a globalised world marked by the mobility of individuals from different linguistic and cultural contexts, it is important to educate future teachers for educational approaches to the linguistic and cultural diversity present in the landscapes that we observe and we live in. Therefore, it is essential to develop teacher education programmes that privilege understanding concerning the (in)visibility of linguistic and cultural diversity and its value in educational contexts. Such programmes may enhance teachers' contribution to the construction of fairer societies, by developing pupils' multiliteracy competences and language awareness. This study aims to reflect on the potential of linguistic landscapes (LL) as a didactical resource for educational purposes, in the context of initial teacher education at the Department of Education and Psychology of the University of Aveiro, Portugal. For that matter, student teachers' discourses are analysed in order to identify the effects of LL as an educational resource on their professional knowledge, namely concerning three dimensions: pedagogical and didactic, ethical and political, and linguistic and communicative. Data was collected by means of their pedagogical projects and written reflections regarding LL educational exploration. The analysis allows us to understand and discuss the teaching professional knowledge built by future teachers when focusing on the concept of LL. It also allows us to reflect on the capitalisation possibilities of this concept in pre-service teacher education contexts.

Keywords Teacher education · Linguistic landscapes · Teacher professional knowledge · Future teachers · Linguistic and cultural diversity

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1 Introduction

Linguistic landscapes (LL) have been object of study in different fields, including education, due to their relevance in “reading” and understanding the world’s increasingly globalised communities. In this sense, it is important to build knowledge on how LL can be used in education and in teacher education contexts. This knowledge may be a valuable contribution to the reflection and construction of educational proposals that are more attentive to diversity and, therefore, more inclusive.

After framing the study presented here, which aims at clarifying the relation between LL and education, principles and practices of teacher education programmes for linguistic and cultural diversity education are presented. In a more concrete way, this study aims to reflect on the potential of LL as a didactical resource for educational purposes, in the context of initial teacher education at the Department of Education and Psychology of the University of Aveiro, Portugal. This case study, developed with future teachers enrolled in Masters programmes, uses a qualitative research methodology, analysing student teachers’ discourses in order to identify the educational relevance they attach to LL and the possibilities of its exploration for their own professional development. Data was collected by means of student teachers’ pedagogical projects and written reflections. The analysis allows us to discuss the integration of the concept of LL in the teaching professional knowledge of future teachers concerning three dimensions, identified in a framework of teaching competences for pluralistic approaches (REFDIC, Andrade, Martins & Pinho, 2019): a pedagogical and didactic dimension; an ethical and political dimension; and a linguistic and communicative dimension.

The discussion of the results highlights key aspects to be considered in teacher education programmes for linguistic and cultural diversity, ranging from an understanding of the concept and its educational relevance to experimentation, analysis and evaluation in real teaching and learning contexts.

2 Linguistic Landscapes and Education

Studies on LL articulate different knowledge domains and research approaches, from linguistic to social, urban or educational fields. These studies have increased in the past decades, since earlier research mainly occurred in the domains of sociolinguistics and literacy areas. In recent years, there has been a clear shift to an educational approach (Gorter, 2018). In fact, back in 1997, LL was defined as “The language of public road signs, advertising billboards, street names, place names, commercial shop signs, and public signs on government buildings” (Landry & Bourhis, 1997, p. 25).

Throughout the years, the concept of LL has been enlarged, comprising other elements which were not included before. In 2009, Shohamy and Gorter considered that LL “contextualizes the public space within issues of identity and language policy

of nations, political and social conflicts. It posits that LL is a broader concept than documentation of signs; it incorporates multimodal theories to also include sounds, images, and graffiti” (Shohamy & Gorter, 2009, p. 4). This definition shows a broader understanding of the concept and the object of study. Following this expansion agenda, Gorter (2013) emphasised that LL

should not limit itself to the study of written language and to the variation in text types, considering also images, colours and other visuals, as well as voices, music and sound and to dynamic changes in the physical (mainly urban) surroundings (p. 11).

The evolution of the concept of LL has led to research developed, for instance, on sounds in the landscape, i.e., ‘soundscapes’ (Scarvaglieri et al., 2013) or ‘sensescapes’ (Prada, 2021; see author’s contribution in this volume).

Several reasons for researching LL have been underlined by those studies: (i) the attention to space/context, since there is a growing observation of the surrounding space by the diverse individuals who inhabit it, reconsidering the use of the term “context” in sociolinguistics studies; (ii) the importance of experimenting and reflecting about diversity, shown namely by the development of studies on urban plurilingualism, from the perspective of linguistic ethnography, which shifted the focus from observing and mapping linguistic diversity to the direct experience of this diversity; (iii) the development of studies on urban plurilingualism, within language policy and planning, from the perspective of linguistic ethnography, shifted the focus from observing and mapping linguistic diversity to the direct experience of this diversity.

The relationship between LL and education is a relatively new field (Bolton et al., 2020), which means that its study in teacher education programmes is still a recent research topic. Concerning LL and education, we may consider two main target groups, learners and teachers. As far as learners are concerned, research shows that effectively exploring LL may develop language awareness, openness to languages and critical thinking skills (Clemente, 2017; Dagenais et al., 2009), as well as foster (incidental) language learning (Cenoz & Gorter, 2008; Rowland, 2013; Tjandra, 2021), develop intercultural awareness and understanding (Gorter & Cenoz, 2015) and promote multimodal literacy skills and text-to-world connections (Li & Marshall, 2018; Rowland, 2013). Thus, LL can operate as an educational tool for linguistic and political activism, by providing in-depth learning about cultural and historical meaning (Shohamy & Waksman, 2012).

Focusing on the relationship between LL and education as far as teachers are concerned, it must be underlined that research conducted with teachers is much scarcer. However, a few studies have shown that teachers realise the potential of exploring LL as a resource as well as an instrument for Foreign Language teaching and learning (Shang & Xie, 2020). LL also seems to promote student teachers’ awareness of linguistic diversity in the communities (Hancock, 2012) and help them understand, reflect about and co-construct language ideologies (Szabó, 2015). It is important to note that within teacher education, Hancock (2012) concluded that the act of investigating LL can potentially impact on student teachers’ worldviews, which may be meaningful in terms of their own professional development. Considering the potential for both learners and teachers, it is important to notice a recent study

which has shown that LL-related tasks can trigger reflection on issues like linguistic inequality or social justice, since LL are a way for teachers and pupils to conceptualise multilingualism in a more inclusive way (Lourenço & Melo-Pfeifer, 2021).

3 Teacher Education and Linguistic Diversity: Some Principles and Strategies

Teacher education programmes for future teachers must prepare them for increasingly complex working conditions. As the OECD report (2011) on teaching profession states, teachers must be prepared to equip learners with the skills they need to become citizens in the twenty-first century. They must be able to personalise learning experiences in order to prepare every student to succeed, and to cope with the increasing cultural and linguistic diversity of their classrooms and schools as well as differences in learning styles. They must also keep up with innovations in curriculum, pedagogy and the development of digital resources (Angel Gurría, Secretary-General, in Schleicher, 2011, p. 3).

In this sense, it is important to educate future teachers to value (near and far) linguistic and cultural diversity, preparing them to know how to educate their pupils to overcome linguistic and cultural barriers, building bridges between languages, cultures, individuals and communities (Andrade & Martins, 2017; Andrade et al., 2019; Andrade & Pinho, 2010; Ferrão-Tavares & Ollivier, 2010). Therefore, it is up to teacher educators and the educational situations for which they are responsible to convey a positive vision of linguistic and cultural diversity, showing that this diversity is an added value, enriching individuals and the contexts in which they circulate.

In general we can say that programmes educating to deal with linguistic and cultural diversity must be shaped by a socio-cultural understanding of learning, a lens through which we can frame student teachers' learning occurring in a social context, understanding learning as a process of mediation through interaction with other people, from other languages and cultures (Percy, 2014, p. 148). LL can be a powerful tool for educating to observe, to recognise and to value diversity in a process of teacher learning and professional development, recognising that we are in contact with diversity and this diversity is part of us and our societies.

4 Research Context and Methodology

4.1 Research Context

In order to educate for the valorisation of diversity, the University of Aveiro (UA, Portugal) offers in the Master's Programmes for Teaching (120 ECTS with 30% in *Practicum*) a Curriculum Unit on *Linguistic Diversity and Education* (from six to

eight ECTS) and the Curriculum Units of *Practicum* and *Seminar* which motivate future teachers to develop projects of education for linguistic and cultural diversity. In these pre-service teacher education contexts, student teachers carry out activities of information on the issues of linguistic and cultural diversity (e.g., reading of texts, research on world languages, etc.), observation (e.g., observation of urban and school landscapes), analysis of schools programmes and of curriculum, planning of activities and/or educational projects, experimentation and reflection on these projects and activities.

More concretely, activities of teacher education for linguistic and cultural diversity have the following objectives:

- To build knowledge about education for linguistic and cultural diversity, and how to integrate it into the curriculum;
- To critically and adequately use information and communication resources in the process of building knowledge about linguistic and cultural diversity education;
- To mobilise knowledge about linguistic and cultural diversity in developing teaching activities or projects with learners in schools;
- To evaluate the outcomes of teaching activities on diversity education in relation to learning;
- To collaboratively design an action research project integrating linguistic and cultural diversity in the school curriculum;
- To write an individual report on the developed action research project.

Within this teacher education path, future teachers carry out activities focused on: (i) individuals (monolingual, bilingual, plurilingual) and their linguistic and communicative development trajectories; (ii) contexts (educational, social, near, far, narrower and wider, ...); (iii) and on learning and teaching processes (design, development, assessment and reflection on lesson plans, educational interventions, didactic resources, projects, ...). Observing and analysing contexts integrates the topic of LL as to prepare future teachers for its educational exploration. In the academic year 2020/2021 students have participated in teacher education sessions of the LoCALL Project (<https://locallproject.eu/theproject/>) which offered activities for the educational understanding and exploration of LL.

4.2 Research Methodology

Against the previous background, a qualitative case study (Stake, 2006) was undertaken in the Department of Education and Psychology (DEP) of the UA (Portugal) in 2020–2021 which aimed to understand the effects of LL as an educational resource on pre-service teachers' professional knowledge, namely concerning three dimensions: pedagogical and didactic, ethical and political, and linguistic and communicative.

The study was developed in the three curricular units (CU) mentioned above which integrate Master's programmes of the DEP, where the concept of LL was introduced: *Linguistic Diversity and Education* (a CU attended by students enrolled

in diversified Masters in Teaching); *Practicum* and *Seminar* (attended by students enrolled in the Master in Teaching of English in Primary School, Master in Primary School Education and Portuguese and History and Geography of Portugal in the 2nd Cycle).

In what *Linguistic Diversity and Education* is concerned, it was attended by 17 students who were asked to develop pedagogical projects in pair work. Nine projects were conceived and analysed for the matter of this study. Concerning *Practicum* and *Seminar*, data were collected by means of individual written reflections from three future teachers: an English Foreign Language teacher (CA) and two generalist teachers (MB and RG), who introduced LL within their *Practicum* in primary schools with children aged 8–10 years old. These reflections, included in their *Practicum* Reports (PR), concerned the perceived results of practical activities on their professional knowledge and on pupils' linguistic, cognitive and affective repertoires.

Data (pedagogical projects and individual reflections) were submitted to thematic analysis (Clarke & Braun, 2013) according to the *Référentiel de compétences en didactique de l'intercompréhension* (REFDIC) (Andrade et al., 2019) which describes knowledge, skills, attitudes and values necessary for education professionals who intend to develop a plurilingual and intercultural education within a reflective approach. This framework was developed within the scope of the Miriadi Project (531-186-2012-FR-KA2-KA2NW) to assess and support the design of teacher education programmes for intercomprehension. Despite this focus, it has been used in teacher education programmes for other plural approaches (Andrade & Martins, 2018). REFdic comprises three dimensions of teachers' professional knowledge which are described briefly below (see Fig. 1):

- the pedagogical and didactic dimension—comprising not only the declarative knowledge about the possible pedagogical-didactic approaches to educate for intercomprehension, plurilingualism and interculturality, but also the procedural knowledge that allows the conception, organisation, development and evaluation of educational practices related to this concept. It integrates the fields of information, planning, didactic action, evaluation and reflection on the educational work developed around intercomprehension. It highlights the importance of having didactic knowledge on plural approaches which requires knowing how to research, select, analyse, adapt and build suitable pedagogical-didactic resources. In this sense, it is expected that the (future) teacher will be able to stimulate linguistic reasoning, promote positive attitudes towards diversity and motivate for the development of plurilingual and intercultural competence (cf. Andrade et al., 2019);
- the ethical and political dimension—referring to the understanding of intercomprehension as a value and as a practice to be advocated and protected, in a world characterised by diversity and inequality. It comprises the importance of listening to the other, defending individuals' linguistic and cultural rights, combating prejudices and stereotypes about languages, cultures and peoples and defending linguistic-communicative justice and peace, recognising the importance of the

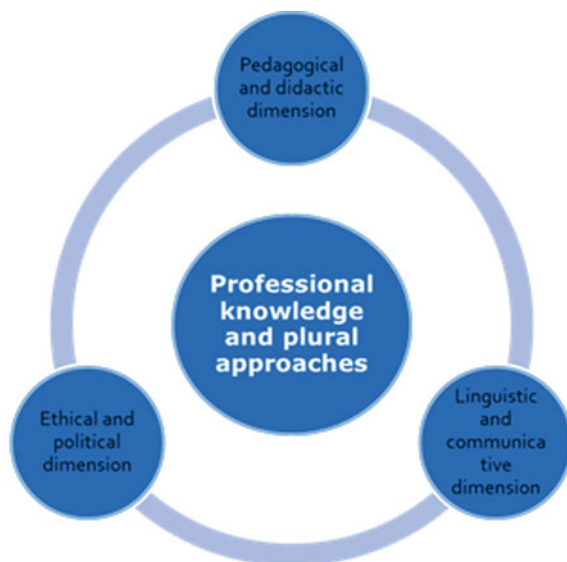


Fig. 1 REF DIC dimensions (in Andrade et al., 2019)

commitment of teachers towards intercomprehension as a way to value linguistic and cultural diversity and to ensure democracy (cf. Andrade et al., 2019);

- the linguistic and communicative dimension—referring to the development of an individual’s plurilingual and intercultural competence, who is committed to the learning of languages and cultures and who uses intercomprehension in this process throughout life. This dimension highlights the importance of analysing and reflecting on plurilingual and intercultural communication situations as self-training strategies which may lead to professional development, emphasising the importance of experiencing communication situations in which intercomprehension is used. It implies that the individual is committed to his/her training (cf. Andrade et al., 2019).

5 Findings

Findings are structured according to the three dimensions of analysis: (i) pedagogical and didactic dimension, (ii) ethical and political dimension and (iii) linguistic and communicative dimension. Within each dimension, data both from the pedagogical projects and individual written reflections will be presented and discussed and an account of students’ statements are exemplified by quotations.

5.1 Pedagogical and Didactic Dimension

All the nine pedagogical projects constructed by the students in the course unit *Linguistic Diversity and Education* refer to the pedagogical and didactic dimension which is the most prevailing in data. In this sense, all students mobilise the notion of LL in the planning of their projects in a more or less explicit way, conceiving projects to be developed in classes, schools, in nearby and/or distant localities and constructing pedagogical-didactic resources aimed at promoting positive attitudes towards linguistic and cultural diversity, as perceived in some of the learning objectives included in the projects: “Identify the multiplicity of languages around” (Group 1); “Think critically about the different cultures around them, more precisely at school, in order to understand that by getting to know the other, they are at the same time building a fairer and more inclusive society” (Group 2); “Recognise the importance of linguistic and cultural inclusion at school, promoting respectful attitudes” (Group 6).

In this line, all students identify LL as an educational resource, using it to educate for linguistic and cultural diversity, namely promoting the observation and valuation of the world’s linguistic and cultural diversity by pupils and educational communities, and promoting the inclusion of other speakers in schools and communities. Within this, and based on an analysis of their intervention contexts, student teachers are aware of the need to mobilise pupils’ linguistic and communicative repertoires and involve different actors—pupils, teachers, and families—in activities related to awareness of linguistic and cultural diversity. Moreover, some student teachers show declarative knowledge about LL and associate concepts with approaches to education for diversity, namely with the development of plurilingual and intercultural competence.

In spite of this, the analysis of the pedagogical projects show that students have some difficulties in relating theoretical concepts such as LL with didactic principles and in stating clearly the educational potential of LL. Moreover, it is important to underline that there is a lack of reflection on the potential of LL on their professional development which may be justified by the fact that these projects were not implemented in educational contexts, being a first approach to the concept of LL.

Regarding the written individual reflections, involved teacher students mobilise the concept of LL in their practices with Primary School children, showing an understanding of the relationship of LL with an education for diversity. They plan, implement and evaluate their projects centered or encompassing LL exploration, using diversified pedagogical resources and classroom strategies, in transversal and interdisciplinary approaches (especially in the case of generalist teachers). They provide children with opportunities to contact with languages and develop critical thinking skills, multimodal literacy skills and values (inclusion, equity).

As it happens in the pedagogical projects planned by the students in the course unit *Linguistic Diversity and Education*, in the individual reflections the pedagogical-didactic dimension is also clearly the predominant one, both from the perspective of interdisciplinary curriculum development, and from the perspective of developing

didactic and professional knowledge. LL appears as a resource and a tool for the integrated development of learning processes in different curricular areas.

The pedagogical-didactic dimension is central to MB and the concept of LL is a leit-motif for an interdisciplinary curriculum approach and for the construction of professional knowledge, organising the curricular insertion of the LL in her own teaching context:

One of my major objectives was to design a project that would meet the pupils' curriculum [...] I intended this project to be interdisciplinary and generate a transversal knowledge to all curricular areas. Thus, the areas of Portuguese Mother Tongue, Mathematics, History, Geography, Citizenship and Development and Artistic Expressions were involved. (PR-MB)

MB evaluates her didactic work and reflects on its impact on pupils' learning, valuing the results obtained:

I felt that the pupils started to think more deeply and meaningfully about linguistic and cultural diversity. The fact that many pupils had never left the country [...] never had realised how many languages exist in their city (pupils realised that languages are not static and do not exist only in a given territory). (PR-MB)

RG also alludes to the educational potential of LL, namely in changing pupils' representations about languages and places, including the languages of their city:

Throughout the project the pupils had contact with other languages and cultures, [...] they had the opportunity to speak with people from different nationalities [...]. It is noteworthy that children learned to say and write more words in other languages [...] I think they will now see the city in a different way. (PR-RG)

Their pedagogical projects show that the concept of LL allows developing the curriculum in an interdisciplinary way, involving different curricular areas, adding the possibility of a work on language(s), in their multimodality, developing pupils and pre-service teachers' pluriliteracy where critical thinking skills and the recognition of the visibility/invisibility of languages and cultures in the city are included. By analysing the reflections of these three pre-service teachers we can see that their main concerns are the curriculum, the contents, the learning strategies and the motivation for learning. In their projects, LL appears as a resource, but also as a didactic instrument at the service of an education for diversity (of spaces, languages, individuals, forms of expression and their relationships) and as an opportunity for collaborative construction of didactic knowledge, through experimentation and searching for educational innovation.

5.2 Ethical and Political Dimension

Five of the nine pedagogical projects outlined by the student teachers in the course unit *Linguistic Diversity and Educations* show an understanding of the ethical and political dimension of LL pedagogical exploration, associating it with the promotion of social inclusion and respect for linguistic and cultural diversity, that is, with social

justice and linguistic rights. This is mainly perceived in projects' aims ("The aim of this project is to promote social inclusion, in line with Portuguese legislation that seeks to make diversity a wealth", Group 2). Furthermore, in those five projects, there is a recognition of the role of educational contexts in expanding individuals' linguistic landscapes and in contexts' linguistic and cultural enrichment, as perceived in the following example:

It is at school that children develop the skills necessary to face the current world, recognising their language and identity, learning to respect the Other and recognising that the world is vast and diverse. (Group 3)

In all the nine projects it is possible to observe that there is an understanding of the relationship between individuals' life stories and the need for educational communities to value them, integrating diversity and promoting diversified educational landscapes. In this sense, students inscribe LL in the framework of a democratic education.

Regarding the written individual reflections, this dimension is present in the discourse of the three pre-service teachers. They understand the ethical and political dimension of LL pedagogical exploration, committing themselves to democratic language education and to the respect for linguistic rights in the projects undertaken with pupils:

It is important to make pupils think, reflect and deepen knowledge and to develop skills and dispositions of critical spirit in relation to what is diverse and/or different within the community, contributing to the education of conscious and responsible citizens. (PR-CA)

The pupils realised that in the city there are inhabitants of different nationalities and what their difficulties are. (PR-RG)

We also need to have a critical sense, reconciling it with our creativity and desire to innovate practice, enabling pupils to be more aware of citizens and respectful of differences. (PR-MB)

These pre-service teachers understand the relevance of promoting pupils' creative and reflexive thinking skills, namely about Otherness, contexts, languages (their roles and status), as well as the importance of deconstructing pupils' stereotypes. They reveal concern with education for diversity and a more inclusive LL. The projects they implemented during the *Practicum* aimed to broaden pupils' linguistic repertoires and to develop critical thinking skills related to the role of languages in the city, including the deconstruction of stereotypes and the mobilisation for an intervention in LL and the involvement in didactic/educational paths of joint demand of solutions to problems of today's world.

The awareness concerning the importance of the didactic work developed from and about LL helps these pre-service teachers understanding the importance of "felicidadania" [happiness + citizenship] (Rios, 2001), as a global citizenship which involves understanding the world, reflecting on the possibilities of improving reality in search of a common wellbeing (happiness). As MB writes at the end of her PR:

I am very happy to have managed to involve the pupils so much, to have made them the biggest stakeholders, to have allowed them to feel proud of the path that, together, we have taken. I

am sure that none of them will look at cities in the same way. I am sure that what they have learnt throughout the pedagogical project will continue to accompany them, contributing to their education as citizens of a global world. And that is what fulfills me the most. (PR-MB)

5.3 *Linguistic and Communicative Dimension*

Regarding the linguistic and communicative dimension, in pedagogical projects (course unit *Linguistic Diversity and Education*) students show an understanding of the need to develop linguistic and communicative competences in pupils but they do not refer to it as part of their professional knowledge.

In the written individual reflections, the linguistic and communicative dimension seems to be implicit in all the didactic work developed by the student teachers, who do not seem to feel the need to go into it in depth. In fact, this dimension appears in the CA's PR associated with the project objectives:

[...] develop children's linguistic-communicative repertoire in English (- Know and identify vocabulary in English LE, related to the topic under study; - Understand instructions given to complete small tasks; - Express themselves appropriately in simple contexts; - Interact with the teacher and peers in simple communicative situations, previously prepared, obtaining and providing information). (PR- CA)

In MB's PR the linguistic and communicative dimension is also linked to the objectives of the didactic intervention project, but besides the development of pupils' knowledge about linguistic and cultural diversity and its presence in the LL, MB also reflects on the knowledge regarding language awareness and LL as a metatext:

.. pupils have realised that LL is very important since it reflects how a city is organised and prepared to welcome migrants and tourists from other countries, in what ways different languages are present in the landscape of a place and why there are places that have road signs in many languages and others do not. (PR-MB)

It is also in the objectives of the project that we can find this dimension in RG's PR (broadening pupils' linguistic repertoire and critical thinking skills related to the role of languages in the city), for example when she writes:

The learners created linguistic elements they would like to add to Aveiro's LL aiming to make immigrants feel integrated in the city. It should be noted that the pupils wrote signs in different languages such as Mandarin, French, Spanish and Ukrainian on the elements they would add to Aveiro. The pupils had a strong connection with diversity when they interviewed guests of different nationalities [...] they learned about the concept of LL and wrote words and sentences in other languages. Another gain was that they understood the difference between a tourist and an immigrant. (PR-RG)

Thus, the linguistic-communicative dimension is associated with the pedagogical-didactic dimension because it is in the teaching practice, or in other words, it is in the development of learning activities of the pedagogical LL project and in the creation of different resources for the development of the curriculum contents. This allows to observe the development of the student teachers' plurilingual and pluricultural competence.

When referring to the *practicum* internship, CA states that it allowed her to realise how imperative it is that programmatic content can be articulated with transversal/current themes of society—preparing the pupils “for life in society, as active and responsible citizens”, and she mentions some activities she developed with the pupils:

Simultaneously with the learning of English as a foreign language, in the classroom context, the pupils looked for different languages in the linguistic landscapes present in their homes, more specifically in products/packaging: it was a very enriching activity in terms of contact with different languages, many of them previously unknown to the children. (PR - CA)

In spite of the fact that all these dimensions were somehow developed by student teachers, data analysis shows some relevant differences between those attending the CU *Linguistic Diversity and Education* and the pre-service teachers’ written reflections in the ambit of *Practicum/Seminar*. The latter reflect more deeply on the potential of LL on their professional development, relating more easily theoretical concepts to didactic principles and teaching practice and stating clearly the educational potential of LL. These differences are justified the following way: while in the CU *Linguistic Diversity and Education*, the future teachers had a first opportunity to be in touch with the concept of LL as a curricular content and idealised pedagogical projects which were not implemented in educational contexts, the pre-service teachers in *Practicum/Seminar* had already attended the CU *Linguistic Diversity and Education* wherein they conceived pedagogical projects and within *Practicum/Seminar* they had the opportunity to mobilise and reconstruct LL concept in practice, i.e., they had the possibility to implement LL projects in schools and to reflect about their potentialities.

6 Concluding Remarks

This study aimed to understand and discuss the effects of LL as an educational resource on the construction of pre-service teachers’ professional knowledge concerning three dimensions: pedagogical and didactic, ethical and political, and linguistic and communicative. For this matter, we analysed nine pedagogical projects developed by future teachers attending the curricular unit *Linguistic Diversity and Education* and individual written reflections of three preservice teachers enrolled in *Practicum/Seminar*.

Results show that both in the pedagogical projects constructed by future teachers in the CU *Linguistic Diversity and Education* and in the pre-service teachers’ written reflections in the ambit of *Practicum/Seminar*, LL is perceived as an educational resource that impacts mainly on the pedagogical and didactic dimension of professional knowledge. In this way, students perceive LL exploration as a way to educate for linguistic and cultural diversity within transversal and interdisciplinary approaches, promoting the observation and appreciation of the world’s linguistic and cultural diversity by pupils and educational communities. This identification

makes them mobilise this notion in the planning and evaluation of their pedagogical projects, which is perceived in learning outcomes, activities, didactic strategies and pedagogical resources conceived.

The process of design, development and evaluation of the didactic projects allowed the future teachers to develop multiple competences related to teacher education principles and strategies underlined above: observation, understanding intervention and reflection. Hence, the concept of LL allowed a (re)construction of knowledge related to the pedagogical and didactic dimension and allowed student teachers to understand the importance of openness and commitment to the promotion of linguistic and cultural diversity. Moreover, the projects developed by them highlight the LL educational potentialities insofar as they allow the development of multiliteracies competences.

Concerning the ethical and political dimension, results highlight that student teachers relate LL pedagogical exploration with democratic language education, social justice and linguistic rights, referring specifically to social inclusion and a broad respect for linguistic and cultural diversity. Accordingly, they emphasise the role of diversified educational actors in the promotion and protection of diversity and diverse educational landscapes, as ways of making the world better, attaching teachers, pupils and families an ethical responsibility in this endeavour.

Regarding the linguistic and communicative dimension, student teachers do not deeply reflect on it regarding the development of their own professional knowledge. This may happen because within their didactic action, naturally, they focus on pupils and on the need to develop their linguistic and communicative competences. This dimension is, thus, implicit and profoundly related to the pedagogical and didactic dimension, notwithstanding the fact that the future teachers need to become more aware of the process of developing their own plurilingual competence, reconstructed within the teacher education process. In fact, the reverse is true: the linguistic-communicative dimension is at the service of a didactic dimension centred on the desire to put into practice knowledge built from and about LL.

Hence, in spite of the different teacher education stages and paths in which students were involved, the results show positive indicators that LL can be an educational resource to be mobilised in a more sustained way in professional life, influencing and enriching pre-service teachers' professional knowledge.

In terms of recommendations for pre-service teacher education contexts, we identify the need for teacher students to experiment the potentials of LL in real educational contexts, for example in research-action activities and pedagogical projects. This experimentation may provide opportunities for teacher students to reflect on their pupils' interaction with different LL, developing pupils' knowledge, skills and attitudes towards languages and diversity and becoming engaged in promoting pupils' understanding and awareness of linguistic rights and democratic values.

As a final remark, we conclude that student teachers realise the potential of exploring LL as a resource and a learning tool, integrating this concept into their pedagogical repertoire. They are aware of the presence of linguistic diversity in communities, including schools, and this awareness helps them to reflect on the ethical and political dimension of their practice which needs a more continuous feedback throughout their learning process of teaching practice. It seems, however,

that it is necessary to return to the theme of LL in recurrent teacher education activities, deepening the knowledge on the concept and the practices it may mobilise in the construction of knowledge on teaching and learning contexts, in order to better prepare teachers to linguistic and cultural diversity in a globalised society.

Further research is required to understand whether pre-service teachers' perspectives have an impact on their future teaching knowledge, namely in terms of creating a supportive school environment, working with and valuing linguistic and cultural diversity and connectedness to pupils' "lifeworlds".

References

- Andrade, A. I., & Martins, F. (2018). Educação global e diversidade linguística na formação inicial de educadores e professores: da intervenção à (auto) reflexão. *Indagatio Didactica*, 10(1), 47–62. <https://doi.org/10.34624/id.v10i1.12973>.
- Andrade, A. I., Martins, F., & Pinho, A. S. (2019). Un référentiel de compétences en didactique de l'intercompréhension–REFDIC. *EL.LE*, 8(1), 253–264. <https://doi.org/10.30687/ELLE/2280-6792/2019/01/010>.
- Andrade, A. I., & Pinho, A. S. (Eds.). (2010). *Descobrir a intercompreensão: Alguns itinerários de autoformação*. Universidade de Aveiro.
- Andrade, A. I., & Martins, F. (2017). Desafios e possibilidades na formação de professores—em torno da análise de relatórios de estágio. *Educar Em Revista*, 63, 137–154. <https://doi.org/10.1590/0104-4060.49134>.
- Bolton, K., Botha, W., & Lee, S.-L. (2020). Linguistic landscapes and language contact. In R. Hickey (Ed.), *The handbook of language contact* (pp. 281–300). Wiley-Blackwell.
- Cenoz, J., & Gorter, D. (2008). The linguistic landscape as an additional source of input in second language acquisition. *IRAL—International Review of Applied Linguistics in Language Teaching*, 46(3), 257–276. <https://doi.org/10.1515/IRAL.2008.012>
- Clarke, V., & Braun, V. (2013). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, 26(2), 120–123. <https://uwe-repository.worktribe.com/output/937596>
- Clemente, M. (2017). *Paisagem linguística urbana—o caso de Aveiro e sua relevância educativa*. [Doctoral thesis, Universidade de Aveiro]. Repositório Institucional da Universidade de Aveiro <https://ria.ua.pt/handle/10773/22801?mode=full>
- Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F. (2009). Linguistic landscape and language awareness. In E. Shohamy & D. Gorter (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 253–269). Routledge.
- Ferrão-Tavares, C. F., & Ollivier, C. (Coord.) (2010). O conceito de intercompreensão: origem, evolução et definições. *REDINTER-Intercompreensão*, 1. <http://www.redinter-intercompreensao.eu/numeros-publicies/numero-1>
- Gorter, D. (2013). Linguistic landscapes in a multilingual world. *Annual Review of Applied Linguistics*, 33, 190–212. <https://doi.org/10.1017/S0267190513000020>
- Gorter, D. (2018). Linguistic landscapes and trends in the study of schoolsapes. *Linguistics and Education*, 44, 80–85. <https://doi.org/10.1016/j.linged.2017.10.001>
- Gorter, D., & Cenoz, J. (2015). Linguistic landscapes inside multilingual schools. In B. Spolsky, M. Tannenbaum, & O. Inbar (Eds.), *Challenges for language education and policy: Making space for people* (pp. 151–169). Routledge.
- Hancock, A. (2012). Capturing the linguistic landscape of Edinburgh: A pedagogical tool to investigate student teachers' understandings of cultural and linguistic diversity. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 249–266). Peter Lang.

- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology, 16*(1), 23–49. <https://doi.org/10.1177/0261927X970161002>
- Li, J., & Marshall, S. (2018). Engaging with linguistic landscaping in Vancouver's Chinatown: A pedagogical tool for teaching and learning about multilingualism. *International Journal of Bilingual Education and Bilingualism, 23*(8), 925–941. <https://doi.org/10.1080/13670050.2017.1422479>
- Lourenço, M., & Melo-Pfeifer, S. (2021). *Linguistic landscapes as a pedagogical tool for plurilingual education and global citizenship*. Paper presentation at the International Conference on Foreign Language Learning. University of Lisbon, Portugal.
- Peercy, M. M. (2014). Challenges in enacting core practices in language teacher education: A self-study. *Studying Teacher Education, 10*(2), 146–162.
- Prada, J. (2021). *From landscapes to sensescapes: the implications of translanguaging for linguistic landscapes research* [Conference session]. 2nd LoCALL Trainign week, YouTube From Landscapes to Sensescapes. https://www.youtube.com/watch?v=JW3MCZcft_4&list=PLQr6fAO8AbiaefOI23ekVpbivB9U1kr45&index=3
- Rios, T. (2001). *Compreender e ensinar: por uma docência da melhor qualidade*. Cortez Editora.
- Rowland, L. (2013). The pedagogical benefits of a linguistic landscape project in Japan. *International Journal of Bilingual Education and Bilingualism, 16*(4), 494–505. <https://doi.org/10.1080/13670050.2012.708319>
- Scarvaglieri, C., Redder, A., Pappenhagen, R., & Brehmer, B. (2013). Capturing diversity: Linguistic land and soundscaping. In I. Gogolin & J. Duarte (Eds.), *Linguistic superdiversity in urban areas: Research approaches* (pp. 45–73). John Benjamins. <https://doi.org/10.1075/hsl.2.05sca>
- Schleicher, A. (2011). Building a high-quality teaching profession: Lessons around the world. *OECD Report*. <https://doi.org/10.1787/9789264113046-en>
- Shang, G., & Xie, F. (2020). Is “poor” English in linguistic landscape useful for EFL teaching and learning? Perspectives of EFL teachers in China. *International Journal of Applied Linguistics, 30*(1), 35–49. <https://doi.org/10.1111/ijal.12258>
- Shoamy, E. G., & Waksman, S. (2012). Talking back to the Tel Aviv Centennial: LL responses to top-down agendas. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 109–125). Peter Lang.
- Shohamy, E., & Gorter, D. (Eds.). (2009). *Linguistic landscape: Expanding the scenery*. Routledge.
- Stake, R. (2006). *Multiple case study analysis*. The Guilford Press.
- Szabó, T. P. (2015). The management of diversity in schools: an analysis of Hungarian practices. *Apples—Journal of Applied Language Studies, 9*(1), 23–51. <http://apples.jyu.fi/article/abstract/353>
- Tjandra, C. (2021). Supporting newcomer children's language awareness, incidental language learning, and identity negotiation through the multilingual linguistic landscape: An exploratory case study. *The Canadian Modern Language Review, 77*(1), 1–22. <https://doi.org/10.3138/cmlr-2019-0060>

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The Co-Construction of the Concept “Linguistic Landscape” by Language Educators in an Online Course



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Abstract In online teacher education programmes, the co-construction of concepts is of paramount importance to create a sense of sharing, motivating teachers to further engage in the activities of a short-term community of practice. Indeed, participants usually (and immediately) engage in this kind of conceptual dialogue, as it builds a sort of affective bond and a cognitive common ground, and reduces potential dissonances. Such co-construction of the meaning of key concepts is even more important in multilingual and online teacher education contexts, as these characteristics of the context might otherwise discourage teachers from actively participating in the exchanges, due to potential technical and linguistic issues. In this contribution, we focus on teachers and mentors participating in an online teacher training event (one-week duration) around the use of Linguistic Landscapes in language education, and we analyse how they collaboratively construct the meaning of “linguistic landscape” in multilingual discussion around specific literature using the platform Perusall. More specifically, we will analyse how they dialogically expand or reduce the scope of the concept and appropriate it for pedagogical purposes, depending on their linguistic repertoires and professional background.

Keywords Teacher education · Socioconstructivism · Co-construction of knowledge · Linguistic landscape

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1 Introduction

The field of teacher education has revealed the importance of establishing and participating in professional development communities (Wenger, 1998). These communities can take place in face-to-face, virtual or blended environments (Sylla & Vos, 2010) and can be facilitated using one or more languages of communication (Araújo e Sá & Melo-Pfeifer 2018; Mondada, 2004), meaning that crosslinguistic mediation can be called upon as a strategy to assure intercomprehension between participants (Araújo e Sá, De Carlo & Melo-Pfeifer, 2019). In any of these scenarios, the community of teachers and/or student teachers must agree upon and discuss the nature of the concepts they use as a starting point for engaging in subsequent tasks. If participants have different profiles and levels of expertise, cognitive mediation can also play a role in how participants negotiate concepts and get involved in their definition, sharing and development (Coste & Cavalli, 2015, on cognitive mediation). In this contribution, we delve into the co-construction of the concept of Linguistic Landscape (LL) in an online, multilingual and short-term community of practice (one-week duration), in which participants have different degrees of professional experience. We assume that the discussion of the concepts used by a community of practice, because it contributes to the professional and reflexive socialization of the participants (Sylla & Vos, 2010), is a reflexive approach that may lead to professional development. Following Alarcão and Roldão (2008), we understand professional development as a process of conceptual and empirical change that takes place in socially constructed contexts of search for professional identity. By engaging in conceptual discussions, participants also co-construct their professional “self”, made up of a complex weave of experiences, knowledge and inter-individual relationships (Marcelo, 2009; following Araújo e Sá, De Carlo & Melo-Pfeifer, 2010a, 2010b).

In the scope of this contribution, we aim to answer the following research questions:

- How do participants in a short-term and multilingual community of practice around the concept of LL appropriate and discuss that concept?
- What pedagogical use do they attach to LL in educational environments, namely when it comes to the implementation of multilingual pedagogies?

To answer these research questions, we will first discuss conceptual co-construction as a particular strand in fostering (professional) knowledge and we will approach its role in professional development. In a second moment, we will describe the contexts and design of the empirical study, followed by the presentation and discussion of its results. We will then suggest some ways forward for developing more critical and controversy-driven communities of practice.

2 Fostering Knowledge and Teacher Education: A Focus on the Co-Construction of Concepts in Online Collaborative Environments

In the socio-constructivist and coactional stance adopted in this contribution, prior linguistic and professional experience plays a central role. Participants are encouraged to construct, together with peers and trainers, their knowledge on LL and its pedagogical use for language education. It is a question of learning to become a language-culture professional not alone but with the other, by placing oneself, at the same time or alternately, in the role of the subject in training and co-trainer. Our conceptual approach to professional (teacher) development is, thus, based on the following premises (Araújo e Sá et al., 2010a, 2010b):

- the concept of professional development is indispensable in an educational profession, since it refers to the process of lifelong transformation;
- for this development to take place, participants must be stimulated to adopt a reflective attitude, which makes them critical of the representations and certainties concerning teaching subjects and the profession;
- autonomy, however, does not mean autarky, because all professional development takes place within a community that acts as interlocutor, source of information, and educator: a reflective approach to training is therefore necessarily a collaborative one, and it is in this sense that we interpret the concept of co-reflexivity;
- discussion around certain concepts (such as LL or intercomprehension), because they offer a new look at language teaching and learning and challenges some persistent biases about languages and language learning, is a valuable approach to promoting reflective, critical and collaborative learning (see Melo-Pfeifer, forthcoming, on LL).

As already stated, collaborative professional development can take place through participation in communities of practice, whether face-to-face, online or hybrid. In research concerning online communication, a particular reflection has taken place among several authors on the notion of community, be it virtual, of practice, of learning or other (Dejean-Thircuir, 2008; Dillenbourg et al., 2003; Herring, 2004). In this work, we take up the definition of Wenger (1998), for whom the concept of “community of practice” is effective for describing knowledge-oriented social organisations with two fundamental, strictly related characteristics: practice (which defines a special community) and identity (which is formed as a function of practices). Wenger proposes a model of learning as a social process in which the appropriation of practices occurs through the construction of social identity and common semantics (including concepts). This is one of the core ideas for the creation of the community that we will study here. Even if the literature frequently denounces the difficulty to define the specific traits that would characterize an online community, some criteria can be identified: (i) actions deployed by participants to advance communication (including identification of a shared objective, active participation in exchanges, acceptance of communication rituals, use of a common language and behaviours, etc.)

and (ii) personal attitudes expressed during exchanges (including self-disclosure, taking into account the words of others, construction of emotional links, presence of humour, conflict management, negotiation of meanings, etc.). Here, we will focus on exchanges around the negotiation of the meaning of LL.

Relevant to this contribution, studies of collaborative work in communities of professional development emphasize the need to consider how knowledge and know-how emerge and are co-constructed in interaction. This implies analyzing interactions as a means of accessing the collaborative construction of knowledge and know-how between members of the “community of practice” or “professional community”, following a socio-constructivist approach to interaction. This analytical work is even more important when we take as the object of study online multilingual communities of language teachers, which are characterised by their radically interactional dynamics (around the different languages and their use) or by their exclusively discursive nature (as other meaning-makers and sense containers, such as gaze and gesture are only scarcely present, e.g., through the use of smileys).

3 Empirical Study

In this chapter, we analyse an online teacher training event (one-week duration) around the use of LL in language education, where teachers and mentors participate to collaboratively construct the meaning of LL in multilingual discussion around specific literature. The training event, one Training Week (TW), was organized between 18th and 22nd January 2021, within the scope of the LoCALL project (2019–1-DE03-KA201-060024). The TW occurred in an online format and was coordinated by the team of researchers from Aveiro University (Portugal), as a project partner. The main goals of this TW were: (i) to reflect on and discuss the concept of Linguistic Landscapes and its integration in teaching practices; (ii) to promote awareness of language presence, roles and dynamics in the community; and (iii) to develop knowledge about the educational added value of mapping local LL, namely using the LoCALL App (cf. Chap. 8).

3.1 *Participants*

After disseminating the TW, 130 individuals showed their interest, by filling in Google Forms. When the program was defined, there were 65 registrations of participants, from 20 countries: Portugal (12), Turkey (11), not mentioned (7), Uruguay (4), Mozambique (4), U.S.A. (4), Brazil (4), Spain (3), Philippines (3), China (2), France (1), Germany (1), Ireland (1), Costa Rica (1), Malta (1), Netherlands (1), Canada (1), Colombia (1), Switzerland (1), Guinea (1) and U.K. (1). These participants mentioned 11 different working languages (Portuguese, English, French, German,

Spanish, Turkish, Mandarin, Dutch, Tagalog, Italian, Filipino). In terms of the participants' profile, 15 were university teachers, 14 were Ph.D. students, 12 were school teachers, 5 were Master students, 3 were researchers, 2 were University students, 1 was a consultant and another one an ELT graduate.

3.2 The Learning Scenario: Activities and Principles

The TW was organized and developed using the Google Classroom, where both trainers and participants enrolled in synchronous and asynchronous activities. There were two previous tasks, to be uploaded by the participants, before the first synchronous session: (a) “My fridge/pantry and my linguistic landscape(s)” and (b) Mandatory readings. In the first task, the participants had to create a short presentation of themselves, unveiling some information about their linguistic biography and about the linguistic landscape they find in their house, for instance in the fridge and/or in the pantry. They were asked to create a short video (up to 2 min), a drawing or a collage of photos using all their multilingual repertoire, and to upload it using the Padlet tool. Both trainers and trainees had to browse the Padlet, watch some of the presentation posts and comment on at least three of them.

The second previous task, which we will focus on in this chapter, was to read and comment on at least two of the provided readings on LL. The articles/chapters were chosen by the trainers according to the content, but also to the language in which they were written. The platform used to upload and comment on the texts was Perusall. Since some participants were not acquainted with Perusall, the organization team shared a tutorial video on how to use this tool.

We will briefly describe the developed activities in chronological order. On Monday, after a short introduction to the project and to the TW itself, 3 webinars were organized: “Exploring multimodal variance in pandemic-related regulatory signage” (by Jannis Androutsopoulos); “From Landscapes to Sensescapes: the implications of translanguaging for Linguistic Landscapes research” (by Josh Prada) and “Multimodal translanguaging in the Linguistic Landscape: in support of language reclamation and maintenance” (by Corinne Seals).

On Tuesday, the participants were asked to watch a video of the LoCALL App, which would be used during group work to be done later on. The LoCALL App was created by the project team in Aveiro and consists of a mobile application tool to explore the linguistic landscape, for example, with students or visitors/tourists in any given location (see chap. 8).

On Wednesday, participants were organized into 7 groups (each with 2 or 3 tutors/trainers), according to their different time zones and their synchronous task was to explore LL with the LoCALL App and create proposals to integrate LL in the App. This would be the final work to be presented by each group on Friday.

On Thursday, participants were invited to a synchronous online visit to Museums: “Looking at Mozambican Portuguese through a kaleidoscope” (by Perpétua

Gonçalves, from Eduardo Mondlane University, Mozambique) and “A virtual promenade through ‘Ciudad Vieja: mapas lingüísticos’” (by Raquel Carinhas, Camões I.P. in Uruguay).

On Friday afternoon there was a synchronous group work presentation for two hours, followed by a wrap-up party, a kind of social meeting where all participants had the opportunity to play games and interact more informally, as well as discuss their opinions about the TW.

3.3 Perusall as a Data Collection Instrument

As mentioned above, in this chapter we focus on the reading activity of the chosen texts and the comments made by the trainees and trainers using the Perusall platform. Previous research on the negotiation of the concept of LL involved language teachers in multilingual discussion forums (Brinkmann, Gerwers, Melo-Pfeifer & Androutopoulos, 2021; Brinkmann and Melo-Pfeifer 2023; Melo-Pfeifer forthcoming) and classroom talk (Brinkmann, Duarte & Melo-Pfeifer, 2022). These studies analysed how the concept of LL was negotiated in classic online and face-to-face interactional environments. The Perusall platform is a social annotation environment specifically designed for undergraduate courses (Miller et al., 2018) and “its goal is to foster the comprehension of curriculum contents by involving students in a digital environment where they can share their issues, doubts and questions by helping each other” (Cecchinato & Foschi, 2020, p. 49). Figure 1 presents a print screen of the Perusall platform, showing how it looks like to the user.

In practical terms, instructors create and upload a library of readings to the course page on the Perusall platform and assign readings to trainees adjusting several parameters (for instance, the minimum number of annotations, type or work—individual or in groups, participant identification or anonymous interaction, duration). The trainers assign readings to all participants at once, or they may give the trainees the possibility to choose which ones they are going to read. The participants’ interactions are based on specific sentences they identify, either because they are considered more difficult to understand or more relatable or more controversial. This tool can therefore foster communication and interaction between participants and can also be useful for the teacher to identify ways to overcome possible misconceptions or clarify concepts and points of view, for instance. One of the potentialities of this tool is its role in creating a sense of community (Rovai, 2002), and in its collaborative approach, since students read and can flag common inquiries (using an orange question mark) or reinforce other annotations (using a green checkmark). As stated by Clarke, “Perusall has incredible potential from a pedagogical perspective. Not only does it encourage more regular reading intervals, it monitors the reading patterns across individual assignments and students” (2021, p.153).

X

All comments for Gorter (2013) Linguistic landscapes in a multilingual world				
	physical space. The extension, she argues, should go beyond the traditional sense of language and must take into account "texts+images+location+environment+people+practices+history+time+ideology" (p.161)			
Raquel Carinhas	Muchísimo!!	2	Nota: 0	jan 20 2:37 pm jan 20 2:37 pm <input checked="" type="checkbox"/> Mark as read
Maria Carolina Lúgaro	Pienso que también se deberían incluir manifestaciones artísticas como graffitis, que muchas veces están acompañadas de frases en diversos idiomas	2	Nota: 1	jan 17 8:50 pm jan 17 8:50 pm <input checked="" type="checkbox"/> Mark as read
Sibrecht Veenstra	I like your suggestion of a multilingual surroundingscape. We should not exclude non-urban settings. There is a lot of interesting LL to be found there as well.	2	Nota: 2	jan 17 6:50 pm jan 17 6:50 pm
Hülya Tuncer	I also prefer "multilingual cityscape" since it may well encapsulate the idea behind although some might disagree on "cityscape". How about (multi)linguistic surroundingscape?	2	Nota: 2	jan 12 8:33 am jan 16 12:49 pm
Eylül Karabulut	The public signs in Istanbul, for example, are mostly written in Turkish as well as Arabic and English. However, the signs that are written in Arabic outnumber the ones that are written in English. This example indicates the variations of languages in Turkey. Therefore, the explanation given here is quite right. We can easily figure out which languages are used or in other words we can see the "general language situation" in any country by analysing its linguistic landscapes.	2	Nota: 1	jan 18 6:36 pm jan 18 6:42 pm
Sara Santos	This choice of languages "signals what languages are prominent and valued in public and private spaces and indexes the social positioning of people who identify with particular languages" (Dagenais et al., 2009, p. 254). Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F. (2009). Linguistic landscape and language awareness. 253-269.	2	Nota: 2	jan 14 3:24 pm jan 14 3:26 pm
Laila Ruiz	Interesting to connect it to the current situation in Northern Ireland.	2	Nota: 1	jan 16 6:46 pm jan 16 6:46 pm
Wilfred Gabriel Gapsas	The FLC Group recently encouraged linguists to examine transgressive linguistic landscapes as a means of identifying health and environmental issues. The method is proposed was to use Google	3	Nota: 2	jan 15 2:23 pm jan 15 2:24 pm

Fig. 1 Printscreen from the Penusall platform showing content from the LoCALL project Training Week January 2021

Thus, Perusall functionalities give the trainer access to participants' participation, both quantitative (relying on multiple indicators and on a Machine Learning algorithm) and qualitative (the transcription of all the annotations written by the participants). With this platform, participants may write comments, underline sentences, highlight parts of the text, share their questions and comments with other participants (both trainers and trainees) in an easy way. Hence, by using the Perusall social annotation system, the reading experience is transformed, changing from a pretty solitary experience to a social one (Miller et al., 2018).

3.4 Corpus and Methodology of the Analysis

The *corpus* (Table 1) comprises 160 entries by 28 participants of the online TW, relating to six theoretical or empirical studies on LL in different languages (Spanish, French, English, Portuguese). Note that the languages of the texts were chosen according to the linguistic profiles of the participants (Sect. 3.1).

The interactions comprise comments to fragments of the studies under analysis and subsequent interactions by participants on a given topic, including reactions (emoticons), reading notes and bibliographic suggestions. The *corpus* was analysed using inductive thematic analysis (Braun & Clarke, 2006), to identify what kind of reflections emerge around LL using a collaborative reading application. From the data analysis, three thematic categories emerge in terms of relevance and meaning, as well as internal homogeneity of each theme and external heterogeneity between themes (Braun & Clarke, 2006): (i) LL-conceptual discussions; (ii) LL as a pedagogical resource; (iii) dynamic relations between languages.

Table 1 *Corpus*: texts, comments and languages

Text code	Reference of the text	Number of participants (P) + comments (C)	Languages used + frequency
T1	Carinhas et al. (2020)	P-10 C-30	Portuguese (23), Spanish (4), English (2), Emoticon (1)
T2	Dagenais et al. (2013)	P-2 C-4	French (4)
T3	Gorter (2013)	P-21 C-60	English (54), Spanish (4), Portuguese (1), Emoticon (1)
T4	Lomicka and Ducate (2019)	P-13 C-32	English (32)
T5	Ma (2018)	P-8 C-15	Portuguese (8), Spanish (6), English (1)
T6	Melo-Pfeifer and Lima-Hernandes (2020)	P-6 C-16	Portuguese (10), Spanish (5), French (1)

In terms of language representativeness, the language used in the text influences the readers and, consequently, the languages or groups of languages used in the comments. In this context, English was the most common language in the interactions (in 4 of the 6 texts, alone or in combination with other languages), followed by Spanish and Portuguese. Regarding the latter two languages, in some cases, there is plurilingual interaction among participants in the same topic, based on the possibilities of intercomprehension between these romance languages.

4 Data Analysis

This section is divided into a presentation of the three thematic categories obtained through an inductive thematic analysis of the *corpus*.

4.1 *Linguistic Landscapes: Conceptual Discussions*

In the first thematic category we observed from the *corpus*, the data analysis points to a re-appropriation and re-conceptualization of the concept of LL that emerges from the interaction between participants. The extension of the concept attends, above all, to a synesthetic apprehension of the landscape that surrounds us. For the participants, LL goes beyond the written modality, encompassing different modes such as sound, gesture, taste, approaching the concept of *sensescapes* (Pennycook & Otsuji, 2015) and a strong relationship with multimodality and the semiotic power of the landscape: “Me parece muito interessante a inclusão do gestual já que também é cultural.¹” (P3.T5).² This semiotic power of landscape embodies a strong relationship between the concept of LL, narrativity and the identity of spaces, as mentioned by P3 and P4: “It is symbolic and also presents a historical narrative of the place” (P4.T3).

Poderíamos considerar também como parte da P[paisagem], além do sonoro, táctil, visual, verbal que se menciona aqui, o paladar? Levando em conta o fluxo migratório e a globalização que faz com que tenhamos nas prateleiras produtos de muitos países e cujos ingredientes vão se misturando com o local.³ (P3.T5)

¹ All the examples are reproduced in the original form and languages, but translation into English is provided in all examples that are not in this language. In this quotation: “The inclusion of signs seems to be very interesting, since it is also cultural”.

² The input coding combines the number assigned to each participant (P) and the commented text (T).

³ Translation: “Could we also consider the taste as part of the Landscape, besides the sound, touch, visual and verbal, mentioned before? Taking into account the migratory flow and globalisation which makes us have in our shelves products from several countries which have ingredients that are mixed with the local ones.”

For the participants, the concept of LL ends up encompassing a communication that, as Canagarajah argues through the concept of translanguistic practices, “transcends words and involves diverse semiotic resources and ecological affordances” (Canagarajah, 2013, p. 6). Consequently, the plurisignifications attributed to a given LL involve the concepts of agentivity and creativity of social actors in the recreation of the plurisemiotic landscape:

I think this is a crucial extension of the term as it captures the agency involved. Given that we do not usually see the creators or authors of the linguistic landscape in the act of creating it, we may have the tendency to forget that just like other language use, people are creating it and re-creating it somewhere along the way (P5.T3).

The concept of LL also incorporates various spatialities such as the street, school, house, but also virtual environments: “Penso que também podemos considerar os espaços virtuais (sobretudo as redes sociais) como paisagens linguísticas (linguistic netscape), que integram textos multimodais a partir de elementos visuais, verbais, sonoros, gestuais, etc.”⁴ (P1.T5).

For P3, LL encompasses not only media and synaesthetic modalities, but a semiotic combination of these with artefacts in time and space, which appeal to multiple meanings (and evocations). This comment takes up the concept of semiotic assemblages which condense the “multisensory nature of our worlds, the vibrancy of objects and the ways these come together in particular and momentary constellations” (Pennycook, 2017, p. 272).

This expansion of the concept reinforces the relationship between individuals and the landscape in which they are immersed. Participants acknowledge the multiple temporalities, spatialities and subjectivities comprised in the same unit of analysis: “Sin embargo, recordemos que el propio concepto de PL [paisaje lingüístico] estará en constante reformulación pues está directamente influenciado por la subjetividad y temporalidad específica (contexto)”⁵ (P2.T5).

4.2 *Linguistic Landscapes as a Pedagogical Resource*

Regarding the second thematic category, we could observe how reading the empirical studies (Table 1 above) enabled the discussion around LL as a pedagogical resource (Cenoz & Gorter, 2008). The participants recognise in the LL a tool that enables the establishment of pedagogical continuities between different learning spaces, such as school and street, promoting individuals’ engagement with spaces of their daily lives:

⁴ Translation: “I think that we may consider the virtual spaces (mainly the social networks) as linguistic landscapes (linguistic netscape), which integrate multimodal texts including visual and verbal elements, sounds, gestures, etc.”

⁵ Translation: “However, let us remember that the very concept of LL [linguistic landscape] will be in constant reformulation as it is directly influenced by subjectivity and specific temporality (context)”.

- aprendizagem na rua, sem paredes, contínua, estimulante para todos os envolvidos⁶ (P4.T1);
- Un lien école / famille particulièrement intéressant, qui ne se focalise pas sur l’individu mais sur son environnement⁷ (P7.T6);
- É uma forma de incorporar a comunidade para dentro da escola, fazendo uma análise de seu entorno e aprendendo juntos⁸ (P3.T6).

The creation of pedagogical scenarios that incorporate students’ communities and personal experiences through the use of LL provides an opportunity to implement Language Awareness approaches (James & Garrett, 1992). These approaches awake students to the diversity of languages and cultures in the space they inhabit and that inhabits them: “esta es una excelente estratégia y actividad para poder evidenciar la presencia de algunas lenguas en este caso del español en espacios físicos y virtuales”⁹ (P2.T5); “devido à globalização, podemos aprender do nosso próprio entorno. Despertar a consciência linguística que está em cada um. Um equilíbrio entre o novo que é assimilado a partir da interação do sujeito com o meio”¹⁰ (P3.T4). Some participants mentioned that using LL in class also enables the study of social uses of languages and even more familiar or popular language registers:

I think it could also be used to help with noticing and reflection on the social use of language and language variation. This could include the use of formal linguistic structures in public spaces (Tu and Usted commands on public signs, or passive structures and infinitives instead of commands on signs i.e. *no fumar* etc) (P5.T4).

Furthermore, when LL incorporate languages of immigration, it is recognised that pedagogical work around these “bits of language” (Blommaert, 2013) may contribute to enhancing students’ feelings of belonging: “Deve ter ajudado às crianças imigrantes a se sentirem realmente parte da cidade onde moram”¹¹ (P5.T1).

The use of technologies and more specifically of certain applications is another of the aspects pointed out by participants when discussing the potentialities of LL: “All of the LL and padlet application is great too... but this as a theoretical construct with solid application potential in classrooms is really exciting” (P5.T4). Technology is thus seen as a tool that can enable motivating and collaborative language learning environments.

⁶ Translation: “Learning in the street, without walls, continuous and stimulating learning for all those involved”.

⁷ Translation: “A bond between the school and the family is particularly interesting, not focusing in the individual but in his/her environment”.

⁸ Translation: “It is a way of incorporating the community into the school, analyzing its surroundings and learning together”.

⁹ Translation: “this is an excellent strategy and activity to show the presence of some languages, in this case Spanish, in physical and virtual spaces”.

¹⁰ Translation: “due to globalization, we can learn from our own surroundings. Awakening to the linguistic awareness that is in each one of us. A balance between the new that is assimilated from the individual’s interaction with the environment”.

¹¹ Translation: “It must have helped immigrant children to really feel part of the city they live in”.

4.3 *Dynamic Relations Between Languages*

In the third thematic category, we could observe participants' comments on the relationship between languages in the public space and, most particularly, on how these dynamics are expressed in LL. Several authors have recognized that how languages circulate in the city results from the various weights they acquire in a given society, especially when this society is characterized by the daily use of one or more languages (Ben-Rafael et al., 2006; Cenoz & Gorter, 2006; Gorter, 2013; Hélot et al., 2012; Shohamy, 2005; Shohamy et al., 2010). Countries such as Switzerland, Spain, Belgium, in Europe, as well as several other decolonised territories in Asia, Africa, Oceania and America, are an example of this.

In this theme, 35 content units were counted. The participants' comments reflect on the power of languages in a given context ("Language is power", P3.T6) and its relation to the language policies of a given country. In addition, they point to reflections around English as a global language, the commodification of languages, as well as a reflective look around their contexts. Migratory flows have contributed to a change in the LL of host spaces. However, the presence or absence of certain immigration languages in the LL of cities may vary according to the type of target community.

Mallorca es uno de los lugares preferidos por los alemanes para veranear o retirarse. Como consecuencia, en la isla reside una comunidad alemana permanente. Esto se traduce en que muchos de los carteles, símbolos, escritos, anuncios, etc. que uno se encuentra por la calle están en alemán (en muchas ocasiones, incluso priorizando este idioma por los propios, el catalán y el español). De alguna manera, esto sirve, además de para facilitar el entendimiento y la comunicación con los alemanes que nos visitan, también para hacer que los residentes se sientan parte de la comunidad¹² (P8. T5).

This comment thus explains the inclusion of German in the LL of the island of Mallorca. In response to it, however, another participant warns of the selection of languages of migrant communities according to their prestige. German may be included so that residents of the island will feel part of the community, constituting what Heller calls "niche markets" (Heller, 2010, p. 104). Nevertheless, other languages are present or absent due to their association with migrant communities.

Efectivamente, tienen todo sentido tanto lo que está presente y visible como esas comunidades a las cuales ustedes se refieren (alemanes en el sur de España o Portugal), así como lo que no es tan visible o a veces silenciado como pueden ser las tiendas populares donde venden productos extranjeros o alimentos "exóticos" que generalmente compran los migrantes: bananas, plátano macho, mandioca (yuca), harinapan, etc.¹³ (P2.T5).

¹² Translation: "Mallorca is one of the favorite places for Germans to spend the summer or to retire. As a consequence, a permanent German community lives on the island. This means that many of the signs, symbols, writings, advertisements, etc. that one sees on the street are in German (on many occasions, even prioritizing this language over their own, Catalan and Spanish). In a way, this serves not only to facilitate understanding and communication with the Germans who visit us, but also to make the residents feel part of the community."

¹³ Translation: "Indeed, what is present and visible, such as those communities to which you refer (Germans in the south of Spain or Portugal), as well as what is not as visible or sometimes silenced,

In some cases, the linguistic landscape reflects the language policy of the dominant party in the area, regardless of the ethnolinguistic background of the people living in that area. (P13.T3)

As the participants’ also imply, the literature has pointed to LL as one more factor of hidden imposition of power of a certain community or of certain linguistic-social behaviours by the centralising power which, consciously or unconsciously, is being absorbed by the population: “While language is dynamic, personal, free and energetic, with no defined boundaries, there have always been those groups and individuals who want to control and manipulate it in order to promote political, social, economic and personal ideologies” (Shohamy, 2005, p. xv).

Relatedly, other comments emerged about the English language as a global language, going in some situations as far as local languages being replaced by English, as shown by the comment by P9 regarding the language policy implemented at his university: “In the university where I teach, signs bearing the names of major structures in Filipino have been replaced by their English translations: (P9.T3)”. This kind of language policy has consequences for the preservation of languages, as stated by P10: “The fact that it is possible to observe the linguistic diversity and the social status of languages through the semiotic symbols made me reflect on language maintenance” (P10.T4).

For some participants, English is associated with the commodification of languages. The concept of commodification, related to the work of Bourdieu and its concept of “linguistic market”, refers to the value that languages acquire or lose as a result of the dynamics of late modernity (Heller, 2003, 2010). Currently, English is included in the LL of cities for mercantilist purposes (“It has a lot to do with the mercantilistic view on learning languages” P14.Q3) and prestige, associated with tourism or the representations that people develop concerning this language: “Here again we see the use of English for symbolic purposes rather than functional” (P5.Q3); “spread of English linked to prestige factor” (P11.Q3) to which P12 adds “or cool factor” (P12.T3).

5 Conclusions and Perspectives

This work has allowed us to understand how the co-construction and circulation of concepts occur in a multilingual online community of professional development for foreign language teachers around the concept of LL. As a corollary, it has also shown the importance of the relationship between the functionalities of a technological device (the Perusall platform) and the interactional dynamics (or lack thereof). Regarding the former, we analysed the participants’ representations of the concept of LL, identifying the semantic features they attributed to the concept, namely from a pedagogical point of view. Despite the heterogeneity of conceptions circulating

such as the popular stores where they sell foreign products or “exotic” foods that migrants generally buy: bananas, *platano macho*, *manioc* (*yuca*), *harinapan*, etc.

in the reference literature and in the 6 texts proposed to the participants for reading on Perusall, we observed in the group of participants the co-construction of a rather homogeneous and complex notion, even if it was frequently problematized, put into perspective and even developed (the same observation was made on the concept of intercomprehension in Araújo e Sá & Melo-Pfeifer, 2018). Thus, we observed in this group of subjects a consensus around a rather homogeneous notion, even if complex. The participants seem to situate themselves discursively about the excerpts of the original texts rather than about the discussions in progress or the comments of other readers. This limits the scope of negotiation within the training sessions and the co-construction of a discursive and professional community, which was one of the major goals of the Training Week. This discursive feature may be related to the characteristics of the technological support, which is not originally intended to stimulate or sustain interaction. Nevertheless, studies on the negotiation of other concepts in other online communities have come to similar conclusions regarding the orientation towards consensus and the lack of dissent leading to negotiation. Such results have been observed in studies reporting on multilingual discussion forums (Araújo e Sá, De Carlo and Melo-Pfeifer 2015) or multilingual chat-rooms (Araújo e Sá et al., 201a, 2010b), which suggests that the orientation towards consensus may not be influenced by the synchronous or asynchronous nature of the interactions.

Following the suggestions in Araújo e Sá & Melo-Pfeifer (2018) on how to stimulate a more engaging environment for negotiation of concepts in contexts of teacher training, we propose the following:

- explicitly provoke the verbalisation of representations on LL, being more precise on the elements to comment (e.g.: identifying metaphors used in the texts, commenting on controversial stances, highlighting disruptions or contradictions between authors and evoked theoretical frameworks, etc.);
- stimulate “cognitive conflicts” (e.g. providing divergent, complementary or provocative definitions, opinions and texts; presenting sceptical perspectives or resistance to the use of LL in education);
- encourage discursive work on representations requiring the active involvement of other participants (stimulating exchange, debate, conflict, recalling divergent and complementary perspectives, role-playing);
- stimulate the linking of comments and texts to the personal and professional biographies of the participants in the discussion.

References

- Alarcão, I., & Roldão, M. C. (2008). *Supervisão. Um contexto de desenvolvimento profissional dos professores*. Pedago.
- Araújo e Sá, M. H., & Melo-Pfeifer, S. (2018). Qu'est-ce que l'intercompréhension ? Représentations des professeurs de langue en formation continue dans le cadre du projet Galapro. In S. Garbarino & C. Degache (Eds.), *Intercompréhension en réseau: scénarios, médiations, évaluations* (vol. 2, pp. 305–320). CRTT: Université Lumière. <https://www.miriadi.net/documents-projet>

- Araújo e Sá, M. H., De Carlo, M., & Melo-Pfeifer, S. (2010a). O que diriam sobre os portugueses?: Intercultural curiosity in multilingual chat-rooms. *Journal of Language and Intercultural Communication*, 10(4), 277–298.
- Araújo e Sá, M. H., De Carlo, M., & Melo-Pfeifer, S. (2010b). Pratiques de communication en-ligne des tuteurs lors d’une formation de formateurs à l’intercompréhension : quelles retombées sur le développement professionnel des sujets en formation ? *Synergies Europe*, 5, 135–150.
- Araújo e Sá, M. H., De Carlo, M., & Melo-Pfeifer, S. (2019). Mediation(s) in an online, multilingual teacher education environment. *Indagatio Didactica*, 11(4), 99–120. <https://proa.ua.pt/index.php/id/article/view/10585/6931>
- Ben-Rafael, E., Shohamy, E., Hasan Amara, M., & Trumper-Hecht, N. (2006). Linguistic landscape as symbolic construction of the public space: The case of Israel. *International Journal of Multilingualism*, 3(1), 7–30. <https://doi.org/10.1080/14790710608668383>
- Blommaert, J. (2013). Citizenship, language, and superdiversity: Towards complexity. *Journal of Language, Identity, and Education*, 12, 193–196. <https://doi.org/10.1080/15348458.2013.797276>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Brinkman, L., Gerwers, F., Melo-Pfeifer, S., & Androutsopoulos, J. (2021). Einstellungen angehender Französischlehrkräfte zum Einsatz von Linguistic Landscapes als Resource im Fremdsprachenunterricht: Un objet didactique non identifié? *Zeitschrift Für Romanische Sprachen Und Ihre Didaktik*, 15(1), 39–68.
- Brinkmann, L., & Melo-Pfeifer, S. (2023). Linguistic Landscapes in multilingual pedagogies. International teachers’ perspectives on the use of linguistic landscapes in the foreign language classroom. In L. Eibensteiner, A. Kropp, J. Müller-Lancé & C. Schlaak (Eds.), *Neue Wege des Französischunterrichts* (pp. 199–226). Narr Verlag.
- Brinkmann, L. M., Duarte, J., & Melo-Pfeifer, S. (2022). Promoting plurilingualism through linguistic landscapes: A multi-method and multisite study in Germany and the Netherlands. *TESL Canada Journal*, 38(2). <https://doi.org/10.18806/tesl.v38i2.1358>
- Canagarajah, S. (2013). *Translingual practice: Global englishes and cosmopolitan relations*. Routledge.
- Carinhas, R., Araújo e Sá, M. H., & Moore, D. (2020). Mi calle favorita: a reconstrução multimodal da paisagem da Ciudad Vieja de Montevideo num projeto plurilíngue entre a escola, os museus e as famílias. *Domínios de Linguagem*, 14(4), 1059–1086.
- Cecchinato, G., & Foschi, L. C. (2020). Perusall: University learning-teaching innovation employing social annotation and machine learning. *QWERTY Open and Interdisciplinary Journal of Technology, Culture and Education*, 15(2), 45–67.
- Cenoz, J., & Gorter, D. (2006). Linguistic landscape and minority languages. *International Journal of Multilingualism*, 3(1), 67–80. <https://doi.org/10.1080/14790710608668386>
- Cenoz, J., & Gorter, D. (2008). The linguistic landscape as an additional source of input in second language acquisition. *IRAL—International Review of Applied Linguistics in Language Teaching*, 46, 267–287. <https://doi.org/10.1515/IRAL.2008.012>
- Clarke, A. J. (2021). Perusall: Social learning platform for reading and annotating (perusall LLC, perusall.com). *Journal of Political Science Education*, 17(1), 149–154. <https://doi.org/10.1080/15512169.2019.1649151>
- Coste, D., & Cavalli, M. (2015). *Education, mobility, otherness. The mediation functions of schools*. Language Policy Unit, Council of Europe.
- Dagenais, D., Moore, D., & Sabatier, C. (2013). Lire la ville. Exploiter le paysage linguistique pour une approche plurilingue intégrée. In C. Cortier & M. Cavalli (Eds.), *Langues régionales/minoritaires dans l’éducation bi-plurilingue, Langues d’ici, langues d’ailleurs*, (pp. 25–33). Conseil de l’Europe.
- Dejean-Thircuir, C. (2008). Modalités de collaboration entre étudiants et constitution d’une communauté dans une activité à distance. *Alsic*, 11(1), 7–32.

- Dillenbourg, P., Poirier, C., & Carles, L. (2003). Communautés virtuelles d'apprentissage: e-jargon ou nouveau paradigme ? In A. Taurisson & A. Sentini (Eds.), *Pédagogies* (pp. 11–47). Net Presses. <https://infoscience.epfl.ch/record/33768>
- Gorter, D. (2013). Linguistic landscapes in a multilingual world. *Annual Review of Applied Linguistics*, 33, 190–212. <https://doi.org/10.1017/S0267190513000020>
- Heller, M. (2003). Globalization, the new economy, and the commodification of language and identity. *Journal of Sociolinguistics*, 7(4), 473–492.
- Heller, M. (2010). The commodification of language. *Annual Review of Anthropology*, 39, 101–114. <https://doi.org/10.1146/annurev.anthro.012809.104951>
- Hélot, C., Barni, M., Janssens, R., & Bagna, C. (Eds.). (2012). *Linguistic landscapes*. Peter Lang.
- Herring, S. (2004). Computer-mediated discourse analysis: An approach to researching online behavior. In S. A. Barab, R. Kling, & J. H. Gray (Eds.), *Designing for virtual communities in the service of learning* (pp. 338–376). Cambridge University Press.
- James, C., & Garrett, P. (1992). *Language awareness in the classroom*. Longman.
- Lomicka, L., & Ducate, L. (2019). Using technology, reflection, and noticing to promote intercultural learning during short-term study abroad. *Computer Assisted Language Learning*, 1–31.
- Ma, Y. (2018). El paisaje lingüístico: Una nueva herramienta para la enseñanza de E/LE. *Foro de Profesores de E/LE*, 14.
- Marcelo, C. (2009). Desenvolvimento profissional docente: passado e futuro. *Sísifo—Revista de Ciências da Educação*, 8, 7–22.
- Melo-Pfeifer, S., & Lima-Hernandes, M. C. (2020). Paisagens Linguísticas: ideologias, discursos e práticas multilíngues nos espaços sociais. *Domínios de Linguagem*, 14(4), 1024–1058.
- Melo-Pfeifer, S. (forthcoming). Challenging mainstream perspectives on linguistic landscapes and multilingual pedagogies. In R. Zaidi, U. Boz & E. Moreau (Eds.), *Transcultural pedagogies for multilingual classrooms: Responding to changing realities in theory and practice*. Multilingual Matters.
- Miller, K., Lukoff, B., King, G., & Mazur, E. (2018). Use of a social annotation platform for pre-class reading assignments in a flipped introductory physics class. *Frontiers in Education*, 3(8), 1–12. <https://doi.org/10.3389/educ.2018.00008>
- Mondada, L. (2004). Ways of ‘Doing Being Plurilingual’ in international work meetings. In R. Gardner & J. Wagner (Eds.), *Second language conversations* (pp. 18–39). Continuum.
- Pennycook, A. (2017). Translanguaging and semiotic assemblages. *International Journal of Multilingualism*, 14(3), 269–282. <https://doi.org/10.1080/14790718.2017.1315810>
- Pennycook, A., & Otsuji, E. (2015). Making scents of the landscape. *Linguistic Landscape Linguistic Landscape an International Journal*, 1(3), 191–212. <https://doi.org/10.1075/ll.1.3.01pen>
- Rovai, A. P. (2002). Building sense of community at a distance. *The International Review of Research in Open and Distributed Learning*, 3(1), 1–16. <https://doi.org/10.19173/irrodl.v3i1.79>
- Shohamy, E. (2005). *Language policy: Hidden agendas and new approaches*. Routledge. <https://doi.org/10.4324/9780203387962>
- Shohamy, E., Ben-Rafael, E., & Barni, M. (Eds.) (2010). *Linguistic landscape in the city*. Routledge. <https://doi.org/10.21832/9781847692993>
- Sylla, N., & De Vos, L. (2010). Développement professionnel des enseignants au sein d'une communauté virtuelle. *Education Et Formation*, 293, 81–100.
- Wenger, E. (1998). *Communities of practice. Learning, meaning and identity*. Oxford University Press.

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Expanding from Linguistic Landscapes in Education Scenarios

Sensescapes and What it Means for Language Education



Josh Prada

Abstract This chapter lays out the groundwork for the notion of sensescapes as grounded in my own ethnographic work, and in dialogue with current developments in the field of linguistic landscapes (LL) as well as with proposals from other areas in the humanities, the social and cognitive sciences. The perspective presented herein centers on how multilingualism in the study of the LL may benefit from a wider lens that integrates sense-making, both, in the sensorial way and in the cognitive way, bridging them through trans-ing processes. The second part of the chapter focuses on language education, and describes the possibilities of sensescapes in this context. Two examples of pedagogical applications (framed as proyectos) are presented; both articulate a sensescapes approach as operationalized at the undergraduate level with multilingual students in a Spanish for heritage/native speakers program, and at the graduate level with pre- and in-service language teachers in an MA program. Both pedagogical assignments promote an ecological understanding of personhood in space, the translanguaging processes that mediate meaning- and sense- making, and the ways in which contextual factors are processed through embodied cognition.

Keywords Sensescapes · Sensoriality · Sense-making · Translanguaging · Embodied cognition · Language education

1 Introduction

El mercado este no tiene un lenguaje...aquí el lenguaje es la música y el sonido que se oye siempre. Allá abajo tiene el señor una tiendita de CDs and DVDs y siempre tiene música hispana nuestra, de México y la escuchamos en todo el mercado. Y el olor este de carnitas, y de las tripas que las pone muy crispy la señora de allá; esa [apunta con el dedo]. ¿La ves allá? Como en México, igual. El mismo olor y son muy sabrosos los tacos. Y cuando ves el palettero, eso también es el lenguaje del mercado. Es más que el inglés o el español que son las lenguas de acá, y el spanglish también: es los colores, y los olores y lo que se oye.

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(The market doesn't have a language...here, the language is the music and the sounds you can always hear. Down there, this gentleman has a little CD and DVD shop and he's always playing our Hispanic music, from Mexico, and we can hear it all over the market. The smell of carnitas and those nice and crispy tripes that lady makes; that one [she points with her finger]. Can you see her over there? Just like in Mexico, just the same. It's the same smell and those tacos are really tasty. And when you see the ice cream man, that is also the language of the market. It's more than just English or Spanish, which are the languages we use here, and Spanish as well: it's the colors and the smells and what you hear.)

Excerpt from interview 6 – El Paso, TX (2017)

I first arrived at the notion of *sensescapes* while doing linguistic landscape (LL) research in marketplaces in the U.S./Mexico border. From the earliest stages of fieldwork in the cities of Lubbock and El Paso (Texas, United States)—the first two sites where my collaborator and I collected data, interviews with vendors and local shoppers were replete with discourse about the roles played by the senses, memory and identity in shaping the marketplaces' LL. In these conversations, locals pushed me to transcend my initial goal to explore the multilingual and socio-political aspects impinged on the markets' LL. With these new opportunities, I adopted new roles that flowed between learner (as they explained to me their perspectives on the market), senser (as I attuned to the various stimuli they called upon while inviting me to make sense of the environment in the same ways they did), and researcher (as I tried to pursue—but still adapt—the original objectives of the project). This way, the interviewees organically reformulated the object of study from an initial focus on multilingualism and its representations on publicly displayed signs to a much broader spectrum of resources, processes and elements guiding the social semiotic mapping of space in the minds and lives of these people and their communities.

Considering their perspectives, and after some initial sorting through the interview data, it became apparent that an alternative route to the study of LLs had opened: a *sensescapes* perspective. At that time, I came up with the term *sensescapes* intuitively, loosely based on the idea that 'the physical and mental escapes which we navigate daily are loaded with elements that rely on our ability to sense them to enable us to make sense of them (note retrieved from my fieldwork journal written after these interviews were completed). In these early notes, I used the term *sensescapes* to capture the idea that 'a number of interwoven elements and dimensions, all complexly related to one another, shape how individuals and communities sense (i.e., physiologically engage with stimuli) and make sense of (i.e., cognitively organize and derive meaning from) the space around them.' In these journal entries, I described space as a collage of stimuli and resources processed in ways that are linked to and often mediated by language, but which necessarily, also transcend it. A *sensescapes* view of the LL, I wrote 'would, therefore, center this ecological understanding of sensing and meaning-making, capitalizing on embodiment, emplacement, and personhood'

After sketching some initial notes on *sensescapes*, I turned to the existing literature to compare my prototypical idea with what other researchers had already explored and proposed. As a term, *sensescapes* already existed in the works of anthropologists and sociologists, as well as in accounts developed by cultural studies researchers, all

of whom followed some sort of *sensual turn* in their disciplines. In applied linguistics and language studies, Alastair Pennycook and Emi Otsuji, whose work I knew at the time, had pointed at multisensoriality in relation to communication (2015). Similarly, Ofelia García and Li Wei had already pointed at the linkage between language and the senses in their early accounts of translanguaging (2014). At the same time, yet still unbeknownst to me, other LL researchers were developing on a body of works (e.g., Peck, Stroud & Williams, 2018; Pütz & Mundt, 2019; Malinowski, Milani & Tuf, 2020) that pushed towards a semiotic view, following calls from the early 2000s, such as Scollon and Scollon's (2003), and Shohamy's (2006). In other words, sensescapes was in line with a number of proposals across disciplines, yet remained heavily underrepresented and undertheorized as a concept and as a perspective.

With the above in mind, in this chapter, I pursue two objectives. Firstly, I present an overview of sensescapes grounded in my own work on LL (which I approach through a translanguaging lens), and in dialogue with lines of work proposed by semiotic accounts of LL, as well as previous proposals from other disciplines. Secondly, I discuss some of its possibilities for language education by foregrounding the foundations for a sensual turn. I begin by laying out some core ideas that situate the study of the LL in line with a sensescapes perspective.

2 Beyond the *Linguistic* in Linguistic Landscapes: A Story Already Told

2.1 Multimodality: Towards a Broader Semiotic Lens

Early definitions of LL emerged from an interest in the “the language of public road signs, advertising billboards, street names, place names, commercial shop signs, and public signs on government buildings combines to form the LL of a given territory, region, or urban agglomeration” by focusing on their “visibility and salience [...] on public and commercial signs in a given territory or region” (Landry & Bourhis, 1997). This definition captured the imagination of researchers interested in language and the implications of its representation and visibility. Considering this, Sebba (2010) situated LLs somewhere at the junction of sociolinguistics, sociology, social psychology, geography, and media studies. This interdisciplinary orientation couched LLs in a not-so-linguistic realm from very early on, which I understand as a recognition that LL research has never been (or at most, was only briefly or only partially) really solely about named languages as countable entities. Conversely, LLs bring us to the interface between the named languages we see around us, and the kinds of knowledges, experiences, and capacities we draw on for meaning- and sense-making around them, as well as the processes connecting these elements ecologically as part of our individual and collective universes. In fact, rather early on, Scollon and Scollon called for “[a]n integrative view of these multiple semiotic systems which together

form the meanings which we call place' (Scollon & Scollon, 2003, p. 214), as they alluded to how multiple factors and elements come into play in the shaping of the LL.

In the 2000s and 2010s, as publicly displayed languages continued garnering the attention of researchers, this logo-centrism was transcended to develop a wider orientation. In fact, Pütz and Mundt's (2019) report to employ the term LL in keeping with "previous literature, but view the term as a metaphor which they expand to include the whole set of 'semiotic assemblages' (Pennycook, 2019) of discursive modalities: imagery, non-verbal communication, silence, tactile and aural communication, graffiti, smell and so on" (p. 1). Pütz and Mundt's (2019) edited collection on semiotic landscapes was preceded by multiple publications that explored the LL in terms of semiotic assemblages. For instance, with a focus on Welsh language and culture in Patagonia, Coupland and Garrett (2010) presented an example that clearly transcended logo-centric views of the LL through a qualitative, critical, frame-analytic account of the site of a Welsh colonial experiment in the mid-nineteenth century. The authors identified the Welsh heritage frame present in the visible landscape in Gaiman, Patagonia, where Welshness is associated with commercial heritage tourism initiatives—particularly *casas de té galesas* ('Welsh tea houses'). Besides language choice (mainly Welsh and Spanish), the authors discussed how multimodal and stylistic resources were used in framing the idea of Welshness, constituting it metaculturally in a variety of types of public signs and displays.

Another powerful example of LL research transcending logo-centrist views is Bonda and Jimaima (2015), who utilized the notion of repurposing to show how people from rural areas of Livingstone and Lusaka in Zambia (South-Central Africa) extend the repertoire of 'signs' to include faded and unscripted signboards, elements found in the local fauna and flora, mounds in the terrain, dwellings and abandoned structures, skylines, and paths (with no written names) in narrations of place. The authors emphasized the lack of studies on linguistic/semiotic landscapes in rural communities characterized by linguistic orality and documented how the system of signage transcends the limitations of the material conditions in these rural escapes. In their discussion, they described processes of redeploying memory, objects, artifacts and cultural materialities to acquire new uses, and for obtaining extended meaning potentials. At the heart of their piece, Bonda and Jimaima (2015) argue that the semiotic ecology in multimodal LL helps to accentuate the diverse processual characteristics of meaning-making.

2.2 *Languaging*

Considering the above, for over a decade, some LL researchers have recognized that the focus of LL is not exclusively related to the idea of language(s) as countable monoliths named after nation states or geopolitical spaces, presenting an expansive view of "language" as complex linguistic and semiotic assemblages. As a translanguaging scholar, I see the linguistic aspect of LL to be more related to meaning- and sense-making, neither of which is a purely linguistic. I, therefore, find the idea

of languaging particularly fitting in this approach. As described by Bloome and Beauchemin (2016), the term languaging emphasizes language as a transitive verb, whether it is teachers and students interacting with each other and with their classroom, or a seller at a marketplace and a potential buyer trying to agree on a fair price, people language the worlds, trajectories and experiences they inhabit and shape.

This proposal is informed by Becker's (1991) notion of "languaging" as an alternative to structuralist views of language which he referred to as "humanistic linguistics" (Becker, 1988, p. 29). Becker's (1991) proposal stated the following:

[People] develop a repertoire of imperfectly remembered prior texts and acquire more and more skill at recontextualizing them in new situations ... the a priori to languaging is not an abstract conceptual system and a means of mapping it onto sounds but particular, imperfectly remembered bits of prior text. The strategies by which memories are reshaped to present circumstances clearly vary from person to person, under general cultural and natural constraints. [...]. Understanding another person is possible to the extent that an utterance evokes memories. A new set of metaphors for languaging emerges: communication becomes orientational and not the encoding and decoding of "meaning" (p. 34).

As Bloome and Beauchemin (2016) describe, according to this perspective, language emphasizes the "construction of intertextuality, recontextualization, memory, the adaptation of previous uses of language and texts to new circumstances, framing and reframing, and the centrality of "orientationality"—relationships, stances, perspectives, and engagements within and to events, people, histories, the material world, the self, and so forth (p. 153)"

Languaging is, thus, the processes whereby humans make meaning and sense in the world, interact with one another and with their environments, transforming, re-appropriating and reformulating parts of their worlds, while engaging in trans-languaging practices that go beyond language(s), modalities, and dimensions (e.g., Wei, 2018). Departing from the notion of languaging, an ampler conception of text and textuality is enabled, where the nature of texts departs from their conception as organically multimodal, multisemiotic, and multilingual assemblages. To engage with texts as defined through a (trans-)languaging view, more than just countable named languages modeled after the boundaries of nation states is needed. Texts, through this view, can be seen as showing-telling, with a multiplicity of resources from various modalities intermeshing with one another in ways that transform them into new wholes (Prada, 2022), as embodied performance (Zhu & Wei, 2022), and / or as collages of resources of different natures, such as sensory or historical. This wider, transdisciplinary stance recognizes the role of different media, stimuli, and elements coming into view as individuals make sense of the world around them. Importantly, this perspective helps us embrace Pennycook's (2018, 2019) push towards space as resource. To engage spatial repertoires in LL research, we must move towards understandings of sensing and making sense that transcend sight and readability.

2.3 *Sensing and Making Sense: Enter the Senses*

I move forward with my theorization of sensescapes based on the recognition that to navigate the semiotic landscape, and by extension, to map out the nature of place and make sense of space through (trans-)linguaging, visibility is privileged as a sensorial axis in Western societies. In short, traditional accounts of LL depart from the assumption that the LL is something that is read, with the eyes, and therefore conceptualizes those who can see and those who can read as *de facto* users. Pennycook's (2018, 2019) idea of semiotic assemblages and spatial repertoires, however, helps us transcend ocularcentrism (Macpherson, 2006). Following through, what would happen if we approached the LL through a lens anchored in (multi)sensoriality—that is, a lens that includes sight/visibility and language(s), but opens our scope of attention to other ways of meaning- and sense- making, as captured in the vignette presented to open this chapter? What are the consequences of exploring the semiotic landscape through phenomenological accounts of sensing and sense-making? Extensive multidisciplinary theoretical and empirical research situating the “five senses” as crucial in human perception, memory, and behavior (Damasio, 2009; Goldstein, 2009; Howes, 2005) can help us move in this direction.

Recognizing this, an innovative example of “semiotic landscape” research is Pennycook and Otsuji's (2015) “Making scents of the landscape” draws our attention to the sensoriality of place. In this piece, they described the piles of Bangla newspapers spread across the floor at the entrance to a Bangladeshi-owned video and spice store, which, along with its small travel agent business at the back, sells a variety of items, including spices, pots and pans, cosmetics and DVDs of Bangladeshi films in Marrickville (Sydney, Australia). As the authors discuss, the idea of sensory landscapes may add olfactory and other modes to a landscape, where the notion of the smellscape has more potential for an understanding of mobile semiotic resources (Pennycook & Otsuji, 2015) as different stimuli can create the effect of ‘olfactory maps of cities, enabling people to conceptualize their environment by way of smell’ (Classen et al., 2002, p. 18). Regarding the sense of smell and odors, Porteous (1985, p. 356) described that cities have “smellscape,” that is landscapes of different smells, which, in turn, are closely associated with context and with memory (Degel et al., 2001; Schroers et al., 2007).

Beyond smells, other sensorial aspects come into play in our navigation of space. Undoubtedly, people whose visibility is impaired have a wealth of knowledge to contribute to this perspective. The navigational practices of blind and visually impaired people are developed to solve many types of obstacles and difficulties (Due & Lange, 2018). Considering that blind people are arguably a disabled and marginalized group, Due and Lange (2018) highlight the difficulties that stem from the ocular-centric nature of Western thought and its application in everyday spatial arrangements (Jay, 2002; Macpherson, 2006). In these contexts, the function of the blind person's cane has been understood as a sensory extension, for example, metaphorically as ‘the blind man's eye’. Although the cane extends ‘the scope and active radius of touch’ (Merleau-Ponty, 2002, p. 165), it nevertheless

possesses specific affordances for what it can and cannot detect. Connectedly, during a visit at the University of Hamburg (Germany), one of my colleagues offered to show me around. As we walked around the city center, a public object caught my attention. As we approached it, I realized it was a metal, 3D map of the city, including buildings, monuments and roads. The map also included descriptions in braille, transcending the purpose of spatial beautification, and serving as a tactile device for visually-impaired people making sense of the city.

Besides scent and touch, sound is a paramount sense which comes into play while navigating space. Davies et al. (2013) describe soundscape as “the totality of all sounds within a location with an emphasis on the relationship between individual’s or society’s perception of, understanding of and interaction with the sonic environment (p. 4).” Particularly vigorous in the field of anthropology, soundscapes focus on an aspect that, while important for the mapping of space, has been often considered as lacking concreteness for sustained empirical attention (Samuels, Meintjes, Ochoa & Porcello, 2010).

Drawing from this perspective, as foreshadowed, the LL transitions organically into Pennycook’s (2018, 2019) notion of assemblage. Assemblages include, among others, multimodal, multisemiotic, multilingual elements that may be read and written, perceived through touch, smell and taste, heard and listened to, and understood and engaged with through the individual’s particular capacities among which language is just one. This approach capitalizes on embodiment and emplacement, and expands the lens of LLs by integrating how different people make sense of their surroundings beyond the named languages they can read, and the semiotic and social values of observable objects and layouts. This stance privileges a bottom-up perspective on how individuals and communities configure, navigate, and collaborate on the creation of space while decentering visibility and named languages, and redistributing meaning- and sense-making throughout individual and collective repertoires. I conceive of this understanding of LL as a sensescapes approach.

3 Sensescapes

The sensescapes perspective I present herein harnesses the theoretical bedrock I have laid out in the previous sections, and reflects a sensual/sensorial turn that embraces social semiotics and the world as text and image, while paying increased attention to sensory perceptions as they interplay with language and broader semiotic resources and abilities in sensing and sense-making.

The idea of sensescapes, which was proposed in the field of human geography, suggests that all the five senses, and not only sight, can be spatially ordered and contribute to individual experiences with place (Rodaway, 1994). A powerful illustration of sensescapes work is Bunkše (2012). In “Sensescapes: or a Paradigm Shift from Words and Images to All Human Senses in Creating Feelings of Home in Landscapes” Bunkše (2012) describes how home can be anywhere, provided there are values and feelings of home. In her case, it is in wilderness mountains that such

values are found. According to Bunkše, wilderness landscapes may become home landscapes when one learns to become competent in using all the senses -touch, smell, taste, hearing, sight, and proprioception (i.e., the human body in its entirety as a sensor). Sensescapes is about including all the senses in theorizing and planning landscapes, as well as the individual and group behaviors brought forth in them.

For me, sensescapes mobilizes a phenomenological perspective on how individuals make sense of their environment, presenting an expansive view on meaning- and sense-making beyond multilingualism, and adhering to the practical nature of translanguaging. Sensescapes is underpinned by embodied cognition, and in doing so incorporates two key ideas: “first that cognition depends upon the kinds of experience that come from having a body with various sensorimotor capacities, and second, that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological and cultural context” (Varela, 1991).

A sensescapes approach centers the individual as they interact with the LL in its entirety, beyond the linguistic aspect, engaging the person as a whole, ecologically, in their sense-making processes and abilities. It bears on one’s individual capacities, the affordances of contextual factors, and their existing repertoires. It privileges what the individual brings to the table to make sense- and meaning as they navigate space. A sensescapes view capitalizes on making sense of the space as memory, identity, physical and mental capacities come into play, interact with one another, and organize emerging knowledge about space, creating histories, and personal and collective accounts of space, and privileging a first-person perspective developed through how spaces are experienced by individuals. Sensescapes incorporates an understanding of one’s identity and historical formation as elements that come into dialogue with our understanding of space.

Finally, sensescapes is born outside of existing hierarchies of countable languages named after nation states, yet it recognizes them as impinging on the experience of many people, particularly in the Global North, as recognized in decolonial approaches (particularly, in translanguaging). Fundamentally, sensescapes is not a counterview of LL or semiotic landscapes, nor does it problematize LL as a field of study, its methods or its interests. In fact, sensescapes as developed herein departs from my own engagement with LL research as a translanguaging scholar, and therefore it reorients LL research through a recognition that we make sense of our environment ecologically, and our senses, sensibilities and sensitivities mediate our understanding of the semiotic landscape in the context of our own experience. In doing so, a sensescapes view of the LL departs from the transdisciplinarity of experiencing, of sense-making, and is therefore naturally attuned to research in cognitive neuroscience, cultural psychology, and applied linguistics, among others.

Thus far, I have focused on presenting the notion of sensescapes as grounded in the evolving nature of LL research by discussing how some work on LL has for a while now been oriented towards a post-logo-centric conception of LL in space mapping. I have, then, connected this understanding of semiotic landscapes to the senses, to multisensoriality, to embodied cognition and to emplacement. In so doing, I have

centered a phenomenological perspective that privileges how individuals interact with the LL (with an emphasis on the non-linguistic dimensions that frame it) through their own means, utilizing their own resources and repertoires, which change and flow, and which inform (and are informed by) individual historical formations and socio-cognitive affordances. In the remainder of the chapter, I focus on the applications of sensescapes to language education.

4 Sensescapes and Language Education: Recognizing and Charting Possibilities

4.1 *Some Considerations*

Recently, Todd et al. (2021) asked “How do we theorize a view of education as a lived, perceived, and embodied experience of sensing the world and ourselves in the present? And in what ways does the lived specificity of educational encounters generate a different set of pedagogical questions for contemporary educational theory?” They explain that while there has been some interest in addressing these questions among education philosophers, efforts have not been substantive yet. Examples include the reframing of the purpose of education in terms of the dimension of subjectification (Biesta, 2014) and a rethinking of teaching that recalls the importance of being attentive in the present (Masschelein & Simons, 2013).

As regards second/foreign/world language teaching and learning multiple perspectives underscore the interplay between cognitive, individual and external factors as interacting pieces of a complex system (Vygotsky, 2011). A socio-cultural perspective centers context and interaction (Ellis, 2008) linking the individual and the world (Lantolf, 2005). Swain (2000) suggested that language learning occurs both inside the head of the learner and in the world in which the learner experiences the learning. In short, internal mediation (mental activity) is originated through external mediation (Ellis, 2008). Similarly, proponents of eco-social perspectives (Atkinson, 2013a, 2013b, 2014, 2019) as well as proposals by the Douglas Fir Group (2016) all underscore, in similar ways, complex thinking, ecological relationships and dynamic interactions which reflect the embodied, emplaced emphasis of a sensescapes approach.

If we consider the central role played by context in the development of cognitive process (Cowart, 2005) as it applies to the “interaction between perception, action, the body and the environment (Barsalou, 2008),” cognition is understood in ongoing dialogue with the body and with place. Research conducted in this area has described the intimate relationship between cognition and sensorimotor experience. Among others, Glenberg, Goldberg and Zhu (2011) and Barsalou (2008) have argued that the cognitive process develops when a tightly coupled system emerges from interactions between organisms and their environment, with the interactions being real-time and goal-directed (Cowart, 2005).

As synthesized by Todd et al. (2021), a person's bodily sensations and actions will impact how they comprehend language. Connectedly, evidence from the perspective of embodied cognition argues that action enhances comprehension (Glenberg, 2008; Glenberg et al., 2011; Tellier, 2008). There is also evidence that points that language processing is an embodied process (Willems & Casasanto, 2011), meaning that bodily action in the contextual environment and the person's perceptual experiences are inseparable during the cognition process. In fact, intentional actions activating the brain resources used for the motor system are also engaged in lexical-semantic processing and language comprehension (Rueschemeyer et al., 2010). Moreover, interestingly, the motor system is automatically activated under the following three situations: when a person (a) observes manipulable objects; (b) processes action verbs; and (c) observes the actions of another individual (Mahon & Caramazza, 2008).

Such findings and proposals about language learning couched in ecological, relational understandings of the individual's mind, body and place, bring to our attention a need to strengthen pedagogical approaches that integrate cognition, sensorimotor elements, personal and shared trajectories and spatial and contextual factors.

4.2 A Sensescapes Approach to Language Education: Two Examples of Pedagogy

My work as an educator takes me to classroom contexts mainly populated by two student profiles. First, I work with people who grew up multilingually, in households where minoritized, racialized speakers are exposed to and use immigrant, aboriginal or other non-official languages, such as Spanish in the United States. These students are often labelled heritage speakers and their lives have been shaped by normalized educational neglect within the ideological framework of standard language cultures (Prada, 2021a). Second, I work with pre- and in-service language teachers and educational researchers, many of whom seek to advance their pedagogies, research skills, and theoretical understanding of bilingualism and education through graduate work. Often, my students are both, racialized, language-minoritized multilinguals, and pre- or in-service teachers pursuing further education and professional development opportunities. In my pedagogies, I create ways of working with them that consider students as complex people, each with their own capacities, personal trajectories, and specific goals. I seek to understand them as individuals, and to present them with curricular pathways that leverage their abilities on multiple fronts, including their linguistic repertoires, their experiential repertoires, their physical abilities, and their identities as ongoing products resulting from their engagement with other people, with contextual factors, with their own evolving worldviews.

In these contexts, I routinely include different forms of fieldwork in the courses I facilitate. This fieldwork may be approached through a number of lenses, and present different objectives, which vary depending on the course and the student

population. Regardless, in my courses, there is typically a focus on how language is used (and by extension, re-appropriated) by different people, in different contexts, and for different purposes, in very different ways. Over the years, I have turned to the LL as an object for exploration and discussion around themes ranging from multilingualism and language diversity, to identity, attitudes and ideologies, language policies, immigration, and research methodologies, among others. In doing so, my students have been asked to complete different projects developed through examinations of the LL, and the various social, political, and personal aspects the LL may reveal (see Elola & Prada, 2021, for an example). A sensescapes approach expands these boundaries to also include how sense is made, how the senses are brought to the fore in sense-making, and how these sensing and sense-making processes contribute to one's historical formation.

Below, I describe two examples of educational work I have implemented with these two groups, both of which draw heavily from the sensescapes perspective presented in this chapter. Before moving on to these two examples, a few considerations are in order. To mobilize sensescapes into pedagogical practice, I build on the tenets presented earlier and create spaces where students can connect them, as well as other theoretical elements, notions and ideas relevant to their own experience. I, therefore, need three broad yet key elements to enable a sensescapes approach to language education: some degree of awareness among the students gained through presentations, readings and classrooms discussions, a physical space for students to engage with contextual stimuli in meaning- and sense-making explorations of the self and others, and the framework of an assignments with specific objectives, practices and expectations to guide them and support them. With these in mind, I now turn to describing the two examples.

An Example of Work with Multilingual Undergraduate Students: “Making Sense and Meaning En Mi Casa”

This proyecto final revolves around the exploration of the semiotic elements that make up one's home as experienced by the individual. I ask my students to explore their households or their places of residence, and to create a map that describes how sensorial stimuli interact with their linguistic and semiotic repertoires, their childhood memories, and their historical formation as multilingual people from so-called “diverse” backgrounds. These proyectos lead to multimodal texts which include traditional written discourse, images, gifs, links to videos (which they upload onto YouTube) and audios (which they upload onto a GoogleDrive, for example). These proyectos provide a first-person account of how their individual lives have been shaped by multiple elements structuring space, how meaning and sense are inter-related, and how their minds, bodies and context interplay with one another, with language (and multilingualism) being just one factor at work in the making of their (sense of) home.

For example, students describe specific smells and tastes, tie them to memories of specific relatives, and of valuable moments of becoming in childhood that impinge

on the present. Students also provide pictures and video clips that show how touch is connected to a sense of home (e.g., a blankie one had as a child) or the sound of novelas on television while the abuela was preparing tamales in the kitchen. The assignments they submit are translanguaging, multimodal compositions carefully designed by each student to immerse the reader in their world. In these proyectos, every element contributes to the assignment. These proyectos are then shared in class through presentations where they convey/call on processes of embodied cognition, sensing and perception to describe their experiencing of home, inviting others to do the same through their narratives. To this end, students often bring a variety of resources to the classroom, from music to food, to spices and perfume, tactile elements such as pieces of fabric or a hair-roll. On the projector, they may choose to play point-of-view videos where the student walks around the household showing us the space, telling everyone about specific memories that contributed to their sense of belonging, or their identity formation.

Through these immersive accounts, students explore and share their own historical formation as multilingual individuals, while zooming in on different aspects that connect to their memories, belonging and cultural practices. These proyectos are powerful in communicating complex ecologies of place, their interaction with self, and how they contribute to the students' personhood. The sharing of these perspectives lay out the groundwork for detailed conversations about the self, the community and what becoming and being Hispanic in the US entails, in very personal ways.

An Example of Work with Pre- and In-Service Teachers (Graduate Students): "Emotions, Languages and Space in the Classroom"

In my work with pre- and in-service language educators, one of my objectives in the practical realm is to promote the development of classroom ethnographic research skills. These are key for action research, an important ability for teacher's seeking autonomy in investigating the needs and strengths of their groups and their own practices. Additionally, epistemologically, one of my goals is to bring teachers towards new understandings of their language learners as complex people, reflecting the eco-social, complex view I presented earlier. Targeting these objectives, one of the exercises I have implemented for some time has focused on the exploration of schoolscales (i.e., the LL of schools and educational institutions). Through these explorations, student teachers investigate how multilingualism and other semiotic resources are strategically mobilized around their schools and classrooms to cater to, represent, and promote the presence and belonging of their diverse students, at times failing to do so in different ways. More recently, I have approached these explorations through the lens of sensescales.

To set the stage for these proyectos, I begin by laying out some key concepts, such as embodied cognition, translanguaging, and history-in-person, which we cover through readings, presentations and discussions. Against these notions, and an understanding of eco-social and socio-cultural approaches to language acquisitions, I provide them with prompts to guide their proyectos. Prompts I have used include: (i)

taking a sensescapes approach, explore how your classroom practices/configuration reflects and supports your students as they engage with specific curricular aspects; (ii) describe your classroom/campus from a mind–body–world perspective by conducting a walking ethnography either by yourself or with your students while drawing on the interplay between language, semiotic resources, identities and memory; (iii) create a lesson plan to explore the notion of LLs with your students, where you expand the focus from language and multilingualism to the senses and sense-making.

The proyectos help teachers explore the interfaces between multilingualism and space in ways that decenter previous assumptions about the multilingual experience of their students as complex people, moving them towards de-essentialized understandings of their day to day experiences. By extension, teachers gain tools to create more complex curricula that articulate a new awareness of the ecologies at work in shaping their students’ personhood and experiences in the classroom and in school.

5 Conclusions

In this chapter, I have laid out the groundwork for the notion of sensescapes, as developed in my own work and in dialogue with current developments in the field of LL and with proposals from other areas in the humanities and the social sciences. The perspective I have presented herein centers on how multilingualism in the study of the LL may benefit from a wider lens that integrates sense-making, both, in the sensorial way and in the cognitive way. In the second part of the chapter, I have moved on to the field of language education, and I have described two examples of pedagogical interventions (framed as proyectos) that articulate a sensescapes approach as operationalized in my classes with so-called “heritage speakers” and with pre- and in-service teachers. Both pedagogical assignments promote an ecological understanding of one’s personhood in space, the translanguaging processes that mediate meaning- and sense- making, and the ways in which contextual factors are processes through embodied cognition.

To conclude, a brief note on my goal with this proposal. I do not think that a sensescapes perspective (should) supersede(s) LL. To be clear, sensescapes is in many ways different from LLs, and so it would fail to address central questions in LL research--particularly those related to language(s) as countable entities and their representation in space, or their relation to public policy. Sensescapes is about phenomenological accounts, sensorial interplays, and sense-making in its broadest sense. Language is part of this, but just one component. A sensescapes account does not have a sharp edge to explore language and multilingualism the way a LL approach does. I see them as complementary in many ways, and it is my hope that this idea supports LL researchers, language educators, and multilingual students gain a broader sense of how they, their students and the people they work with interact with and understand communication, meaning and sense in space. This perspective opens new, very exciting possibilities for growth and renewal.

References

- Atkinson, D. (2013a). Language learning in mindbodyworld: A sociocognitive approach to second language acquisition. *Language Teaching*, 47(4), 467–483. <https://doi.org/10.1017/s0261444813000153>
- Atkinson, D. (2013b). Beyond the brain: Intercorporeality and co-operative action for SLA studies. *Language Teaching*, 47(4), 467–483. <https://doi.org/10.1017/s0261444813000153>. (*The Modern Language Journal*, 103(4), 724–738, 2019).
- Atkinson, D. (2014). Language learning in mindbodyworld: A sociocognitive approach to second language acquisition. *Language Teaching*, 47(4), 467–483.
- Atkinson, D. (2019). Beyond the brain: Intercorporeality and co-operative action for SLA studies. *The Modern Language Journal*, 103(4), 724–738.
- Banda, F., & Jimaima, H. (2015). The semiotic ecology of linguistic landscapes in rural Zambia. *Journal of Sociolinguistics*, 19(5), 643–670.
- Barsalou, L. W. (2008). Grounded cognition. *Annual Review of Psychology*, 59, 617–645.
- Becker, A. L. (1988). Language in particular: A lecture. In D. Tannen (Ed.), *Linguistics in context* (pp. 17–35). Ablex.
- Becker, A. L. (1991). Language and languaging. *Language and Communication*, 11(1-2), 33–35.
- Biesta, G. (2014). Pragmatising the curriculum: Bringing knowledge back into the curriculum conversation, but via pragmatism. *Curriculum Journal*, 25(1), 29–49.
- Bloome, D., & Beauchemin, F. (2016). Languaging everyday life in classrooms. *Literacy Research: Theory, Method, and Practice*, 65(1), 152–165.
- Bunkše, E. V. (2012). Sensescaping: Or a paradigm shift from words and images to all human senses in creating feelings of home in landscapes. *Landscape Architecture and Art*, 1(1), 10–15.
- Classen, C., Howes, D., & Synnott, A. (2002). *Aroma: The cultural history of smell*. Routledge.
- Cowart, M. (2005). Embodied Cognition. Retrieved April 23, 2014, from <https://www.iep.utm.edu/embodcog/>.
- Coupland, N., & Garrett, P. (2010). Linguistic landscapes, discursive frames and metacultural performance: The case of Welsh Patagonia. *International Journal of the Sociology of Language*, 205, 7–36. <https://doi.org/10.1515/ijsl.2010.037>
- Damasio, A. (2009). Neuroscience and the emergence of neuroeconomics. In *Neuroeconomics* (pp. 207–213). Academic Press.
- Davies, W. J., Adams, M. D., Bruce, N. S., Cain, R., Carlyle, A., Cusack, P., Hall, D. A., Hume, K. I., Irwin, A., & Poxon, J. (2013). Perception of soundscapes: An interdisciplinary approach. *Applied Acoustics*, 74(2), 224–231.
- Degel, J., Piper, D., & Köster, E. P. (2001). Implicit learning and implicit memory for odors: The influence of odor identification and retention time. *Chemical Senses*, 26(3), 267–280.
- Douglas Fir Group. (2016). A transdisciplinary framework for SLA in a multilingual world. *The Modern Language Journal*, 100(S1), 19–47.
- Due, B., & Bierring Lange, S. (2018). The Moses effect: The spatial hierarchy and joint accomplishment of a blind person navigating. *Space and Culture*, 21(2), 129–144.
- Ellis, N. C. (2008). The dynamics of second language emergence: Cycles of language use, language change, and language acquisition. *The Modern Language Journal*, 92(2), 232–249.
- Glenberg, A. M., & Kaschak, M. P. (2002). Grounding language in action. *Psychonomic Bulletin & Review*, 9(3), 558–565.
- Glenberg, A. M. (2008). Embodiment for education. In P. Calvo & A. Gomila (Eds.), *Handbook of cognitive science* (pp. 355–372). Elsevier.
- Glenberg, A. M., Goldberg, A. B., & Zhu, X. (2011). Improving early reading comprehension using embodied CAI. *Instructional Science*, 39(1), 27–39.
- Goldstein, E. B. (Ed.). (2009). *Encyclopedia of perception*. Sage.
- Howes, D. (2005). Architecture of the Senses. In M. Zardini (Ed.), *Sense of the city: An alternate approach to urbanism* (pp. 322–331). Lars Müller Publishers.
- Jay, M. (2002). That visual turn. *Journal of Visual Culture*, 1(1), 87–92.
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology*, 16(1), 23–49.

- Lantolf, J. P. (2005). Sociocultural and second language learning research: An exegesis. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning*. Routledge.
- Macpherson, H. (2006). Landscape's ocular-centrism—and beyond. *Frontis*, 12, 95–104.
- Mahon, B. Z., & Caramazza, A. (2008). A critical look at the embodied cognition hypothesis and a new proposal for grounding conceptual content. *Journal of Physiology-Paris*, 102(1–3), 59–70.
- Malinowski, D., Milani, T. M., & Tufi, S. (Eds.). (2020). *Reterritorializing linguistic landscapes: Questioning boundaries and opening spaces*. Bloomsbury Publishing.
- Merleau-Ponty, M. (2002). *Husserl at the limits of phenomenology*. Northwestern University Press.
- Masschelein, J., & Simons, M. (2013). *In defence of the school: A public issue*. Education, Culture & Society Publishers.
- Peck, A., Stroud, C., & Williams, Q. (Eds.). (2018). *Making sense of people and place in linguistic landscapes*. Bloomsbury Publishing.
- Pennycook, A. (2018). Linguistic landscapes and semiotic assemblages. In M. Pütz & N. Mundt (Eds.), *Expanding the linguistic landscape: Linguistic diversity, multimodality and the use of space as a semiotic resource* (pp. 75–88). Multilingual Matters.
- Pennycook, A. (2019). From translanguaging to translingual activism. In D. Macedo (Ed.), *Decolonizing foreign language education* (pp. 169–185). Routledge.
- Pennycook, A., & Otsuji, E. (2015). *Metrolingualism: Language in the city*. Routledge.
- Porteous, J. D. (1985). Smellscape. *Progress in Physical Geography*, 9(3), 356–378.
- Prada, J. (2021). The critical awakening of a pre-service teacher in a Spanish graduate program: a phenomenology of translanguaging as pedagogy and as content. *International Journal of Bilingual Education and Bilingualism*, 1–14. DOI <https://doi.org/10.1080/13670050.2021.1881945>
- Prada, J. (2021a). Translanguaging Awareness in Heritage Language Education. In S. Loza & S. M. Beaudrie (Eds.), *Heritage Language Teaching* (pp. 101–118). Routledge.
- Prada, J. (2022). Approaching Composition as Showing–Telling through Translanguaging: Weaving Multilingualism, Multimodality, and Multiliteracies in a Digital Collage Proyecto Final. *Languages*, 7(1), 70.
- Pütz, M., & Mundt, N. (2019). *Expanding the linguistic Landscape*. Multilingual Matters.
- Rodaway, P. (1994). *Sensuous geographies: body, sense, and place*. Routledge.
- Rueschmeyer, S. A., van Rooij, D., Lindemann, O., Willems, R. M., & Bekkering, H. (2010). The function of words: Distinct neural correlates for words denoting differently manipulable objects. *Journal of Cognitive Neuroscience*, 22(8), 1844–1851.
- Samuels, D. W., Meintjes, L., Ochoa, A. M., & Porcello, T. (2010). Soundscapes: Toward a sounded anthropology. *Annual Review of Anthropology*, 39, 329–345.
- Scollon, R., & Scollon, S. W. (2003). *Discourses in place: Language in the material world*. Routledge.
- Sebba, M. (2010). Linguistic landscapes: A comparative study of urban multilingualism in Tokyo. Peter Backhaus. *Writing Systems Research*, 2(1), 73–76.
- Shohamy, E. (2006). *Language policy: Hidden agendas and new approaches*. Routledge.
- Schroers, M., Prigot, J., & Fagen, J. (2007). The effect of a salient odor context on memory retrieval in young infants. *Infant Behavior and Development*, 30(4), 685–689.
- Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through. *Sociocultural Theory and Second Language Learning*, 78(4), 97.
- Tellier, M. (2008). The effect of gestures on second language memorisation by young children. *Gesture*, 8(2), 219–235.
- Todd, S., Hoveid, M. H., & Langmann, E. (2021). Educating the senses: Explorations in aesthetics, embodiment and sensory pedagogy. *Studies in Philosophy and Education*, 40(3), 243–248.
- Varela, F. J. (1991). Organism: A meshwork of selfless selves. In A. Tauber (Ed.), *Organism and the Origins of Self* (pp. 79–107). Springer.
- Vygotsky, L. (2011). *Interaction between learning and development*. Linköpings Universitet.
- Wei, L. (2018). Translanguaging as a practical theory of language. *Applied Linguistics*, 39(1), 9–30.

Willems, R. M., & Casasanto, D. (2011). Flexibility in embodied language understanding. *Frontiers in Psychology*, 2, 116.

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Material Culture Inside and Beyond the Multilingual Classroom: Theoretical and Pedagogical Perspectives



Larissa Aronin, Daria Bylieva, and Victoria Lobatyuk

Abstract Linguistic landscape (LL) studies have developed extensively to describe more places and more items. The tendency of expanding the LL purview towards including the items that, in fact, belong to the material culture deserves thorough analysis. This is especially critical for the classroom research and practices, where tangible, concrete, three-dimensional, culturally indexical, manipulatable and portable materialities, many of which ensure ‘affective understanding’, aid the teaching and learning process. Therefore, it is important that teachers are cognizant of the role of material culture in the learning and in multilingual socialisation of pupils and students in bilingual, multilingual, and monolingual settings. The chapter explains how LL is an ineluctable part of the material culture of multilingualism (MCM), describes the unique qualities of the material culture of multilingualism (MCM) for the domain of education and overviews the specific materialities inside and beyond language classroom basing on the multilingual context of the Russian Federation in the years 2019–2021.

Keywords Material culture of multilingualism (MCM) · Linguistic landscape · Multilingual classroom · Multimodality · Multilingualism · Domain · Affordances

1 Introduction

Countries and communities of the world increasingly face the reality of multilingualism, and multilingual classrooms became its consequence and insignia. Pupils speak a variety of languages and dialects at home and with friends; in addition,

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teaching two or three additional languages is common. Originally, linguistic landscape (LL) entered the educational realm due to mainly sociolinguistic concerns, pointing to languages used in particular settings and revealing their hierarchy, importance, or lack of attention towards certain languages in a community. Since then, many valuable insights into how LL can help teach languages in class and in out-of-class contexts have been offered (see, e.g., Malinowski, Maxim, & Dubreil, 2020). Education and language teaching embraced the developments of LL in the societal sphere and projected the findings and methods to their domains (see e.g., a comprehensive overview by Dagenais et al., 2009; Niedt & Seals, 2020). Of recent, LoCALL project (<https://locallproject.eu/>) embodies the best features of classroom related use of LL most vividly, with attractive multimodal educational activities and sufficient cultural knowledge outcome.

Recently, the authors of LL studies expand the purview of the field and attempt to deal with subjects that are not only posters and ads, but also things and objects thus spilling beyond its original agenda defined by Landry and Bourhis as to “the visibility and salience of languages on public and commercial signs in a given territory or region” (1997, p. 23). Although it is a positive development in terms of adding to the pool of knowledge about the environment in which multilingual individuals and communities live and educate new generations, theoretical examination is necessary to clarify the characteristics of items under research and their subsequent relevance for the methodological framework. In simple words, it is not sufficient to call an item a LL piece to obtain valid research results and receive a proper knowledge of how to use it in teaching practice advantageously. The variegated forms of the material world have their own properties which are to be researched in order to enable educators to use them in an informed manner and in proper situations. LL is an important part of the wider area of materialities, but it cannot be indiscriminately used to cover all innumerable items that need the attention of researchers and practitioners.

To this end, the first section of the chapter briefly traces the development of LL research towards the expansion of its purview and situates it within the wider field of the Material Culture of Multilingualism (MCM). The clarification of similarities and distinctions between LL and MCM is followed by the proposal to organise the studies on MCM according to human activity and communication domains. Section two is devoted to the material culture of multilingualism in education and language teaching. The features of MCM that make it important for teaching and learning are singled out, followed by an examination of the multilingual materialities of a classroom (MMC). The theoretical material is supported by the visual evidence from the multilingual classrooms in Russian Federation collected in 2019–2021.

2 From LL to the Material Culture of Multilingualism (MCM)

This section aims to trace the gradual expansion of the purview of LL studies in sociolinguistics and applied linguistics (1.1). It briefly describes the field of MCM (1.2), and demonstrates why and how various kinds of tangible items fit different theoretical frameworks—either LL or the MCM (1.3). The section ends with the proposal to divide the field of MCM into sub-fields based on the domains as they are understood in sociolinguistics (1.4).

2.1 *Trajectory of Purview Expansion in the Field of the LL*

The fiery stream of studies on the LL resulted in an enormous number of papers on the subject. The field's growth is marked by descriptions of LL in more streets, further cities and numerous additional places in the world (Backhaus, 2007, Gorter, Marten, & Van Mensel, 2012, Hewitt-Bradshaw, 2014, Barrs, 2017). Along with that, some researchers added to their scholarly discussions the items that they perceived as belonging to LL. We will trace the latter development below.

For the originators of the LL field, “Linguistic Landscape refers to the visibility and salience of languages on public and commercial signs in a given territory or region (Landry & Bourhis, 1997, p. 23). More recently the commonly accepted area of concern of LL is succinctly summarised as referring to” multimodal texts displayed in public places and spaces. It encompasses the range of language use in a speech community. (Hewitt-Bradshaw, 2014, p. 157). Advertisements, posters and signs placed in the public settings of various communities and countries were examined and conditions for language choice in public signage were formulated (Spolsky and Cooper 1991) in various places globally (Backhaus, 2007; Gorter, 2006), especially with regard to minority languages (Cenoz & Gorter, 2006; Gorter et al., 2012). Most of the studies discussed the hierarchy of languages in a particular community or area and consequent power relations between languages and communities as they transpire through the LL, thus investigating the social aspects of the use of languages. The importance of LL was and is still seen in its capacity to be a measure of linguistic contact. The leading researchers of LL pointed out that the LL approach “not only studies the signs, but it investigates as well who initiates, creates, places and reads them,” and looks at how the LL is manipulated in order to confirm or to resist existing or presumed language prestige patterns and hierarchies (Gorter et al., 2012, p. 1).

Cook expanded the research of LL into social semiotics and the realms of writing systems, fonts and punctuation (Cook, 2013, 2014a, b). His expert analysis of the punctuation aspect of LL items in two streets in Newcastle upon Tyne, Stowell Street and Leazes Park Road revealed its telling difference from the ‘standard’ punctuation of the ordinary texts (Cook, 2014a, p. 289) in that the language of the street “uses punctuation very sparingly” (Cook, 2014a, p. 287).

The insightful introduction of a ‘place’ factor by Scollon and Scollon (2003) advanced the field to a new interdisciplinary crossing. The authors put forward an idea of a systematic analysis of signs, based on geosemiotics, which they defined as “the study of the meaning systems by which language is located in the material world” (Scollon and Scollon, 2003, p. 2). According to the authors, it is a place where the signs are situated that grants meaning to them. Only on condition of being placed on the relevant site does a sign acquire its designated meaning. Further studies discussed semiotic landscapes and space (see e.g., Jaworsky & Thurlow, 2010; Malinowski et al., 2020), and extended the mobility concept to LL in a special issue of the *International Journal of Multilingualism* (Moriarty, 2014a), thus, deepening our understanding of LL. Hult (2014) collected data on visual language use (Spanish and English) in public space, along the San Antonio highway system, that is, literally on the way. He has found that the language choice on signs is mediated by “a confluence of (trans) national, cultural and economic discourses” (Hult, 2014, p. 507). Also referring to mobility, Sebba notes that signs may be “valuable indicators of such things as multilingual composition of a community, public debates about language, public policy goals and power relations between languages” (2010, p. 59). Moreover, he adds a selection of items less typical for the examining LL, to the purview—product labels, pamphlets, banknotes, stamps, tickets, handbills, and flyers—which he calls ‘unfixed’ (Sebba, 2010).

We find such ‘unfixed’ LL items in terms of Sebba (2010) in other works: stickers and flags Moriarty (2014b)—metal manholes in the multilingual town of Zadar, Croatia (Oštarić, 2012), and jars of honey with bilingual labelling in the investigation of LL of French and Italian cities, by Blackwood and Tufi (2012), graffiti (Pennycook, 2009), body as a corporeal landscape (Peck & Stroud, 2015)—all ascribed to LL paradigm. Such studies with explicitly more material subjects of interest multiply as scholarly curiosity inevitably strives further and deeper. There is a clearly perceived and well-justified need within LL research to go further in linking languages with the physical environment where they are used. With that, in our point of view, not all the items examined under the LL agenda are such; many of them are, in fact, materialities. Although LL is part of the wider category of material culture, the distinction between the two is crucial. Allotting each framework its own suitable niche will allow nuanced managing of the environmental factors and their informed and appropriate use in education.

2.2 What is the Material Culture of Multilingualism (MCM)?

The material culture of today’s multilingual world comprises physical objects of various kinds, including everyday items, such as goods, products, books, pens and carpentry tools, food with its packages, utensils, furniture, pieces of art, medications, medical devices, and artefacts such as clay tablets and monuments of the past, as well as the most recent technology appliances of the present, interconnected by and with a local and global mindset, culture, tradition and social life (Aronin, 2018). Scholars

also include into the material culture somewhat less tangible phenomena such as events, rituals, smells, sounds, spaces while Ingold (2011) insists on including and studying materials of which materialities are made as more defining characteristics of the material world that we find ourselves in. Whether monumental buildings or small-sized memorabilia, materialities are linked to cultures and ways of life (Schlereth 1985) and objectively represent a group's subjective vision of custom and order (Marshall, 1981).

Drawing on the earlier and current research by anthropologists, ethnologists, and scholars in material history, we nevertheless have to note that given the contemporary global multilingual condition, in this chapter, we do not refer to 'material culture' in general as to just places and materialities. We speak about 'the material culture of *multilingualism*' where the word 'multilingualism' added to the term carries an additional important emphasis (Aronin et al., 2018). It implies the co-dependency between mind, action, and matter and the inseparability of thought, action and material things revealed by interdisciplinary studies (Capra & Luisi, 2014; Malafouris, 2013). MCM underlines the pervasive role of multilingualism in current human life. It is defined as a specific blend of materialities, originating from many cultures which constitute a multilingual society (Aronin, 2012, Aronin and Ó Laoire 2013, p. 228). It comprises materialities relating to a multilingual way of existence, whether by individuals or societies.

Material culture is a pervasive and enduring part of everyday experience. It is so natural and common to our lives that it is often taken for granted and may be underestimated by educators. However, artefacts and objects that accompany, enhance and enable human activities possess important features that are to be considered in education and language teaching. They are briefly described below.

Materialities reflect social reality and its dynamics, enabling lifestyles and traditions through their properties: solidity and concreteness; temporal tenacity and dynamicity in time, space, and form; three-dimensional indexicality (Aronin, 2018). The range of the 'what for', 'when' and 'how' people use artefacts and things is unlimited. Some things are used (always or occasionally) and put on display, and others are just kept or hidden, still others, such as roads, buildings and spaces, are experienced as a given or passed by. In other words, material objects are dealt with or manipulated, moved or carried along. In social contexts, solid material culture objects merge with often intangible social, cognitive and emotional aspects of life, thus creating a complex interface of reality. Things in some way arrange, organise and enable our lives and if used in education, materialities can serve as a 'shortcut' to multilingual contexts of any scope. Found in both public and private places and in the in-between places, contiguous with physiological and psychological events, materialities provide the 'whole experience'. Materialities are part of our life-world and reflect it with satisfying exactness.

Objects and things copiously fill in our senses of sight, hearing, taste, touch, or smell, or several of them at a time by virtue of their physical properties. Material culture often invokes thoughts, triggers reminiscences and emotions and boosts cognition by activating the feature of "affective understanding" (Aronin, 2012, 2018). One possible explanation for this may be that "the five senses do not travel along

separate channels, but interact to a degree few scientists would have believed only a decade ago” (Cytowic, 2010, p. 46, quoted in Pink, 2012, p. 4). Tangible materialities seem to be the ideal support for cognition and emotions, since they provide natural sources for arousing all the five senses simultaneously. In addition, acting with and manipulating material culture items enhances learning. Furthermore, the material realm is an ineluctable part of human discourse, more precisely, it is one more channel of discourse, in addition to writing and speech. In a broad sense, material culture is a discourse of a particular kind that expresses values, assumptions and ideas, through material objects. Materialities ‘talk’, merging their ‘voice’, or rather ‘touch’, to verbal communication. Normally, multilinguals belong to several discourse communities, either more centrally or more peripherally, thus sharing basic values, assumptions and ways of communication with each of them. For this, multilinguals mix their discourse systems in a wide variety of ways, also including multi-modal communication means. This leads us to conclude that materialities are also the means for joining other discourses in addition to their function of supporting selected discourses.

In sum, the ability of materialities to reflect multilingual reality, evoke thoughts and reminiscences, promote or eliminate motivation, awake awareness, include a person into a societal discourse, and provoke attitudes, is beneficial for education and, therefore, material culture should be seriously considered in language teaching. Using materialities in education prepares the pupils to deal with the real world and provide additional modality means for multilingual socialisation.

Having discussed the specific features of the MCM, we now turn to the question: How is LL related to MCM? The following subsection of this paper is devoted to a discussion of this question. While LL and MCM share many things in common, it is important to understand where they diverge. This theoretical excursus in the next subsection (1.3) demonstrates how both frameworks can be used most constructively and the items of LL and MCM researched in an organised and systematic way.

2.3 Distinctiveness of LL and MCM

Since the items of the LL are often placed, written, inscribed on material substances, such as paper, carton, metal or stone, they definitely belong to the realm of material culture. With that, LL and MCM differ in several features, the degree of manifestation of common features, and areas of application. The relation between the fields of LL and MCM can be roughly expressed as overlapping, and one (LL) being an important part of the other (MCM). The material culture of multilingualism embraces a wide variety of material objects and artefacts, LL items being one such category of things (Fig. 1).

Fig. 1 Illustration roughly showing the relationship between the purviews of Material Culture of Multilingualism and LL

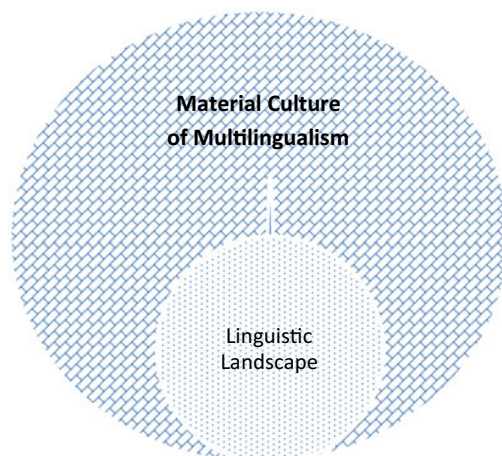


Figure 1 illustrates how LL is part of the wider category of material culture and also their overlap and divergence. Along with similarities, the two frameworks with items belonging to them have distinctive properties. We briefly describe them below.

1. Domain of Spread

While the LL studies originally were meant to investigate language use in public spaces and are still dedicated mainly to items in public display, the material culture items pervade personal and in-between spaces equally copiously. The MCM purview naturally embraces all the domains of human interest and activities. The ‘entrance’ to the identity realm is highly relevant for teaching and education as material culture is a perfect tool for analysing individual cognitive and emotional states and life trajectories. Some materialities label a person or a community and define them in an official, or unofficial manner, adding nuances and tools for intercultural education. Encompassing comprehensively, not partially, the whole environment of multilinguals, materialities relevant to all spheres of human life are a barometer of linguistic, cultural and societal diversity (Aronin, 2018) and serve as good tools of preparation for the multilingual reality of life. Material items of multilingualism can be beneficially used in preparing school children and students to meet the multilingual world in all its manifestations.

It is also obvious that being an inherent part of the personal domain, materialities (memorabilia, remembered items, among them) are more closely connected with identity than the ads and posters on the street, thus being a valuable part of the educational process.

2. Modality

One of the most important tasks of education is to prepare pupils and students to function in the world and fit into society. The contemporary world is noticeably polymorphous. Moreover, the current reality is particularly rich in modalities of

all kinds, and current educational practices reflect and embrace them. Materialities are often solid, and they deliver to the perception of their user or by-passer their qualities such as form, texture, smell. This rich multimodality can be advantageously acknowledged in the cognitive tasks in teaching and education through the use of things and objects that are available in several modalities including writing, aural—listening or oral input, digital, texture, smell, touch, olfactory. Technology objects used in a classroom and outside of it are particularly complex with regard to modality (Aronin, 2018) since they include an LL-looking screen display and 3D physical hardware ingredients that account for exceptionally dynamic context.

As for LL, its dominating modality is visual. Partially, the predominance of visuality and some disregard for material components is a consequence of our perception of usually thin material underlying the information content of LL items. They are typically perceived as 2D rather than 3D things, as a sheet of paper or carton. Another reason that has a bearing on preference for visuality in LL is socio-cultural. Boivin (2008, p. 97) reminds us that *visualism* is “the dominance and privileging of vision [and text] in contemporary and recent Western societies” and its continuing being on the top of the hierarchy of senses in the West is linked to preoccupation with literacy (Ong 1969, 2002). LL relies on visual perception because it originated from the linguistic and sociolinguistic studies tradition. Its difference from the MCM transpires because normally we do not touch posters or advertisements in the public domain unless, of course, they are written in Braille characters, three-dimensional tactile bumps.

As an illustration to the fact that LL historically draws on tendencies that focus on visuality and language, consider the work by Coulmas, a linguist examining writing. His obvious point of departure when discussing inscriptions on things is language. Consequently, while noting the physical qualities of objects under discussion, such as the smell of leather, or the volume and weight of stone material, Coulmas refers to these objects as a “writing surface in the form of” coins, swords and mirrors (2006, p. 558). The linguistic content visually and meaningfully dominates LL items, and the majority of research questions and findings in the LL studies refer to the content of inscriptions and texts. The brilliant excursions into the materials from which the ads are made by Cook (2013, 2014b) on the street are the exceptions proving the rule.

3. Dynamicity, Portability

LLs are dynamic in their own way, but they cannot be compared to material objects in dynamism and capriciousness of behaviour. Big and small things keep moving or being moved, arranged and rearranged, hidden or put on display in sophisticated, utterly complex, and unexpected ways. It is possible to trace the trajectories of objects of material culture (‘thing biography’, or ‘history of things’) in time and space, following the dynamics of their particular ‘life,’ as representations of their owners or users. Unlike ‘fixed’ signs of the LL, which typically are supposed to stay put, ‘in place,’ in order to fulfil their role and acquire their intended meaning, objects and artefacts are very often portable and movable in many ways. One might think of souvenirs that are brought from other countries, pendants worn near one’s heart, a favourite vase brought by an immigrant to a new life, and kept in the new

home for many years, then handed on to children and grandchildren, which thus assures the ethnic identity may often relate to a minority language (Hornsby, 2018; Oštarić, 2018). While LL on the street or in any other public space mostly reflect the commonly accepted and practised in this community sociolinguistic status quo, the status of languages and their users, material culture objects, such as tickets, caps, food, uniforms, enjoy high mobility and make a strong emotional and cognitive impact on their users.

4. Agency, Manipulability

The LL items differ from many material culture items in terms of agency. Not getting deep into the discussion of agency in the ethnographic and material culture studies (see e.g., Hoskins, 2001; Tilley, 2001; Knappett, 2005), here we define the agency of materialities as a capacity of things to produce effects in the form of humans' mental and physical state when used for a particular purpose. LL objects are known to serve four purposes: locating, controlling, informing and service (Cook, 2013). Locating signs identify the streets and its buildings; informing signs provide functional information such as opening times, the availability of goods (e.g., 'Coffee & Sandwich Shop'), job offers, for sale signs and advertisements; controlling signs ask or require people to behave in particular ways, whether drivers, pedestrians or customers, e.g., 'No entry' sign; and service signs such as those put up by providers of services, e.g., 'Post office', hydrant sign or manhole cover labelled 'CATV' for a particular readership used by special services (Cook, 2014a, 2014b, p. 274, p. 276, p. 279, p. 282). Given these four main tasks of the LL signs, the agency over them is in the hands of those who have these LL items produced and expect a particular impact on the readers according to their specific aim (to point to a shop location, to show the traffic direction). The agency of readership, the receivers of the information provided by a sign, poster or other LL item is rather limited in most of LL cases. Banners and posters are not produced with the thought that each passer-by would correct, change it or take the metal signboard of the store along with him, on the opposite, they are supposed to 'stay put' where they were placed by line road police, shop owners, or university administration. We may conclude that the interaction between the producer of a LL item and their 'clients' recipients are not equal in terms of agency.

On the opposite, with other than LL types of materialities, the agency over things is spread along with their users more widely; it is common to move, carry along and manipulate things. Things are more easily available for transformations, that are manipulatable in a much more varied way than LL.

5. Emotional Impact

The emotional impact of LL items on their readers is possible but not typical. This can be accounted for by the main mission of LL items already stated above. Information or notification can, of course, annoy or sadden, but these are rather exceptions than a norm. Contrary to that, many materialities evoke emotional response elicited by a variety of reasons: whether for their beauty or scientific meaning, as art and anthropology, or because of the personal story behind an ordinary thing, or due to it

being especially fitting to reach particular aims defined by its owner, e.g. comfortable shoes, favourite cup. Emotions and feelings evoked by things may range from positive to negative and various nuances—sweet—sour nostalgia, anger, fear, pride. Emotional component is more commonly expressed in things rather than in LL.

6. Affective Understanding

The feature of affective understanding associated with cognition is also more typical of things and artefacts than of the LL items. Since the affective understanding feature is more pronounced in things rather than in LL, it is sensible to increase the use of material culture in class and beyond it. Materialities are especially of value for language classrooms. Due to it, some things may be brought to a classroom, such as items considered to be indicative of the English language and western culture might be used in a classroom to improve memorisation, lead to deeper understanding, and create motivation (e.g. Włosowicz, 2018).

7. Power of Impact

Finally, due to its qualities and usage to support activities, MCM is more conducive to actions, more persuasive. Consider two options of delivering a smoking policy in a cruise ship to the tourists (see Fig. 2a and b). One is a LL item, a “No smoking” sign. The other is an MCM object—an ashtray attached to the deck wall of a cruise ship. Given the two opposing instructions, will you smoke in this circumstance? Many people do, because an object affording an activity of smoking— an ashtray—is more conducive to action (of smoking in this case) this than only a visual, written prohibition sign.

The seven features of LL and DLC items as related to their use and perception in society are presented in comparison in Table 1.

It is easy to see from this table that all the features of LL and MCM singled out above overlap in some ways but differ in their intensity. Quantitative dissimilarities bring qualitative differences leading to the emergence of another quality that makes

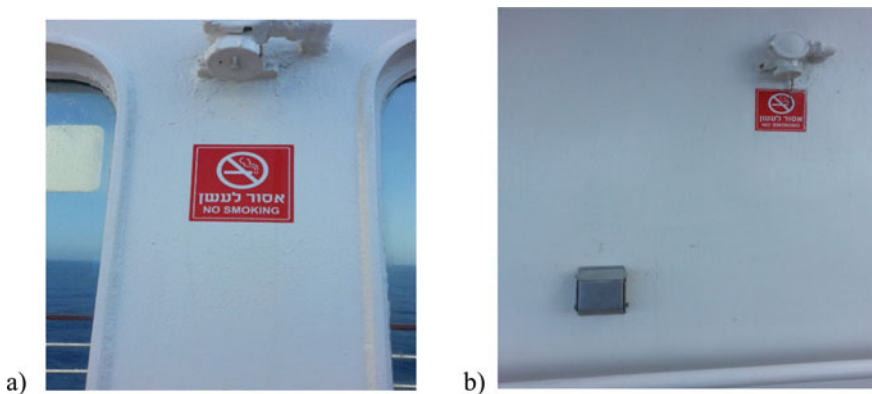


Fig. 2 a LL prescribing sign ‘no smoking’ b ash-tray, material culture item

Table 1 Distinctive properties of LL and Material Culture of Multilingualism frameworks

Features	Linguistic landscape	Material culture of multilingualism
1. Realm of human life that a framework captures best	Called for to focus mostly on public spaces	Encompasses personal, public and in-between spaces
2. Modalities involved	Visual–writing modality prevails	Materialities are multimodal
3. Dynamicity, portability, mobility	Limited	A considerable part of materialities is variously dynamic and portable
4. Agency, manipulability	Normally, more characteristic for those who have them produced and put up. Limited/not provided for receivers	MCM allows agency for those who possess them; they are more active in their dealing with the items
5. Emotional impact	Possible but not typical	Many materialities evoke an emotional response
6. Affective understanding (cognitive aspect)	Possible but not typical	Many materialities enable affective understanding
7. Impact on actions/activity	Is supported by the linguistic (logical) persuasion	Linguistic, physical, being a tool for activity conduction

MCM different from items of LL in important for education aspects. The properties of LL and MCM items signpost their application areas, and we will discuss the benefits of their application in education and language teaching in section two. Material culture of multilingualism (MCM) includes LL as its important constituent, but goes beyond it in its purview, thus offering rich theoretical foundations. In the next sub-section, we discuss the different domains of human life in which the MCM is concentrated.

2.4 *Domains of the MCM*

The MCM is involved in most of the contemporary human activities and domains of practice. Materialities surround us at home and at work, in official and intimate settings, whatever we undertake. The things, their assemblages and the way they are organised for particular activities and situations differ in different spheres of life, and it seems useful to categorise the material culture of multilingualism according to some practically and theoretically sound criterium. To this end, we propose to utilise the concept of *domain* introduced by Joshua Fishman about language use in a bilingual society. Fishman (1965/2000, p. 94) defined domain as a “cluster of social situations typically constrained by a common set of behaviour rules.” Domains are settings where interlocutors make their language choice, conditioned by a particular locale and the events and subject matter associated with this domain. Aiming to

establish the rationale behind the language choice of bilingual speakers, Fishman found out that in stable bilingual contexts, using one language rather than another in certain situations is not accidental but customarily associated with specific settings, topics, and groups of interlocutors. Fishman (1965/2000) identified five domains named for a social space: ‘family’, ‘education’, ‘employment’, ‘friendship’, ‘government and administration’. Each domain is associated with a specific field of experience and roles of participants, and appropriate to its language variety and language behaviour. Additional domains, both broader and more specific types of situations, were subsequently distinguished; Spolsky (2009) discusses legal, army and health domains, as well as supranational organisations social spaces. Fishman distinguished domains by the location, participants, and topics on which people normally converse in these settings. Thus, the domain of ‘religion’ spreads along with typical locations—temples, mosques and synagogues. Its participants both animated and social bodies are religious institutions, missionaries, and believers and their common set of ‘proper’ issues for conversation and prayers. As in other domains, in the domain of ‘religion’ some languages and not others are normally selected for these particular physical settings and social milieu. Examples are the use of Church Slavonic as a liturgical language in the Russian Orthodox Church and the regular use of Korean by recent immigrants from Korea to Ireland, in the Dublin Korean Church (Singleton, Aronin & Carson, 2013). To account for the global transformations, a domain was defined via the affordances perspective as “a space–time where and when the most powerful collection of affordances favoring the choice of a particular language is furnished” (Aronin & Singleton, 2010, p. 122).

Regardless of their number identified in multilingual settings, domains refer to typical institutional contexts, events, and topics to talk about, and their congruent behavioural co-occurrences. We here wish to emphasise the importance of *activities* characteristic for each domain and materialities that are involved in or allow to carry out these activities. Hence it is reasonable to divide the field of the MCM into a number of domain-associated sub-areas based on the main activities and associated materialities characteristic for each domain (see Table 2).

The domain of education is associated with institutions such as kindergartens, schools, universities, and corresponding events requiring the use of a particular, often official language. Normally, communication in this domain revolves around the issues of learning, teaching, scientific disciplines, class and extracurricular events. This domain of classroom materialities is our special interest in this chapter, and

Table 2 Sub-fields of the material culture of multilingualism according to the domains of activity (The Material Culture of Multilingualism, MCM)

MMH—the multilingual materialities of **home**

MMC—the multilingual materialities of a **classroom**

SMM—**social** multilingual materialities

MMW—the material culture at **work**—various kind of jobs have various sets of materialities characteristic and vital form them

we discuss the benefits and practicality of using MCM in education and language teaching in the next section.

3 Material Culture of Multilingualism in Language Teaching

Section two explicates MCM in the domain of education and language teaching, and singles out its features that are especially conducive for teaching languages in a multilingual classroom and outside it.

3.1 Multilingual Materialities in Language Classroom (MMC)

Since today language classrooms are more often than not are multilingual, teachers want to understand the principles of using the environment to which they are actually preparing their pupils and students. As opposed to some other MCM domains, such as, for instance, home (MMH), which is mainly personal, educational, and classroom domain is largely public. Therefore, this domain of classroom material culture is dependable on current social perceptions, ideas and predispositions concerning both scientific and everyday aspects of life (Aronin & Singleton, 2019; Edwards, 2020).

The role of materialities in education has been treated by historians of education. The seminal volume edited by Lawn and Grosvenor (2005) is dedicated to education in general, to objects and sites of schooling, such as keys, walls and fences, space and light, school furniture, school uniforms. The authors do not see the relationship between objects and people as a dichotomy, rather, giving a rich historical account, they investigate “the ways objects are given meaning, how they are used, and how they are linked into heterogeneous active networks, in which people, objects and routines are closely connected” (Lawn & Grosvenor, 2005, p. 7).

Practitioners and researchers discussed classroom materialities that were not limited to pictures and posters on the walls (e.g., Brown, 2012). In previous decades teachers were concerned with the authenticity of materials and debated the issues of authentic materials and authenticity in foreign language learning (see e.g., Gilmore, 2007), and this interest is in place till our time (Obdaloova et al., 2018). Teachers traditionally brought into class postcards, pictures, souvenirs and memorabilia that helped to construct a foreign language space in class. The corresponding classroom research dealt with material culture in teaching materials, academic textbooks, student reports, boxes, bookshelves, correspondence to parents, locally produced items, students’ certificates, official school papers, charts, posters, flags, and visual aids (see e.g., Escamilla, 1994; Coady, 2003). In the case of minority language education, when educators are concerned about the status of the minority language outside

the classroom, objects and artefacts related to this language and culture draw attention, remind and stimulate interest on the part of learners. Johnson in 1980 looked into the material culture of public-school classrooms for the purpose of studying the symbolic integration of local schools and national culture (Johnson, 1980). The materials designed with the purpose of giving children and their families opportunities to participate in events and daily activities in the minority language proved to be effective. In the 2000s such were, for example, CD for hockey playing related to Ojibwe youth culture (Williams, 2002) and a bilingual colouring and stuffing activity book for Welsh children (Edwards & Newcombe, 2005).

The materialities of the classroom have been traditionally made of several kinds of materials (Ingold, 2011) such as paper, cardboard, clay, plasticine, chalk, wood for furniture and later plastic. The traditional schooling materialities were ‘invisible’ for a long time because they were so natural for school and schooling. Today plasticines are made of modern materials, texts and books are moving to digital as the nature of materials and materiality used in education gradually changes. In the recent decade and especially, a recent year and a half, the classroom related materialities have undergone drastic and obvious reconfiguration due to the COVID-related changes in education. The proportion of technology materialities increased as teaching and learning went online, thus swapping more traditional materialities for technological ones (Aronin, 2018, 2021; Bylieva et al., 2021). The global trend of multimodality of discourse enhanced by technology has also been adopted in education (see Fig. 3).

A powerful increase of technology materialities used in teaching and learning did not eliminate crude ‘real’ things and artefacts (see Fig. 4).

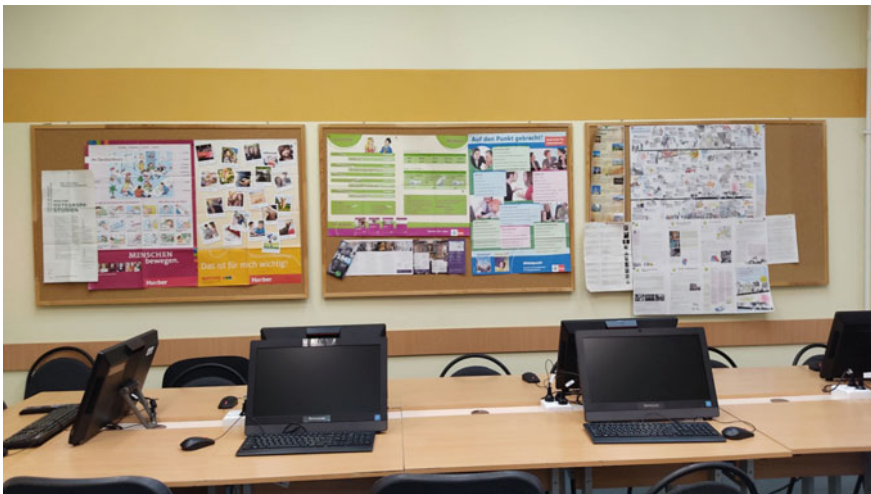


Fig. 3 Student places in the German language class at Peter the Great St. Petersburg Polytechnic University



Fig. 4 Collectable toys of Moomin characters and a “Historiska Kvinnor” board game in the Swedish language class at Peter the Great St. Petersburg Polytechnic University

The expansion of technology artefacts, multilingualism, and the use of various modalities in class is a response to the global transformations. Today socialisation of pupils and students includes the involvement of up-to-date materialities and skills in their appropriate use. In their language classes, children and adult language learners receive not simply socialisation, but *multilingual and multimodal socialisation*. In addition to *awareness* of one’s own and other languages in the milieu, multilingual socialisation also requires the development of *multilingual social skills*, which include knowledge of when, how and with whom use which language, observe the rules of certain language discourse with its traditions and culturally and historically imparted restrictions as well as the ability to participate in conversations and activities. MCM prepares the pupils/students to live in a multilingual society in global and local settings by way of physical examination, use and manipulation of culturally-nuanced materialities, and informed interaction between the material world and language. Therefore, multilingual materialities are relevant for education and language learning for bilingual and monolingual students and those who live in a monolingual enclave or attend a monolingual paradigm school. They still live and deal with a predominantly multilingual world. The acknowledgement, use, and, if needed, creation of age-appropriate, attractive materials (MCM items) that would accompany and enhance educational processes in and outside the classroom is paramount.

Changes befalling materialities in the domain of language classroom also refer to measuring in educational research and practices. The measuring techniques that have been suggested by researchers of material culture earlier were replaced by new technology-supported opportunities. The ingenious measuring methods through the means of material culture might be no longer considered effectual. For example, considering physical traces, that include erosion measures such as ‘wear and tear’ of more or less used books, or the frequency with which the floor tiles must be waxed in a museum, or the rails and doorknobs leading to various corridors require polishing (Webb et al. 1966), may be substituted by eliciting the data from servers. This way is perhaps even more informative nowadays as it allows to register whether an article or book was read in full or only an abstract, etc. The exotic ideas about measuring the

nose prints deposited on a glass each day may safely give way to thorough computer registering.

3.2 The Objectives for the Use of Materialities in the Classroom

The unique qualities of the MCM make them indispensable for teaching and learning, both in class and extracurricular work, trips, and events of all kinds. The impact of tangible, portable manipulatable materialities found in private, public and in-between spaces is more inclusive than that of LL items.

The next advantage of the use of things and artefacts can be expressed in the logical chain ‘affordances- actions–materialities’. Material culture provides affordances (Gibson, 1979; Proffitt, 2006); in fact, things and artefacts themselves *are* affordances (Aronin, 2014) that make certain actions possible. Affordances and actions that are taken with the realisation of affordances are central for the students of languages. These are not only language activities per se, but the widest array of other human activities that are accompanied and made possible by speaking, listening, writing, and reading, in short–by using languages. Material culture also affords to create additional spaces for underrepresented languages, e.g. minority, heritage or second languages.

Following the extended cognition view (Capra & Luisi, 2014; Clark & Chalmers, 1998; Malafouris, 2013), understanding emerges through embodied cognition, body activities of the organism, agent’s physical, social and cultural environment; that is, cognition happens through the physical touch, movement and interaction with things. Materialities afford, enable and enhance the learning/teaching activities. Since material objects and artefacts normally accompany, enable or more often, used as tools for various *activities*, their pedagogical selection should be driven by the preferred activity that the things are expected to support.

Consider board or card games in a Swedish learning class that are not intended for studying language and, in some cases, do not require knowledge of a particular language but still have a linguistic and cultural component. A game such as “Historiska Kvinnor” (Fig. 4), where players collect cards with Swedish attractions or famous women of Sweden, involves physical operating with cards, chips, cubes, and other material items in an intersection with the knowledge on Swedish cultural realities. Manipulation with notions that are familiar members of a speech community via substitute things (cards, chips, cubes) and traditionally used things in a community with a particular language teaches the students how to behave and be part of its discourse. Without it, communication and cooperation would not be authentic or complete. Applying manipulations with materialities in class is teachers’ prerogative, who, for the purpose of teaching, hand over the agency regarding multilingual artefacts to their students.

The MCM ensures multimodality and sensualising of education that LL items alone cannot guarantee. This is in tune with the current tendencies as applied linguistics researchers increasingly discover the bodily, material and sensual dimensions of life that are to be considered in today's education. Prada and Melo-Pfeifer (forthcoming) “bring to focus the relationships between language(s), sense(s) and modality(ties) in the interaction with Others and with timespaces”. The polymorphous, multisensory and multimodal world is expected to arrive and stay in a classroom.

Material Culture in a classroom serves various purposes, and MCM items can perform various roles in a classroom. Materialities may be used to supply emotionally-charged elements of languages-cultures and stimulate the affective understanding, which leads to longer remembering and better learning outcomes. Another group of materialities can be used as didactic tools to enhance, anchor and speed up understanding and memorisation. For these purposes, most of the language classes in Russia contain material objects associated with the culture of the country of the target language. The most popular object associated with the target language's country is a flag, whether plastic or flags to real textile. Among material objects associated with the country can be cultural artefacts, such as castanets, figurines in national costumes a Spanish dancer, fan and peseta coin in the Spanish class, or animals' figurines such as panda figurine in a Chinese learning class. Such materialities may not always have an activity-related purpose, as does, for example a tin-box with Chinese tea, but have primarily a symbolic meaning serving the purpose of creating a particular culture-related space and emotional tuning (Fig. 5).



Fig. 5 Materialities for the “Spanish cabinet”: a fan and castanets on the wall and artefacts on a shelf: a flamenco dancer statuette and a figurine in a sombrero, Antonio Gaudi’ lizard, peseta, pitchers

When things are examined, moved around and properly used and referred to in class, these activities lead to establishing an appropriate ethos—the characteristic spirit of a culture. Using and manipulating material culture is especially helpful in a monolingual or bilingual community class when things deliver an atmosphere peculiar for a target language community. Enacting the usage characteristic for particular culture items, their typical configurations develops multilingual socialisation. Take tea drinking, for example, with Chinese tea ceremony using culture specific artefacts or the presence of milk-pots in every tea-drinking place in Ireland.

4 Conclusion

In this chapter, we presented the differences between the fields of LL and the material culture of multilingualism as theoretically and practically important and situated LL within the wider field of the MCM. Revealing distinctions in the features and areas of habitual use of LL and MCM items leads to deeper theoretical considerations and practical implications for teaching. We argue that dealing with 3D things and artefacts requires an appropriate theoretical framework that gives due attention to their material qualities, such as physicality and solidity (including size, volume, texture, weight, colour, material, composition), portability and manipulability. To support this approach, we laid down the characteristics of the MCM and discussed the specific features of the classroom multilingual materialities, supplementing the theoretical discussion by illustrations of teaching practices in the language classes of a university in the Russian Federation, in 2019-2021.

We arrived at the following conclusions. LL has deservedly gained currency as an enrichment of classroom activities and multilingual education. With that, labelling all the non-linguistic tangible items as the LL does not do justice to the process of education and diminishes the possible benefits of involving multimodal 3D items in the classroom. LL is an integral part of the MCM. Although LL is part of the wider category of material culture, the distinction between the two is indispensable. Theoretically accurate outline of the areas of LL and MCM will enable appropriate use of these concepts in sociolinguistics and education. It follows that both LL and MCM have their specific niches of use in education and their corresponding aims for practical application.

Multilingual classroom today with its multilingual students, teachers and multimodal activities that take place in formal and informal settings necessitates an increasing awareness in MCM. MCM, which is highly dynamic and interactive, is a welcome and valuable addition to the teaching/learning processes. Physical, concrete and manipulatable materialities that have unique properties due to their distinct nature will play a more prominent role in language teaching classroom if teachers are aware of the role of material culture of multilingualism in a classroom and engage their (of materialities) outstanding properties to the full. Such an awareness includes informed

and carefully planned use of materialities at the lessons and during extracurricular activities in a way that gainfully releases their learning-enhancing features such as affective understanding, mobility, agency, in other words, yields its most for the benefit of better learning.

References

- Aronin, L. (2012). Material culture of multilingualism and affectivity. *Studies in Second Language Learning and Teaching*, 2(2), 179–191. <https://doi.org/10.14746/ssl.2012.2.2.3>.
- Aronin, L. (2014). The concept of affordances in applied linguistics and multilingualism. In M. Pawlak & L. Aronin (eds.), *Essential topics in applied linguistics and multilingualism* (pp. 157–173). Springer.
- Aronin, L. (2018). Theoretical underpinnings of the material culture of multilingualism. In L. Aronin, M. Hornsby & G. Kiliańska-Przybyło (Eds.), *The material culture of multilingualism* (pp. 21–45). Springer. https://doi.org/10.1007/978-3-319-91104-5_2.
- Aronin, L. (2021). Dominant Language Constellations: Teaching and learning languages in a multilingual world. In K. Raza, C. Coombe & D. Reynolds (Eds.), *Policy development in TESOL and multilingualism: Past, present and the way forward* (pp. 287–300). Springer.
- Aronin, L., & Jessner, U. (2014). Methodology in bi- and multilingual studies: from simplification to complexity. In R. M. Manchón (Ed.), *AILA review 27: Research methods and approaches in applied linguistics: Looking back and moving forward* (pp. 56–79). John Benjamins. <https://doi.org/10.1075/aila.27.03aro>.
- Aronin, L., & Ó Laoire, M. (2012). The material culture of multilingualism. In D. Gorter, H.F. Marten & L. Van Mensel (Eds.), *Minority languages in the linguistic landscape* (pp. 299–318). Palgrave Macmillan. <https://doi.org/10.1080/14790718.2012.679734>.
- Aronin, L., & Ó Laoire, M. (2013). The material culture of multilingualism: Moving beyond the linguistic landscape. *International Journal of Multilingualism*, 10(3), 225–235. <https://doi.org/10.1080/14790718.2012.679734>.
- Aronin, L., & Singleton, D. (2010). Affordances and the diversity of multilingualism. In L. Aronin, and D. Singleton (guest eds.) (September 2010), Special Issue: The Diversity of Multilingualism. *International Journal of the Sociology of Language*, 105–129. Mouton de Gruyter.
- Aronin, L., & Singleton, D. (2019). Introduction. In D. Singleton and L. Aronin (Eds.), *Twelve lectures in multilingualism* (pp. xxiii–xxvi). Multilingual Matters.
- Aronin, L., Hornsby, M., & Kiliańska-Przybyło, G. (Eds.). (2018). *The material culture of multilingualism*. Springer. <https://doi.org/10.1007/978-3-319-91104-5>.
- Backhaus, P. (2007). *Linguistic landscapes. A comparative study of urban multilingualism in Tokyo*. Multilingual Matters. <https://doi.org/10.21832/9781853599484>.
- Barrs, K. (2017). English in the Japanese linguistic landscape: An awareness-raising activity examining place, form, and reason. *Studies in the Humanities and Sciences*, 58(2), 211–224.
- Blackwood, R., & Tufi, S. (2012). Policies vs non-policies: Analysing regional languages and the national standard in the linguistic landscape of French and Italian Mediterranean cities. In D. Gorter, H. F. Marten, & L. Van Mensel (Eds.), *Minority languages in the linguistic landscape* (pp. 109–126). Palgrave Macmillan. https://doi.org/10.1057/9780230360235_7.
- Boivin, N. (2008). *Material cultures, material minds: The impact of things on human thought, society, and evolution*. Cambridge University Press.
- Brown, K. D. (2012). The linguistic landscape of educational spaces: Language Revitalization and Schools in Northeastern Estonia. In D. Gorter, H. F. Marten, & L. Van Mensel (Eds.), *Minority languages in the linguistic landscape* (pp. 281–298). Palgrave Macmillan. https://doi.org/10.1057/9780230360235_16.

- Bylieva, D., Zamorev, A., Lobatyuk, V., & Anosova, N. (2021). Ways of enriching MOOCs for higher education: A philosophy course. In D. Bylieva, A. Nordmann, O. Shipunova, & V. Volkova (Eds.), *Knowledge in the information society. PCSF 2020, CSIS 2020. Lecture Notes in Networks and Systems* (Vol. 184, pp. 338–351). Springer. https://doi.org/10.1007/978-3-030-65857-1_29.
- Capra, F., & Luisi, P. L. (2014). *The systems view of life: A unifying vision*. Cambridge University Press.
- Cenoz, J., & Gorter, D. (2006). Linguistic landscape and minority languages. *International Journal of Multilingualism*, 3(1), 67–80. <https://doi.org/10.1080/14790710608668386>.
- Clark, A., & Chalmers, D. (1998). The extended mind. *Analysis*, 58, 7–19.
- Coady, M. (2003). English books and Irish aspirations: Language and material artefacts in two Irish medium schools. *Journal of Celtic Language Learning*, 8, 5–23.
- Coulmas, F. (2006). *The Blackwell encyclopedia of writing systems*. Blackwell Publishing.
- Cook, V. J. (2013). The language of the street. *Applied Linguistics Review*, 4, 43–81. <https://doi.org/10.1515/applirev-2013-0003>.
- Cook, V. J. (2014a). Standard punctuation and the punctuation of the street. In M. Pawlak, & L. Aronin (Eds.), *Essential topics in applied linguistics and multilingualism, second language learning and teaching* (pp. 267–290). Springer. https://doi.org/10.1007/978-3-319-01414-2_16.
- Cook, V. J. (2014b). Meaning and material in the language of the street. *Social Semiotics*, 25(1), 81–109. <https://doi.org/10.1080/10350330.2014.964025>.
- Cytowic, R. (2010). Our hidden superpowers. *New Scientist*, 206(2757), 46. [https://doi.org/10.1016/S0262-4079\(10\)61018-4](https://doi.org/10.1016/S0262-4079(10)61018-4).
- Dagenais, D., Moore, D., Sabatier, C., Lamarre, P., & Armand, F. (2009). Linguistic landscape and language awareness. In D. Gorter & E. Shohamy (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 253–269). Routledge.
- Edwards, J. (2020). Towards multilingualism. *Journal of Multilingual Theories and Practices*, 1(1), 23–34.
- Edwards, V. & Newcomb, L. P. (2005). When school is not enough: New initiatives in inter-generational language transmission in Wales. *International Journal of Bilingual Education and Bilingualism*, 8(4), 298–312.
- Escamilla, K. (1994). The sociolinguistic environment of a bilingual school: A case study introduction. *Bilingual Research Journal*, 18, 21–47.
- Fishman, J. (2000). Who speaks what language to whom and when? *Linguistics*, 2(1965), 67–88. (Original work published 1965).
- Gilmore, A. (2007). Authentic materials and authenticity in foreign language learning. *Language Teaching*, 40(2), 97–118. <https://doi.org/10.1017/S0261444807004144>.
- Gorter, D. (Ed.). (2006). *Linguistic landscape: A new approach to multilingualism*. Multilingual Matters.
- Gorter, D., Marten, H. F. & Van Mensel, L. (Eds.). (2012). *Minority languages in the linguistic landscape*. Palgrave Macmillan.
- Hewitt-Bradshaw, I. (2014). Linguistic landscape as a language learning and literacy resource in Caribbean creole contexts. *Caribbean Curriculum*, 22, 157–173. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.930.2043&rep=rep1&type=pdf>.
- Hornsby, M. (2018). The material cultures of multilingualism in a minoritized setting: the maintenance and transformation of Lemko. In L. Aronin, M. Hornsby & G. Kiliańska-Przybyło (Eds.), *The material culture of multilingualism* (pp. 175–188). Springer.
- Hoskins, J. (2001). Agency, biography and objects. In C. Tilley, W. Keane, S. Kuechler-Fogden, M. Rowlands, & P. Spyer (Eds.), *Handbook of material culture* (pp. 74–84). Sage Publications.
- Hult, F. M. (2014). Drive-thru linguistic landscaping: Constructing a linguistically dominant place in a bilingual space. *International Journal of Bilingualism*, 18(5), 507–523. <https://doi.org/10.1177/1367006913484206>.
- Ingold, T. (2011). *Being alive: Essays on movement, knowledge and description*. Routledge.
- Jaworsky, A., & Crispin, T. (Eds.). (2010). *Semiotic landscapes: Language, image, space*. Continuum.

- Johnson, N. B. (1980). The material culture of public school classrooms: The symbolic integration of local schools and national culture. *Anthropology and Education Quarterly*, 11(3), 173–190.
- Knappett, C. (2005). Animacy, Agency, and personhood. In *Thinking through material culture: an interdisciplinary perspective* (pp. 11–34). The University of Pennsylvania Press.
- Landry, R., & Bourhis, R. (1997). Linguistic Landscape and ethnolinguistic vitality. *Journal of Language and Social Psychology*, 16(1), 23–49.
- Lawn, M., & Grosvenor, J. (Eds.). (2005). *Materialities of schooling design-technology—Objects-routines*. Symposium Books.
- Malafouris, L. (2013). *How things shape the mind*. MIT-Press.
- Malinowski, D., Hiram H. M., & Dubreil, S. (Eds.). (2020). *Language teaching in the linguistic landscape: Mobilizing pedagogy in public space*. Springer.
- Marshall, H. (1981). *Folk architecture in Little Dixie: A regional culture in Missouri*. University of Missouri Press.
- Moriarty, M. (2014a). Languages in motion: Multilingualism and mobility in the linguistic landscape. *International Journal of Bilingualism*, 18(5), 457–463. <https://doi.org/10.1177/1367006913484208>.
- Moriarty, M. (2014b). Contesting language ideologies in the linguistic landscape of an Irish tourist town. *International Journal of Bilingualism*, 18(5), 464–477. <https://doi.org/10.1177/1367006913484209>.
- Niedt, G., & Seals, C. A. (Eds.). (2020). *Linguistic landscapes beyond the language classroom*. Bloomsbury Publishing.
- Obdaloova, O. A., Minakova, L. Y., Tikhonova, E. V., & Soboleva, A. V. (2018). Insights into receptive processing of authentic foreign discourse by EFL Learners. In A. Filchenko & Z. Anikina (Eds.), *Linguistic and cultural studies: Traditions and innovations. LKTI 2017. Advances in Intelligent Systems and Computing* (Vol 677, pp. 231–241). Springer. https://doi.org/10.1007/978-3-319-67843-6_28.
- Ong, W. (1969). World as view and world as event. *American Anthropologist (N.S.)*, 71, 634–647.
- Ong, W. (2002). *Orality and Literacy: The technologizing of the World*. Routledge.
- Oštarić, A. (2012). Language in the public space of a Dalmatian town: The linguistic landscape of Zadar. In M. Jernej, J. Lah, & A. Iveković-Martiniš (Eds.), *Multilingualism in the public sphere* (pp. 28–29). Interuniverzitetški Centar.
- Oštarić, A. (2018). Commodification of a forsaken script: The Glagolitic script in contemporary Croatian material culture. In L. Aronin, M. Hornsby & G. Kiliańska-Przybyło (Eds.), *The Material Culture of Multilingualism* (pp. 189–208). Springer.
- Peck, A., & Stroud, C. (2015). Skinscapes linguistic landscape. *An International Journal*, 1(1–2), 133–151. <https://doi.org/10.1075/ii.1.1-2.08pec>.
- Pennycook, A. (2009). Linguistic landscapes and the transgressive semiotics of graffiti. In D. Gorter & E. Shohamy (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 302–312). Routledge.
- Pink, S. (2012). Situating everyday life: Practices and places. *SAGE*. <https://doi.org/10.4135/9781446250679>.
- Prada, J., & Melo-Pfeifer, S. (forthcoming). The sense-appeal of translanguaging. *Journal of Multilingual and Multicultural Development* (Special Issue).
- Proffitt, D. R. (2006). Embodied perception and the economy of action. *Perspectives on Psychological Science*, 1, 110–122. <https://doi.org/10.1111/j.1745-6916.2006.00008.x>.
- Sebba, M. (2010). Discourses in transit. In A. Jaworskia & C. Thurlow (Eds.), *Semiotic landscapes: Language, image, space* (pp. 57–76). Continuum.
- Schlereth, T. J. (1985). Material culture and cultural research. In T. J. Schlereth (Ed.), *Material culture: A research guide* (pp. 1–34). University Press of Kansas.
- Scollon, R., & Scollon, W. S. (2003). *Discourses in place: Language in the material world*. Routledge.

- Singleton, D., Aronin, L., & Carson, L. (2013). Minority language use in Ireland: The time dimension. In D. Singleton, J. Fishman, L. Aronin, & M. O. Laoire (Eds.), *Current multilingualism: A new linguistic dispensation* (pp. 121–138). Mouton de Gruyter.
- Spolsky, B., & Cooper, R. L. (1991). *The languages of Jerusalem*. Cambridge University Press.
- Tilley, C. (2001). Ethnography and material culture. In P. Atkinson, A. Coffey, S. Delamont, J. Lofland, & L. Lofland (Eds.), *Handbook of ethnography* (pp. 258–272). Sage Publications. <https://doi.org/10.4135/9781848608337.n18>.
- Webb, E. J., Campbell, D. T., Schwartz, R. D., & Sechrest, L. (1966). *Unobtrusive measures: Nonreactive research in the social sciences*. Rand McNally.
- Williams, S. J. (2002). Ojibway hokey CD-ROM in the making. In B. Burnaby & J. Reyhner (Eds.), *Indigenous languages across the community*. Northern Arizona University.
- Włosowicz, T. (2018). Multilingual students' representation of Material Culture. In L. Aronin, M. Hornsby & G. Kiliańska-Przybyło (Eds.), *The material culture of Multilingualism* (pp. 71–93). Springer.

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The Visibility of Languages–Connecting Schools to Communities



Alice Chik

Abstract Our urban linguistic landscape is present in communal spaces online and offline. In public spaces, we are frequently limited by official language policy, which can extend beyond the government use of language(s) to commercial display and communication. However, language use in private spaces can be a lot more varied depending on heritages, family configuration, and digital practices. What our students speak, hear, read, see, and write in public and private spaces might not be aligned and might be in conflict. This is especially the case of many Australian suburbs. This chapter proposes an alternate geolinguistics approach to the use of census and online public access information to map the new urban diversities of multilingualism. Following historical migration patterns, earlier Australian multilingualism studies tended to focus on European language speech communities in specific locales. These studies created a public impression linking specific languages to certain neighbourhoods, or ethnoburbs (e.g. Little Italy in Melbourne, Haymarket Chinatown in Sydney). Such public imaginaries suggest a singular language use in a singular geographical location. Consequently, such public imaginaries of places and languages might have created stigmatization and discrimination. In addition, public imaginaries of place-based language use also tend to sanction the presence of multilingualism: only certain ‘ethnoburbs’, or suburbs with a substantial ethnic minority population, are ‘multilingual’ but not the rest of Australia. This stigmatization extends to the linguistic landscapes at schools. This chapter acts first to demystify ‘ethnoburbs’ or homogeneity of speech communities and shows multiple scales of multilingual heterogeneity. Second, while census data reveal multilingual heterogeneity, there is a noted absence of online visibility of multilingualism on local institutional and business websites. The chapter concludes with new directions for using a critical geolinguistic approach to make the school-community linguistic landscape connection.

Keywords Linguistic landscapes · Multilingualism · Education · Community · Language learning

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1 Introduction

When people talk about Australia, it is mentioned that Australia is a multicultural country. Multiculturalism and multilingualism is inseparable. Although Australia has a multicultural policy it does not have a multilingual policy, and there is no official national language. Australia is an English-speaking country, but English is only a de facto national language (Clyne, 2008; Lo Bianco, 1987; Ozolins, 1993). It is true that people of Australia speak English, or it should be said that many Australians speak English. Or more accurately, many Australians speak English *and* a language other than English. In this chapter, I will first discuss multiculturalism and multilingualism in Australia, with a special focus on greater Sydney and the state of New South Wales. It will be of interest to revisit the concept of linguistic diversity in Greater Sydney, especially in the education sector. Second, I will discuss the visibility of languages in the community. The visibility of languages has a strong impact on how languages are perceived and constrained. Finally, I will discuss taking a different approach to understanding multilingualism and the potential benefits for the education sector.

2 Multilingual Sydney

The 2021 Australian Census was just completed in October and the findings will not be available until later in 2022 and early 2023. Most of the population demographic data cited in this chapter will be taken from the 2016 Census and other publicly available sources. While we have limited data on migration, it should be stated that the COVID-19 pandemic has had an enormous impact on the Australian population structure. In the financial year 2020–2021 (1 July to 30 June), there were only 150,880 visitor arrivals, which is down 97.8% from the previous financial year (Australian Bureau of Statistics, 2021a, 2021b). Though there has been a drop in overseas arrival in 2020, when comparing the figures of overseas-born between 2016 and 2020, there is still a significant increase from 26% of the total population in 2016 to 29.8% in 2020 (Table 1).

The Australian population is changing not just by the number of overseas-born, but the changes are also happening in the language diversity. Changes in language diversity are the direct consequences of changes in countries of origin among the overseas-born. In the last ten years, though England has been and is still the top country of birth among

Table 1 The percentage of overseas-born (*Source* Australian Bureau of Statistics, 2021a, 2021b; idcommunity, 2017b)

	Australian population	Overseas born
2020	25.7 million	7.6 million (29.8%)
2016	23.4 million	6.1 million (26%)

Table 2 The top ten countries of birth (2010–2020)

	The top ten countries of birth: In order
2020	England, India, China, New Zealand, Philippines, Vietnam, South Africa, Italy, Malaysia and Sri Lanka
2015	England, New Zealand, China, India, Philippines, Vietnam, Italy, South Africa, Malaysia and Sri Lanka
2010	England, New Zealand, China, India, Italy, Vietnam, Philippines, South Africa, Malaysia, and Sri Lanka

overseas-born Australians, there is a gradual shift (Table 2). In 2015, more than one-third (38.6%) of all overseas-born Australian migrants came from North and East Asia (21.4%) and South and Central Asia (17.2%). In 2020, there was an increase to 40.7% of all migrants came from North and East Asia (23.6%) and South and Central Asia (17.1%).

This changing language diversity is increasingly represented in census data with a higher proportion of respondents stating that they spoke a language other than English at home over the years (Table 3). The census question only allows one response which means each respondent can only nominate one language spoken at home. In a multilingual household, the respondent has to make a decision on the one language to be recorded officially. Clyne (2003, p. 22) argued that “if a language is not transmitted in the home, it is not likely to survive another generation”. Though only asking about language use at home might have created complications for some households, for instance, among shared households and multilingual families, this census question provided a relatively reliable set of time-series data to explore changing demographic diversities.

In 2016, the top ten most commonly spoken languages in Australia are Chinese Mandarin, Arabic, Chinese Cantonese, Vietnamese, Italian, Greek, Filipino, Hindi, Spanish and Punjabi. In 2016, among the top ten most commonly spoken languages in Australia, seven are classified by the Australian Bureau of Statistics as Asian languages (North and Eastern Asian, and Central and South Asian), only three (Italian, Greek, and Spanish) are European (Southern) languages (Table 4). The top ten most commonly spoken languages in 2001 were very different: Italian, Greek, Chinese Cantonese, Arabic, Vietnamese, Chinese Mandarin, Spanish, Filipino, German and Macedonian. In 2001, only five were Asian languages. With a much greater influx of migrants from Asia between 2010 and 2020, it is inevitable that the

Table 3 The proportion of the population reported speaking a language other than English at home

	Australia (%)	Greater Sydney (%)
2016	20.8	35.8
2011	18.2	32.4
2001	15.1	27.4

Table 4 Classification of languages in the 25 most commonly spoken languages (idcommunity, 2017a)

	Asian	European
2016	1. Mandarin, 2. Arabic, 3. Cantonese, 4. Vietnamese, 7. Filipino, 8. Hindi, 10. Punjabi, 11. Dari, 12. Korean, 14. Tamil, 16. Urdu, 17. Indonesian, 19. Sinhalese, 20. Nepali, 21. Turkish, 23. Japanese, 24. Thai, 25. Bengali	5. Italian, 6. Greek, 9. Spanish, 13. German, 15. French, 18. Macedonian, 22. Croatian
2001	3. Cantonese, 4. Arabic, 5. Vietnamese, 6. Mandarin, 8. Filipino, 13. Turkish, 15. Hindi, 19. Korean, 20. Indonesian, 22. Japanese, 23. Dari, 25. Tamil	1. Italian, 2. Greek, 7. Spanish, 9. German, 10. Macedonian, 11. Croatian, 12. Polish, 14. Serbian, 16. Maltese, 17. Dutch, 18. French, 21. Russian, 24. Hungarian

language diversity shift in Australia will continue to move towards Asian languages in the 2021 census results (Table 4).

Table 4 shows changing profiles of the most commonly spoken languages in 2001 and 2016 as ranked by the number of speakers in Australia. The shift from European to Asian languages reflected the changes in migration patterns. During the post-war period, European migrants made up the majority of new migrants to Australia. Then the major waves of migration included the Vietnamese boat refugees from the mid-1970s, Lebanese migrants after the outbreak of civil war in 1975, and Hong Kong migrants from the mid-1980s. However, the introduction of the point system to attract skilled migrants from the mid-1980s had attracted highly educated and skilled migrants globally and they are not more likely to be non-European, and also more likely to have come from non-English speaking countries.

This shift in language diversity of the Australian population is particularly prominent in the two major migrant-receiving cities, Sydney and Melbourne. Some of the popular assumptions are that migrants prefer to live near each other, thus forming ethnohubs or areas which show homogeneity of speech communities. Ethnohubs are defined as ‘multi-ethnic communities in which one ethnic minority group has a significant concentration, but does not necessarily comprise a majority’ (Li, 1998, p. 479). This brings up a question as to whether there are geographical concentrations of migrants or ethnohubs in Sydney and Melbourne.

In the Australian popular media, there are imaginary ‘maps’ of migrants (Salt, 2017), ‘suburbs of (insert-your-language)-speaking communities (Gothe-Snape, 2017). In other words, the media project an imaginary Australia that is geographically divided conveniently by the languages that the residents speak. Australian politicians have persistently used the idea of ethnohubs to make xenophobic statements against migrants. The One Nation leader, Senator Pauline Hanson, famously stated in 1996 that “I believe we are in danger of being swamped by Asians... They have their own culture and religion, form ghettos and do not assimilate” (Australian Human Rights Commission, 1997). Twenty years later, the then Minister for Citizenship and Multicultural Affairs Alan Tudge argued that “Our challenges are made harder today because technology means that a person can communicate easily and

cheaply back to their birth country or within their own diaspora. In short, a person can more easily live within a language and cultural bubble in suburban Australia” (Tudge, 2018). Such public imaginings of place-based language use create the myth that multilingualism only happens in some places but not others. In the next section, this concept of ethnohubs in Sydney will be further examined.

3 Do we Really Have a Chinatown or Little Greece in Sydney?

Against the backdrop of the public assumptions of ethnohubs, it will be worth the question as to whether an ethnohub exists. This myth of ethnohubs could also be perpetuated by property agencies, especially those in Greater Sydney. For instance, Knight Frank (2017) gave a brief tour by segmentation as

Sydney is mapped by languages spoken and how diversity is shaping the city’s real estate markets...Long standing areas of tradition remains, for example Italians congregating in and around Leichhardt, Portuguese close to the beaches around Mona Vale, Koreans in Lidcombe and Marrickville, Jews (Hebrew) in the Eastern Suburbs, Southern Asians in Blacktown and Vietnamese in Cabramatta.

So one property agency has neatly divided Sydney by speech communities and uses this segregation as a real estate marketing guide. This short passage gave a very clear indication to potential home buyers that if they speak a certain language, they want to consider the dominant languages other than English spoken in the suburbs they are interested in before putting a downpayment. This point about the separation of private and public domains of visibility of multilingualism will be revisited in the next sections. However, the study by Chik et al. (2019) shows that there is no clear indication of Sydney by languages (Fig. 1). The languages included in Group 1 are 87% English only plus mainly European languages; Group 2: 58% English plus South-West Asian languages; Group 3: 60% English only plus European languages; Group 4: 48% English plus Asian languages; and Group 5: 34% English only plus a mix of European and Asian languages. There are certain suburbs in Sydney with a mix of speech communities with a lower percentage of English-only speaking households. But there is no one language that dominates in any one suburb, for example over 50% of the local population. Rather than one dominant language in one suburb in Sydney suburbs, it will be more productive to view clusters of language groups that are more prominent in some suburbs.

From Fig. 1 we can see that languages are mixed in every part of Greater Sydney and there is no one particular language (other than English) that dominates a particular suburb. This can also be shown when we contrast the locations of presumed ethnohubs with the distributions of community language schools. This can be an important exercise in the New South Wales context as community language schools serve to teach languages other than English that are not necessarily offered in all schools during the regular school hours. Frequently, the locations of

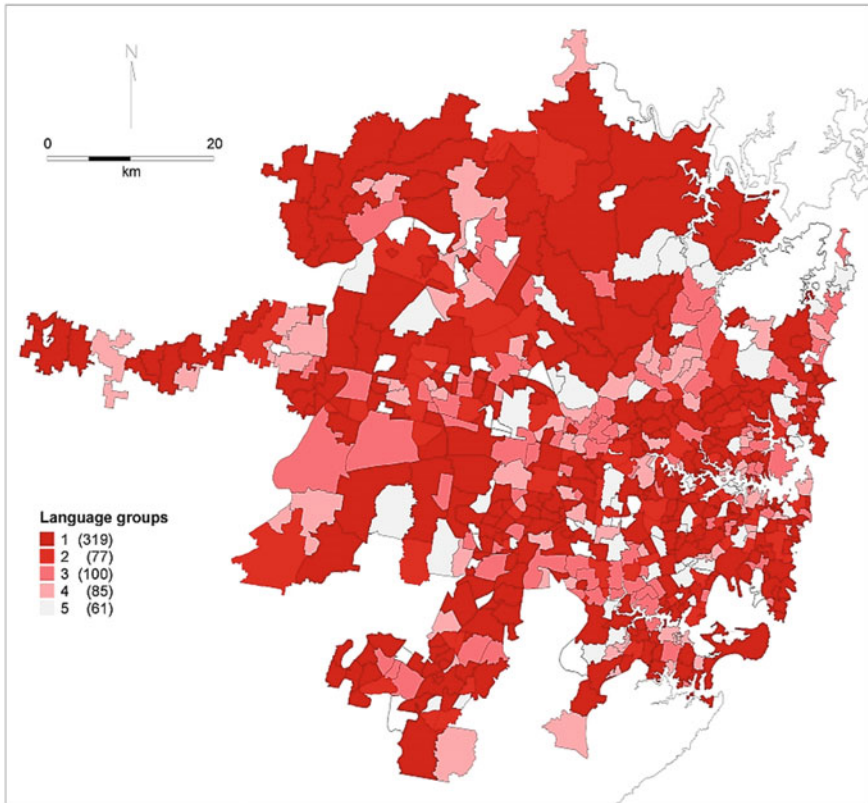


Fig. 1 Languages spoken at home in Sydney (Chik et al., 2019, p. 29)

community language schools, especially those serving larger language communities (e.g. Chinese and Greek), are closely aligned with the distribution of the language communities. In other words, where there is a large Chinese- or Greek-speaking community, there is likely to be a Chinese or Greek community language school teaching the language to the younger generations. This phenomenon is frequently a reaction to the limited provision of language education in the mainstream curriculum.

While the popular imagination of Chinatown in Greater Sydney is located in downtown Sydney, academic research has already shown that the area is more populated by Asian international students rather than merely Chinese migrants (Wong et al., 2016). The distribution of Chinese community language schools as shown in Fig. 2 indicates that there are only two Chinese community language schools located in Chinatown and other Chinese community language schools are distributed across the whole of Greater Sydney.

Figure 2 shows a map of all Chinese community language schools (including both Mandarin and Cantonese) in Greater Sydney.

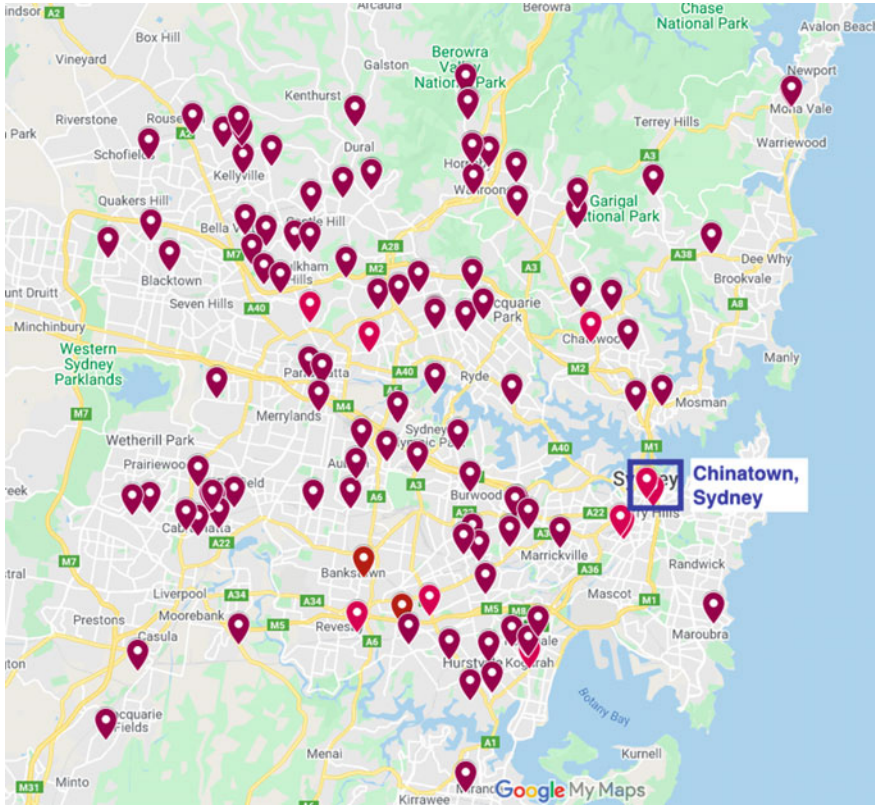


Fig. 2 A map of all Chinese community language schools in Sydney

This may be a similar finding for the Greek community language schools. Where is ‘Little Greece’? A street corner in the Inner West of Sydney has recently been renamed ‘Little Greece’ in recognition of the contributions of the Greek migrants to Sydney (The Inner West City Council, 2021). A major wave of Greek migrants to Australia came after the Second World War and the early 1960s. While many have preferred to settle in Melbourne, a strong population is set up in the Inner West of Sydney (Department of Home Affairs, 2016). However, over the years, the Greek diaspora has moved beyond the Inner West of Sydney, as attested from the map of Greek community language schools in Greater Sydney (Fig. 3).

The two maps of Chinese and Greek community language schools seek to demonstrate that the population of Greater Sydney is more diverse with no particular geographical concentration of speech community that speaks a language other than English. This is further supported by the statistics on languages spoken by students in government schools in New South Wales.

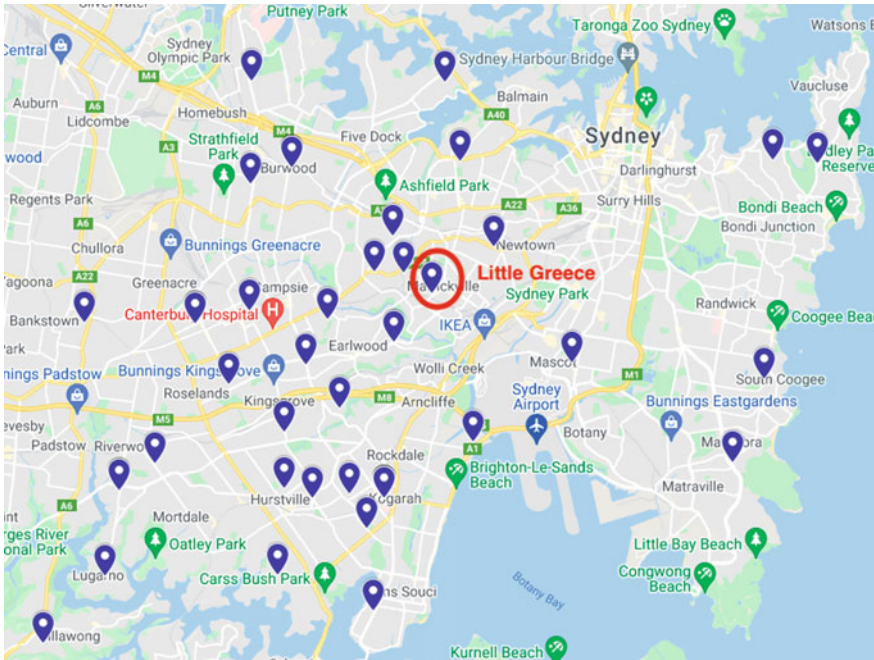


Fig. 3 A map of all Greek community language schools in Greater Sydney (2021)

4 What Languages do Students Speak?

The New South Wales Department of Education releases an annual report on the language diversity of students from all government schools in New South Wales. These annual reports show a more targeted and refined understanding of the youth population than the census data. In 2020, 36.9% of all government school students came from homes where a language other than English (LBOTE) is spoken. A total of 243 languages was reported as spoken at home. This is an increase from 29.4% in 2010, and there has been a steady annual increase over the last ten years. In Greater Sydney, the percentage of LBOTE students is significantly higher, at 56.2%. I will start with the overall distribution of languages other than English spoken by the government schools in 2020 (Table 5).

The percentage of LBOTE students refers to all government school students from both primary and secondary education levels. The percentage of LBOTE students is much higher in preschool settings (48.4%).

The simple fact is that there is a high level of language diversity among primary and secondary school students. It will be important to see if the teaching workforce is also aligned with the same diversity.

Table 5 LBOTE students by language groups (Centre for Education Statistics & Evaluation, 2021)

	Language or Languages group	Proportion of the LBOTE primary and secondary students (%)
1	Indian Languages (include Hindi, Urdu, Bengali, Tamil, Punjabi, Gujarati, Nepali, Telugu, Malayalam, Sinhalese, Marathi and other Indian Languages)	20.2
2	Chinese Languages (include Mandarin, Cantonese and other Chinese Languages)	15.4
3	Arabic	13.7
4	Vietnamese	5.6
5	Filipino	3.4
6	Samoan	2.8
7	Korean	2.8
8	Spanish	2.7
9	Greek	2.5
10	Assyrian	1.6

5 And What Languages do Teachers Speak?

New South Wales is a culturally and linguistically diverse state (Table 6). The 2016 census data show that teachers in New South Wales tended to speak English at home (Chik et al., 2021). Parr's calculation from the 2016 Census data shows that 88.6% of primary teachers and 84.5% of secondary teachers in New South Wales chose English as the only language spoken at home. The most commonly spoken languages at home, nominated by the teachers, were Arabic (2%), Greek (1.5%), Italian (1%) and Hindi (0.95%) (cited in Chik et al., 2021). In Table 6, it is shown that the language diversity of the primary and secondary teachers is much lower than the state average. This is an alarming phenomenon, especially when the student population is becoming more diverse and reflecting the overall demographic changes, shifted towards Asian languages. The visible gaps between the major Asian languages communities and the teaching workforce show that school faculty and staff are not likely to be multilingual. Among the most commonly spoken Asian languages like Chinese (Mandarin and Cantonese), Vietnamese, Filipino and Korean, the percentages of teachers who stated that they speak these languages are alarmingly low. When Whitton asked "But how many registered primary teachers are there who are both (a) competent in one of the major migrant languages, and (b) trained in bilingual teaching method? Not many" (Whitton, 1975, p. 14). In 2016, Whitton's question is still hauntingly empty. It is worrying that the primary teaching workforce is even more monolingual than the secondary teaching workforce.

Table 6 Percentage of primary and secondary teachers who spoke a language other than English at home

	New South Wales population (%)	Primary teachers (%)	Secondary teachers (%)
English	68.5	88.6	84.5
Mandarin	3.2	0.4	0.7
Arabic	2.7	1.9	2.0
Cantonese	1.9	0.5	0.7
Vietnamese	1.4	0.4	0.5
Greek	1.1	1.4	1.7
Italian	1.0	1.0	1.1
Filipino	0.9	0.08	0.07
Hindi	0.9	0.5	1.4
Spanish	0.8	0.6	0.7
Korean	0.8	0.2	0.4

This is not a simple matter of simplifying that as an English-speaking country, Australia does not need multilingual teachers. The visible absence of multilingual teachers might have a more negative impact (Bense, 2014). As shown in a study by Chik and Alperstein (2021) that monolingual teachers tend to be less positive towards language learning.

6 Education and ‘Monolingualism’

Monolingualism is not only reflected in the teaching workforce, it is only reflected in the curriculum structure. In New South Wales, primary school students are not required to take language education. However, students can enrol in community language education as an option. Some primary schools also provide optional language classes, but these language classes are not necessarily aligned with the language heritage of the students (Eisenclas & Schalley, 2020; Schalley et al., 2015). While Mandarin Chinese and Arabic are the two most commonly spoken languages of the New South Wales population, Japanese and French are widely studied by primary school students and yet these two languages have much smaller speech communities than Mandarin and Arabic (Table 7).

This divergence between languages offered in school and students’ language heritage is further obvious at the secondary education level (Table 8). In New South Wales, the only language requirement throughout schooling is 100 h of Languages Education, frequently taken during Year 7–9 (Secondary 1–3). The five most popular language subjects in 2020 were Japanese, French, Italian, Mandarin and Spanish. In particular, the language participation for Japanese is disproportionate to the overall

Table 7 Primary school students studying a language other than English (2020)

Language subject in primary schools	Number of enrolment	Number of speakers in NSW (2016 Census data)
Mandarin Chinese	17,281	239,945 (1st in most commonly spoken language)
Arabic	9,339	200,825 (2nd)
Italian	8,805	75,694 (6th)
Japanese	6,318	17,319 (29th)
French	4,898	23,743 (21st)

Table 8 Language participation for Year 7–9 (2020)

Language participation in secondary school	Number of enrolment	Number of speakers in NSW (2016 Census data)
Japanese	27,362	17,319 (29th in most commonly spoken language)
French	14,651	23,743 (21st)
Italian	5,522	75,694 (6th)
Mandarin Chinese	5,318	239,945 (1st)
Spanish	3,304	63,527 (9th)

number of speakers in New South Wales. While Arabic has been a popular choice for many primary school students as an optional afterschool activity, Arabic is not a popular offer at secondary schools. In 2020, it was only taken by 423 students though it is the second most commonly spoken language in New South Wales.

As lower secondary school students are most likely to participate in Japanese, French, Italian and Mandarin Chinese, this preference continues to high schools. For the High School Certificate (HSC) examination, which is the exit examination for secondary school leavers, only 7.6% of all candidates enrolled in a language subject (NSW Education Standards Authority, 2021). This is even lower than the national average of 10.3% (Australian Curriculum, Assessment and Reporting Authority, 2020). The most popular language subject choices remained to be Chinese, Japanese, French, Italian and Spanish over the years. It can be said that the education curriculum is not monolingual because students can opt to take language subjects. However, it should be noted that students may not be able to take some language subjects. There is also a skewed preference towards some languages over others. As schools give a preference to some language subjects, Nicholas (2015) argues that this further discourages some students from taking heritage languages and effectively bilingualism.

7 What do Educational Websites Say About Multilingualism?

All the big data on the general population and student demographics show that Greater Sydney is linguistically diverse. Though the Australian multicultural policy acknowledges the heritage of cultural and linguistic diversity, this acknowledgement is not necessarily exercised in everyday life (Moran, 2017). In this section, I would like to focus on one particular geographical area: the City of Ryde. This is where my university is located, and it is highly diverse. The City of Ryde is located about 10 km from the Sydney CBD. From the 2016 Census, 48% of the population spoke a language other than English at home, and the top five most commonly spoken languages were Chinese (Mandarin and Cantonese), Korean, Italian, Arabic and Armenian. This is a city with a high proportion of migrant residents with about 27% of the population arrived within five years prior to 2016 (idCommunity, 2017c). With such a diverse population, what do we know about the representation of diversity online? To start with, the City of Ryde Council website does not provide any in-language support (The City of Ryde, 2021). That means there is no widget or plug-in for Google Translate to be used for the website navigation. So website visitors can only browse for information in English. Even the dedicated page for ‘Online resources for migrants and refugees’ is only available in English (The City of Ryde, 2021), but the Welcome Guide for Asylum Seekers are Refugees is available in English, Farsi, Arabic and Tamil (City of Ryde 2021). Some essential support information is provided in languages, for instance, the ‘Make a Stand’ against violence campaign has information in six languages (English, Mandarin, Cantonese, Korean, Arabic and Farsi). In general, the council website is not user-friendly for visitors who do not read English fluently. There is no indication on the council website that this is a culturally and linguistically diverse city.

In the catchment area of the City of Ryde, there are a total of 8 secondary schools and 32 primary schools. As aforementioned, students in New South Wales are only required to participate in 100 h of language education between Year 7 and 9 (Secondary 1 and 3). Among the eight secondary schools, two schools do not offer language education for Year 12, and the six schools that provide language education offer French, Japanese, Italian, Chinese, Spanish and Indonesian. To take a step back, primary school students should be offered language education if there is wishful thinking that secondary school students will take languages. Among the 32 primary schools, there is one Italian bilingual school, four schools offer French, Italian and Mandarin, and only one school offers Chinese as a community language. It should be noted that the Italian bilingual school is a tuition-charging school so it may not be readily accessible to many families in the area. To supplement the limited supply of language education, there are optional community language schools in Armenian, Bangla, Chinese (Mandarin and Cantonese), Dari, Korean, Punjabi and Telugu to support the diverse communities.

In addition to understanding the provision of language education, Most parents and guardians would also consider using school websites for information and an

understanding of the diversity of the school community. I adopt a critical discourse analytical approach (van Leeuwen, 2009) to analyse the written and visual texts on school websites to examine how cultures and languages are represented. The visual texts, in this study, refer to the photographs uploaded to the school websites. Many of the school websites follow the New South Wales Department of Education prescribed website design and page layout so some pages are uniformly similar (e.g. About, Principal's Message, Curriculum). I take the belief that the websites provide a true-to-life representation of the school in the texts and images used. In general, schools try to use their websites to communicate positive imagery of their communities to their target audience as website visitors frequently form their first impression of the school based on the information and aesthetics visual style of the homepage (Ha & James, 1998).

For the City of Ryde, a website analysis of 40 school websites was conducted in 2021. A total of 2247 photos were recorded as of 30 August 2021. The analysis of who was being represented and the types of activities they engaged in were examined. The photos mostly represented For the school websites, only two pages were consistently recorded across the forty schools - 'About the school' and 'Principal's message'. A total of 11,342 words were recorded in the corpus. Within the corpus, a word frequency search was conducted to explore how words associated with diversity (e.g. 'multicultural', 'diverse', 'community', 'language/s') are used. The language diversity profiles of the schools vary a lot as there are primarily three types of schools in New South Wales: government school (free), Catholic schools (tuition charging) and independent schools (tuition charging). Language diversity in government schools tends to be greater than in Catholic and independent schools. We also see higher language diversity in some neighbourhoods of the city. The estimate is that across the whole city, the language diversity of schools is well aligned with the metropolitan figure of 56.2% of the students come from a language background other than English.

Overall, school websites provide a blurred reading of cultural and linguistic diversity. Photographs generally show ethnically and faith diverse students conducting various types of learning activities both on campus and during excursions. However, there was no explicit representation of languages in these photos—for instance, there was no portrayal of students learning languages or representations of languages. Though there were three instances of multilingual welcome signs, they were more tokenistic than actually reflecting linguistic diversity. The written texts also provide limited references to cultural diversity. The word 'multicultural' is used on 23 out of 40 school websites, however, the word 'multilingual' was never used. It should also be noted that rather than 'multicultural', 20 instances of 'from / are of diverse backgrounds' were used to vaguely represent cultural and linguistic diversity. Another common observation is that the teaching team is never referred to as being 'multilingual'. The initial analysis of school websites only shows an ambivalent representation of cultural and linguistic diversity that is certainly present among the student population.

8 Concluding Thoughts

The last few census surveys have shown that cultural and linguistic diversity is the future of Greater Sydney and Australia. This diversity is not limited to some geographical areas, we are looking at changing diversity in almost all suburbs. The current school curriculum is not catering to the changing diversity but continues to provide languages education that does not reflect the national linguistic diversity. Meanwhile, the growth of student diversity has also outpaced the diversity of the teaching workforce. As May (2020) argues, the concept of one nation one language is no longer applicable in the age of superdiversity. Nations, especially major cities, are now having a much higher level of migration from every corner of the world, and many more of these migrants speak a range of languages. Such linguistic diversity changes have to be viewed considering the greater national and social changes, and such changes could be viewed as disruptive and subversive. So there must be a stronger and urgent need to adhere to the multilingual turn (May, 2019) to understand the fundamental changes in the younger student population and their families and their backgrounds. What needs to be reconsidered then is a better understanding of the big data on geolinguistic development and other statistical representation of cultural and linguistic diversity. In this way, teachers will at least be better informed about their changing teaching contexts.

References

- Australian Bureau of Statistics. (2021a). Overseas Arrivals and Departures, Australia. Retrieved October 20, 2021a, from <https://www.abs.gov.au/statistics/industry/tourism-and-transport/overseas-arrivals-and-departures-australia/latest-release>.
- Australian Bureau of Statistics. (2021b). Migration, Australia. Retrieved October 20, 2021b, from <https://www.abs.gov.au/statistics/people/population/migration-australia/latest-release#scope>.
- Australian Curriculum, Assessment and Reporting Authority. (2020). Year 12 Subject Enrolments. Retrieved October 15, 2021 from <https://www.acara.edu.au/reporting/national-report-on-schooling-in-australia/national-report-on-schooling-in-australia-data-portal/year-12-subject-enrolments>.
- Australian Human Rights Commission. (1997). The Racial Hatred Act: A guide for people working in then Australian Media. Retrieved September 12, 2019, from <https://humanrights.gov.au/our-work/race-discrimination/publications/racial-hatred-act-guide-people-working-australian-media>.
- Bense, K. (2014). “Languages aren’t as important here”: German migrant teachers’ experiences in Australian language classes. *The Australian Educational Researcher*, 41(4), 485–497. <https://doi.org/10.1007/s13384-014-0143-2>.
- Centre for Education Statistics and Evaluation. (2021). Schools: Language diversity 2020. Retrieved September 29, 2021, from <https://data.cese.nsw.gov.au/data/dataset/schools-language-diversity-in-nsw>.
- Chik, A., Forrest, J., & Siciliano, F. (2019). Language diversity in Sydney: At home and in public. In A. Chik, P. Benson, & R. Moloney (Eds.), *Multilingual Sydney* (pp. 26–39). Routledge.

- Chik, A., & Alperstein, D. (2021). Multilingualism at school: Starting points, teaching challenges and methodological-didactic objectives. In C. Helmchen & S. Melo-Pfeifer (Eds.), *Mehrsprachigkeit in der Schule: Ausgangspunkte, unterrichtliche Herausforderungen und methodisch-didaktische Zielsetzungen* (pp. 103–126). Narr Publisher.
- Chik, A., Benson, P., Parr, N., & Falloon, G. (2021). *What are languages worth? Community languages for the future of New South Wales 2021*. The NSW Federation of Community Language Schools Inc.
- Clyne, M. (2008). The monolingual mindset as an impediment to the development of plurilingual potential in Australia. *Sociolinguistic Studies*, 2, 347–366. <https://doi.org/10.1558/sols.v2i3.347>.
- Department of Home Affairs. (2016). Greece-born community information summary. Retrieved October 12, 2021, from <https://www.homeaffairs.gov.au/mca/files/2016-cis-greece.PDF>.
- Eisenclas, S. A., & Schalley, A. C. (2020). Early language education in Australia. In M. Schwartz (Ed.), *Handbook of Early Language Education* (pp. 1–26). Springer.
- Gothe-Snape, J. (2017). Census 2016: The communities where five languages are common. SBS. Retrieved October 12, 2021, from <https://www.sbs.com.au/news/census-2016-the-communities-where-five-languages-are-common>. (Jul 7, 2017).
- Ha, L., & James, E. L. (1998). Interactivity re-examined: A baseline analysis of early business web sites. *Journal of Broadcasting & Electronic Media*, 42, 457–474. <https://doi.org/10.1080/08838159809364462>.
- idcommunity. (2017a). Australia: Language spoken at home. Retrieved October 20, 2021, from <https://profile.id.com.au/australia/language?EndYear=2001&DataType=UR&BMID=250>.
- idcommunity. (2017b). Australia: Overseas arrivals. Retrieved October 20, 2021, from <https://profile.id.com.au/australia/overseas-arrivals>.
- idcommunity. (2017c). City of Ryde. Retrieved October 20, 2021, from <https://profile.id.com.au/ryde/overseas-arrivals>.
- Knight, F. (2017). Sydney mapped by languages spoken and how diversity is shaping the city's real estate markets. Retrieved October 22, 2019, from <https://www.knightfrank.com.au/blog/2017/11/16/sydney-mapped-by-languages-spoken-and-how-diversity-is-shaping-the-citys-real-estate-markets>.
- Li, W. (1998). Anatomy of a new ethnic settlement: The Chinese ethnoburb in Los Angeles. *Urban Studies*, 35, 479–501. <https://doi.org/10.1080/0042098984871>.
- Lo Bianco, J. (1987). *National policy on languages*. Commonwealth Department of Education.
- May, S. (2019). Negotiating the multilingual turn in SLA. *The Modern Language Journal*, 103(S19), 122–129.
- May, S. (2020). Rethinking the principle of linguistic homogeneity in the age of superdiversity. In Y.-Y. Tan & P. Mishra (Eds.), *Language, nations, and multilingualism: Questioning the Herderian ideal* (pp. 37–53). Routledge.
- Moran, A. (2017). *The public life of Australian multiculturalism: Building a diverse nation*. Palgrave.
- Nicholas, H. (2015). Losing bilingualism while promoting second language acquisition in Australian language policy. In J. Hajek & Y. Slaughter (Eds.), *Challenging the monolingual mindset* (pp. 165–181). Multilingual Matters.
- NSW Education Standards Authority. (2021). HSC Enrolments by course. Retrieved October 12, 2021, from <https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/hsc/about-HSC/HSC-facts-figures/HSC-course-enrolments>.
- Ozolins, U. (1993). *The politics of language in Australia*. Cambridge University Press.
- Salt, B. (2017). 2016 Census: City launch pads project migrants far and wide. The Australian. Retrieved February 23, 2018, from <https://www.theaustralian.com.au/news/inquirer/2016-census-city-launch-pads-project-migrants-far-and-wide/news-story/ef9a7e9ccdecdf8485143358c59957df>. (Oct 14, 2017).
- Schalley, A. C., Guillemin, D., & Eisenclas, S. A. (2015). Multilingualism and assimilationism in Australia's literacy-related educational policies. *International Journal of Multilingualism*, 12(2), 162–177. <https://doi.org/10.1080/14790718.2015.1009372>.

- The City of Ryde. (2021). Welcome guide for asylum seekers and refugees. Retrieved September 21, 2021, from <https://www.ryde.nsw.gov.au/Community/Community-Support/Welcome-Guide-for-Asylum-Seekers-and-Refugees>.
- The Inner West City Council. (2021). Marrickville road precinct formally recognised as ‘Little Greece’. Retrieved February 19, 2021, from <https://www.innerwest.nsw.gov.au/about/news/media-releases/2021-media-releases/marrickville-road-precinct-formally-recognised-as-little-greece>.
- Tudge, A. (2018). The integration challenge: Maintaining successful Australian multiculturalism. Retrieved October 12, 2021, from <https://www.alantudge.com.au/speeches/the-integration-challenge-maintaining-successful-australian-multiculturalism/>.
- Van Leeuwen, T. (2009). Discourse as the recontextualization of social practice: A guide. In R. Wodak & M. Meyer (Eds.), *Methods of critical discourse analysis* (2nd ed., pp. 144–181). SAGE Publications.
- Whitton, D. J. (1975). The migrant child and teacher preparation. In *English in Australia* (Vol. 32, pp. 8–22). <https://search.informit.org/>. <https://doi.org/10.3316/ielapa.742932273766886>.
- Wong, A., Anderson, K., Ang, I., & McNeill, D. (2016). Sydney’s Chinatown in the Asian Century: From ethnic enclave to global hub. Retrieved October 2, 2021, from https://www.westernsydney.edu.au/__data/assets/pdf_file/0009/1086885/sydneys_chinatown_in_the_asian_century_research_report.pdf.

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Virtual Linguistic Landscapes from Below: A Hashtag Analysis of the European Day of Languages



Sarah McMonagle

Abstract This chapter investigates virtual linguistic landscapes (VLLs) from ‘below’ by exploring (potentially) multilingual practices on social media. Due to the participatory culture of social media, resulting in user-generated content, users may construct the linguistic landscape (LL) of the networks in which they engage. This study examines the diversity of languages used in tweets about the European Day of Languages (EDL)—an annual event organised by the Council of Europe to highlight and promote linguistic diversity as well as the importance of language learning in Europe. A corpus of Tweets (N = 50), compiled from the official EDL hashtag (#coeEDL), is both quantitatively and qualitatively examined using a coding scheme for hashtag analysis. The tweets (i.e. semiotic signs) were analysed for language visibility and saliency in the corpus. Initial findings show the dominance of English in tweet composition, along with a ‘symbolic multilingualism’ in added modalities. While the latter confirms the potential of Web 2.0 platforms for multilingual representation, the former must be evaluated critically from both linguistic and (socio)technical perspectives. Although diverse user practices and motivations determine the multilinguality of bottom-up VLLs, their experiences of those same VLLs are partly determined by platform algorithms. This has implications for virtual knowledge experiences, and may be explored via classroom pedagogies.

Keywords European Day of Languages · Multilingualism · Twitter · Virtual linguistic landscapes

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1 Introduction

The study of linguistic landscapes (LLs) reveals the language policies and practices of given spaces—whether through public signage in officially bilingual regions, the indexing of commercial space in urban areas or the conveying of information in institutional settings. Signifying the “visibility and salience” of languages on signs (Landry & Bourhis, 1997, p. 23), the LL tells us something about the symbolic construction of such settings and spaces; linguistic landscaping thus presents us with “a set of appropriate methods for learning about society from linguistic facts” (Ben-Rafael & Ben-Rafael, 2019, ix). Indeed, the present volume indicates how language (in)visibility matters in our everyday surroundings, and its critical examination can *inter alia* affirm the plurality of contemporary societies and raise language awareness—not least in classrooms and for language teaching and learning.

The present chapter takes a somewhat different approach by exploring the multilingualism of virtual linguistic landscapes (VLLs), thus extending the discussion of LLs from the physical to the online world. If LLs describe the linguistic constellations of public spaces, investigations of VLLs are justified and necessary—after all, the internet, too, is public space (Camp & Chien, 2000). Moreover, online spaces are deterritorialised, potentially enabling interaction on a global level and without the communicative and semiotic restrictions of one’s immediate physical environment. Early conceptualisations of the VLL argued that “virtual environments can innovatively repackage and reposition languages in an unfolding universe of new interactive possibilities, creating a linguistic ecology that is not representative of the physical world” (Ivkovic & Lotherington 2009, p. 19). The subsequent rise and ubiquity of Web 2.0 platforms, characterised by collaborative spaces and open-source applications, have transformed internet users from mere recipients of static content on webpages to “prosumers” (producer + consumer) of participatory online culture (Leppänen et al., 2014, p. 114). The virtual world not only affords opportunities for multilingual interaction and presentation that are not always possible in the physical world, multilingual VLLs may also be created from ‘below’.

This chapter explores the VLL of the Council of Europe’s European Day of Languages (EDL) as constructed by users on the social media site, Twitter. This event was chosen in keeping with the theme of the present book: taking place across Europe annually, the EDL promotes linguistic diversity and the importance of language teaching and learning. Given the focus and scope of this event, one might anticipate the creation of a multilingual VLL as users across Europe share their thoughts about and experiences of the EDL on their social media profiles. Combining research on LLs with computer-mediated communication (Androutopoulos, 2014), this study attempts to determine levels of multilingualism potentially present in the social media VLL of the EDL. It is a wholly exploratory study that enquires: Which languages are salient in the VLL of the EDL on Twitter? Because user practices determine the multilinguality of social media VLLs, is the linguistic diversity of Europe visible in this VLL from ‘below’? If LL research helps us to learn about society through

linguistic facts (op. cit.), what can the VLL of the EDL tell us about this annual event as it is experienced and promoted in “affinity spaces” (Gee, 2005)?

The next section positions the present study in the growing body of research on language and social media. It underlines the need for increased examination of VLLs to uncover the functional and symbolic uses of language—in common with research on physical LLs—in these spaces. More detailed information is then provided on the EDL and on Twitter as a participatory platform and setting for language-related research. The methods section outlines the study design and approach (i.e. hashtag analysis), including the coding scheme for analysis (McMonagle et al., 2019). This is followed by a description of the main findings and a concluding discussion with suggestions for educational practice. As the ‘virtual’ (as yet) represents a nascent area of investigation in linguistic landscaping, more questions than answers are inevitably raised in this exploratory study. Just as the present book is testimony to the ever-expanding foci and approaches of LL research, this chapter highlights not just the potential of social media spaces for multifarious examination, but also the need for increased awareness of and attention to the (socio)technical aspects of distinct VLLs. “Algorithmic culture” (Galloway, 2006; Striphas, 2015) interacts with “linguistic culture” (Schiffman, 1996) in determining the VLLs presented to and occupied by users. Social media VLLs thereby emerge as types of ‘in-between’ spaces that are contingent on human–machine interaction (see Roberge & Seyfert, 2016), and of which we find no direct counterpart in the physical LL. Nonetheless, examinations of the physical LL may be extended or adapted to include those virtual spaces which educators and learners increasingly experience, inhabit and create.

2 Language and Social Media: The Case for Virtual Linguistic Landscapes

More than half of the world’s population has access to the internet (although still with sizable regional and urban/rural differences, International Telecommunication Union, 2020). This figure increases to around 70% for people aged 15–24 (ibid.). These numbers alone imply that speakers of diverse languages are active online, both creating and consuming content. At the same time, the pervasiveness of English online, due to its global prestige and American dominance in internet infrastructure and content provision, has long been critiqued. However, the “cybercolonial force of English” (Ivkovic & Lotherington 2009, p. 27) is deemed to be challenged as more people and languages come online (see also Crystal, 2011). Social media in general are of increasing interest to scholars of language, language education and multilingualism (e.g. Barrot, 2021; Barton & Lee, 2013; Crystal, 2011; Deumert, 2014; Jones & Uribe-Jongbloed, 2013; McCulloch, 2019; Seargeant & Tagg, 2014). The features of social media bid investigation into *inter alia* language change, maintenance, learning and revitalisation; the formation of (new) networks of communication, multimodality and identity expression.

Yet little scholarly attention has been paid to the ways in which users of social media may co-construct the VLLs of which they are a part. While there are several million users of platforms such as Facebook, Instagram, TikTok and Twitter, not all users of the same platform inhabit the same VLL. Firstly, users can choose in which language the respective platform interface should appear. Secondly, the language of content created and consumed on those platforms is not dependent on the language interface settings. So, while Facebook users can choose from around 120 language options (until 2008 only English was available), they are free to upload content in any of the languages that they may use or choose—especially as more writing systems are enabled by Unicode and audiovisual media can be embedded online.

The VLL of social media platforms is therefore unpredictable; its configurations rely both on the technical possibilities (which must also be understood as constraints) of the platforms themselves as well as the individual practices of heterogeneous users. While a description of Web 1.0 VLLs is relatively straightforward due to the more static and ‘top-down’ nature of their design (see, for example, Keles et al., 2020), investigations of Web 2.0 VLLs can take many different approaches. No single study can capture the multiplicity of actions that construct VLLs on social media, nor how the VLL is experienced and perceived by different actors. However, by examining carefully delineated ‘networked communities’, we can derive insights into user practices that co-create a given VLL. For example, Biró (2018) issued questionnaires to and examined the Facebook profiles of bilingual university students in Romania. Their profiles, and therefore personal VLLs, are constructed according to language proficiency and sense of identity that they wish to portray to others. Taking a vastly different approach, Hiippala et al. (2019) used computational methods (‘geotagging’) to explore the LL of social media posts associated with a particular tourist location in Finland. While their findings point to a multilingual VLL in Instagram posts, a small number of languages dominate, with English the most dominant (even among Finnish users). Although having different aims, and therefore employing different methodologies, these studies show that language in the VLL, and in common with physical LLs, has both functional and symbolic roles. Those roles may be decided by users themselves in accordance with their preferences and purposes (see also Androutsopoulos, 2015).

The study presented in this chapter takes yet a different approach to examining VLLs: a corpus of tweets that are digitally linked via the official hashtag of the Council of Europe’s EDL (#coeEDL) was compiled for qualitative and quantitative examination using a coding scheme for hashtag analysis (McMonagle et al., 2019). Whereas this coding scheme was initially designed to examine specific languages on Twitter, it is adapted here to determine levels of multilinguality in the user-constructed VLL of the EDL.

3 The European Day of Languages (EDL)

2001 was announced the European Year of Languages (EYL) by the Council of Europe and the European Union. So-called ‘European Years’ are declared in order to raise awareness of specific issues across the European Union and for which funding may be made available to initiatives addressing these issues at local, regional, national and cross-border levels (European Union, 2021).¹ Both the Council of Europe and the European Union regard linguistic diversity in overlapping, yet also distinct, ways. The European Union, with 27 member states, is concerned with managing the multilingualism of its own institutions and promoting the benefits of language skills in education and jobs among its citizens (e.g. Gazzola, 2006; Kraus & Kazlauskaitė-Gürbüz, 2014; Krzyżanowski & Wodak, 2011). Regarding the latter, the European Union collaborates with the Council of Europe, especially with its European Centre for Modern Languages (ECML). The Council of Europe’s modern languages project has long been engaged in the development of policies and frameworks for language learning, with its Common European Framework of Reference for Languages (CEFR) providing a comprehensive set of tools for the design, assessment, teaching and learning of languages (Council of Europe, 2001). A separate body from the European Union, the Council of Europe has 46 member states that cooperate in the areas of culture, education, democracy and human rights—core areas that the Council of Europe was established to address in the aftermath of the Second World War in 1949. The Council of Europe monitors the progress of its member states in the protection of human rights and non-discrimination, *inter alia* with regard to minority languages. The European Charter for Regional or Minority Languages (Council of Europe, 1992), enforced by the Council of Europe, is the only legal instrument worldwide that is designed specifically to protect and promote regional and minority languages.²

Altogether, the promotion of language and multilingualism is embraced by European bodies to meet their specific remits and strategic goals. Both the Council of Europe and the European Union are also subject to critique in their approaches to language diversity (e.g. Fulcher, 2004; McDermott, 2017; Phillipson, 2003; Wright, 2009). Criticisms of the promotion of multilingualism in Europe pertain largely to the continuing dominance of English (also in social media, despite opportunities for more diverse communication practices (Koskinen, 2013)) and the exclusion of the

¹ For example, 2021 was declared the European Year of Rail to promote rail as a sustainable and beneficial mode of transport. Other ‘European Years’ have sought to raise awareness of topics such as ageing, sport and citizenship. For a full list of ‘European Years’, see https://eurlex.europa.eu/summary/glossary/european_year.html?locale=en.

² The Charter defines these languages as those “i. traditionally used within a given territory of a State by nationals of that State who form a group numerically smaller than the rest of the State’s population; and

ii. different from the official language(s) of that State” (Council of Europe, 1992, p. 2). The languages of migrants are not included in this definition.



Fig. 1 Screenshot from the homepage of the European Day of Languages showing the 41 language options available. Accessed November 2021

languages of migrants. Nonetheless, or even therefore, the EYL was seen as an opportunity to contemplate and critically examine the meaning(s) of multilingualism, and with a proposal to continue the momentum that was stimulated by it (Crystal, 2001).

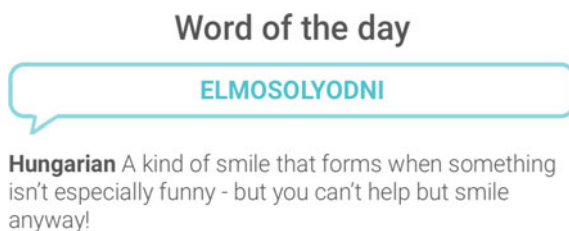
As the EYL was drawing to a close, the Council of Europe announced that a European Day of Languages (EDL) would be observed annually on 26th September in order to raise awareness of language diversity in Europe, and to promote an increase in and diversification of language learning among Europeans.³ This should occur in a decentralised and flexible way, in accordance with the wishes and approaches of partners within the respective member states (ECML, 2021). A visit to the website of the EDL outlines the aims and objectives of this annual event, activities for learners and suggestions for teachers, facts and trivia about languages—all displayed in a highly visual and interactive manner (*ibid.*). Of interest to the present paper on VLLs, this information is presented in a range of both national and regional languages of the respective member states, from Azeri to Ukrainian (see Fig. 1).

With 41 language versions,⁴ the website of the EDL is multilingual in its presentation, or at least it is possible to access the site in several different languages—more than are available to access the webportal of the European Union (available in the EU's 24 official languages), the website of the Council of Europe (English/French/German/Italian/Russian/Spanish), and even that of the ECML (English/French). At the same time, the website of the EDL does not reflect the full extent of Europe's multilingualism: the same website claims that Europe is home to 225 indigenous languages (*ibid.*).

³ English is the most popular foreign language in schools across the European Union, with 97.9% of pupils in lower secondary education learning the language. This is followed by French (33.4%), German (16.9%) and Spanish (16.9%) (Eurostat, 2019).

⁴ 41 language versions were available at the time of writing. As this chapter went to print, Maltese had been added, bringing the language selection to 42.

Fig. 2 Word of the day, 23 November 2021, from the EDL English-language webpage: <https://edl.ecml.at>



At the time of writing, the English-language webpage of the EDL presents images of smiling young people who hold signs in different languages and with different national flags. Occupying much of the page are new items and suggested activities for the EDL 2021; there is a recorded statement from the Secretary General of the Council of Europe to mark the EDL 2021, as well as information portals on the EDL and language and multilingualism in general. Visitors to the site are encouraged to take quizzes, play games and download materials. All displayed text is in English, aside from the 'Word of the day', which displays a term from a European language that is not so readily translatable to other languages. Figure 2 displays an example of 'Word of the day' from the EDL English-language webpage. The word is 'elmosolyodni' in Hungarian, with an explanation provided in English.

It is beyond the scope of the present study to evaluate the multilinguality of the VLL of the EDL website. Firstly, this would require access to previous iterations of the site in order to measure development over time. Secondly, this study is concerned with how VLLs are constructed in participatory Web 2.0 settings; the website of the EDL is an example of a Web 1.0 platform, whose VLL is largely determined by institutional language policies and strategic goals as well as acquisition of resources for translation and materials development. However, the extent to which the European institutions and their agencies enable or inspire online activity in diverse languages is certainly of interest. After all, the EDL is about raising awareness of Europe's multilingualism and promoting the learning of languages for skills and interculturalism. Some examples of content from a brief inspection of two other (alongside English) language versions of the EDL site will be presented here in order to understand the visibility of different languages in this Web 1.0 VLL. For this, the German and Irish versions were selected as languages reflecting rather divergent sociolinguistic and political positionings. German⁵ is considered a 'major' European language due to a large L1 speaker population and is the third most taught foreign language (after English and French) in Europe. It has been a 'procedural' language of the European Economic Community/European Union since 1958. Germany's economic influence in Europe and the world lends the German language prestige, while Germany attracts high numbers of international migrants. Irish,⁶ although the first official language of

⁵ German EDL webpage (accessed November 2021): <https://edl.ecml.at/Home/tabid/1455/language/de-DE/Default.aspx>.

⁶ Irish EDL webpage (accessed November 2021): <https://edl.ecml.at/Home/tabid/1455/language/ga-IE/Default.aspx>.

the Republic of Ireland, is a lesser-used language with a relatively small L1 speaker population. It has a larger L2 population, but Irish is only taught in schools in the Republic of Ireland and in some schools in Northern Ireland. The language may be learned as part of Celtic Studies programmes at a very small number of universities in Europe (and North America and Australia). Irish became an official language of the European Union in 2007, following a successful grassroots campaign. When it joined the European Economic Community in 1973, the Irish government elected to have English as its working language. English is the dominant language of public, political and commercial life in Ireland.

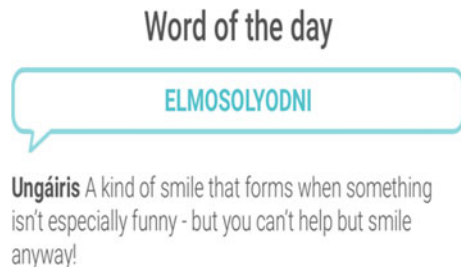
Scrolling through the English, German and Irish webpages of the EDL, all pages present the same types of content (as outlined above), although to differing degrees in the respective language. While the English version appears to be the ‘default’ page and therefore ‘fullest’ in its language provision, most (however not all) of this content is also available in German, and only some of it is available in Irish. Figures 3 and 4 illustrate the same ‘Word of the day’ as above, screen-grabbed from the German and Irish pages. The meaning of *elmosolyodni* is given in both instances in English. ‘Word of the day’ has been translated into German (*Wort des Tages*) and not at all in Irish (although the Irish for Hungarian (*Ungáiris*) is provided).

The partial translation in both these examples may be explained by a lack of resources to keep up with daily-changing content. Yet gaps also appear in more ‘fixed’ types of content, such as information portals. Figures 5, 6 and 7 show such portals from the English, German and Irish webpages, respectively. Again, the content from the Irish page is most conspicuous by the presence of English. Just one of the eight portals appears entirely in Irish (*Eolas faoin Lá/About the EDL*). Three of the

Fig. 3 Word of the day, 23 November 2021, from the German-language EDL webpage



Fig. 4 Word of the day, 23 November 2021, from the Irish-language EDL webpage



portals are titled in English only; five are mixed Irish and English (although not bilingual).

Although this is far from a thorough presentation of the VLL of the EDL website, some trends can be identified. Firstly, information can be accessed via 41 different language portals, juxtaposed alongside one another. Secondly, the presentation of information is not equal for all of those languages. If the LL “serves an important informational and symbolic function as a marker of the relative power and status of the linguistic communities inhabiting the territory” (Landry & Bourhis, 1997, p. 23), this Web 1.0 VLL indicates the institutional and social hierarchies of language that extend from the physical world. Whether such tendencies further extend to the EDL



Fig. 5 Information portals on the English-language EDL webpage. Accessed November 2021



Fig. 6 Information portals on the German-language EDL webpage. Accessed November 2021



Fig. 7 Information portals on the Irish-language EDL webpage. Accessed November 2021

on social media will be examined here. In any case, the ECML has clearly grasped the general participatory potential of social media: at the bottom of the EDL website (and in every language version), site visitors can directly link to the ECML on Facebook and on Twitter, and to the hashtag #coeEDL.

4 Twitter

Social media are broadly defined as “those internet-based sites and platforms which facilitate the building and maintaining of networks or communities through the sharing of messages and other media” (Sergeant & Tagg, 2014, p. 3). Twitter, the setting for the present study, bears these functions as a social media platform: users compose tweets (i.e. short informational messages) of up to 280 characters in length, which may also include a range of media (hyperlinks, GIFs, photos). Those tweets are seen by one’s followers, and potentially by other Twitter users, who may like, retweet (i.e. forward to one’s own followers) or respond to them. One does not have to follow particular Twitter accounts to receive information—it is, for example, also possible to follow hashtags that denote and link to topics of interest. On Twitter, adding # to a term or unbroken phrase creates a hashtag which in turn acts as a digital link to that tweet. It also becomes linked to all other tweets bearing the same hashtag. If, for example, one wanted to read about the EDL on Twitter, it would be possible to do this by following the Twitter account of the ECML of the Council of Europe. It is, however, unlikely that a single account can capture the full range of tweets pertaining to a large-scale event such as the EDL. Users tweeting about the EDL can therefore add a relevant hashtag (#coeEDL), making their tweets ‘findable’ by other users who click on the respective hashtag. Hashtags are metalinguistic markers; when consciously applied they can draw attention, promote and inform (boyd et al., 2010; Page, 2012). By applying certain hashtags, users can signify the topics that they tweet about, which may encourage others with similar interests to follow them. This is one way, among many others, in which social networks may be built online as hashtags define “affinity spaces” (Gee, 2005) in which users, who are otherwise unknown to one another, share interest in given topics and/or events.

Since its inception in 2006, Twitter has grown to more than 200 million daily active users worldwide (Statista, 2021). At the time of writing, the Twitter account with the most followers is that of the former American president, Barack Obama (@barack-obama), with more than 30 million followers (Socialtracker, 2021); the account to have posted most tweets is the Japanese convenience store, Lawson (@japan_lawson (ibid.)). This merely illustrates that information of all sorts can be posted to and seen on Twitter; it is both a social networking and news informational site, with users able to both broadcast and receive tweets.

Unless a hashtag is ‘trending’ (i.e. has considerable reach), it is not possible to parse the reach of most hashtags simply by viewing the Twitter interface.⁷ On 25 November, 2021 at 13:50, for example, the top trending hashtag displayed on the present author’s Twitter account was #KoalitionsVertrag (#CoalitionAgreement) with 52.7 thousand tweets, following the agreement reached by three political parties in Germany to form a government after several weeks of negotiations. Twitter reveals such trends to users as general topics of interest, but also according to the location and practices (e.g. accounts followed, topics tweeted) that Twitter tracks. The Twitter algorithm is thus designed to offer information ‘of relevance’ to its users. While trending topics are news topics of interest, they represent but a small fraction of any number of hashtags applied to tweets in a given moment.

One means of targeting users with ‘content of relevance’ is via their locational and language settings. Regarding the latter, users can choose from more than 40 display languages⁸ (i.e. the language in which the various Twitter functions and headlines should appear). Under Twitter’s language settings, users can also manage “additional languages you speak”—relevant to content that users *want to see* on Twitter, this is a more extensive and somewhat different list of options to the possible display languages. Twitter further offers users the opportunity to manage “languages you may know”, referring to languages that Twitter infers *one may understand* based on one’s activity. It may well be that not all users are aware of such language settings. At any rate, the Twitter algorithm is highly influential in the content brought to user’s attention. This is critical to bear in mind when conducting language-related research on Twitter, and as became apparent in the course of this study.

5 Methods

This screen-based investigation used the Twitter interface to compile a corpus of tweets posted on 26 September 2019 and containing #coeEDL. As this study is exploratory, it was important to define a relatively stable and manageable sample space. Although data collection and analysis took place in Spring 2021, the more recent EDL of 2020 was not selected for analysis because it fell on a Saturday and during a period of school closures due to the COVID-19 pandemic. Given the focus of the EDL on language teaching and learning, we expected richer findings from 2019.

⁷ As companies and political bodies increasingly utilise Twitter as a marketing channel and informational platform, returns from so-called ‘hashtag counters’ can be purchased from third parties who advertise such services on the web.

⁸ Arabic, Arabic (feminine), Bangla, Basque (beta), British English, Bulgarian, Catalan, Croatian, Czech, Danish, Dutch, English, Filipino, Finnish, French, Galician (beta), German, Greek, Gujarati, Hebrew, Hindi, Hungarian, Indonesian, Irish (beta), Italian, Japanese, Kannada, Korean, Malay, Marathi, Norwegian, Persian, Polish, Portuguese, Romanian, Russian, Serbian, Simplified Chinese, Slovak, Spanish, Swedish, Tamil, Thai, Traditional Chinese, Turkish, Ukrainian, Urdu (beta), Vietnamese.

Using Twitter's 'advanced search' function, the 'top' tweets for #coeEDL on 26 September 2019 (N = 50) were manually coded and analysed. Top tweets are those tweets deemed 'most relevant' to a particular search—a feature that was introduced by Twitter in 2018. They are algorithmically generated by Twitter "based on the popularity of a Tweet (e.g., when a lot of people are interacting with or sharing via Retweets and replies), the keywords it contains, and many other factors" (Twitter, 2021). 'Latest' tweets, a category displaying the most recently posted tweets in response to a search query, present another option for corpus building and analysis. As an initial study, it was decided to analyse the 'top' tweets as they can be presumed to be especially popular (either among those following #coeEDL or following tweeters who post about the EDL). The option 'any language' was applied to the search.

The coding procedure was based on the codebook developed by McMonagle et al. (2019) to analyse minority-language tweets, specifically Welsh, Frisian and Irish. This codebook was developed to examine specific languages on Twitter and so had to be adapted for the present study to account for the presence of unspecified, and potentially many, languages.

Each tweet was treated and analysed as a semantic unit (or linguistic sign). Primarily concerned with exploring the multilinguality of the EDL on Twitter, the languages of composed text as well as languages visible in other modalities were recorded. There were relatively few problems identifying the languages visible in tweets; in a very small number of instances where the researcher/coder could not be sure, the expertise of others was called on to confirm the appearance of a particular language/script. All languages visible in composed text (i.e. the main body of the tweet) were coded; coding allowed for single-, bilingual- and mixed-language tweets. Other modalities (GIFs, photos, hyperlinks) were coded as well as all languages visible in them, including *inter alia* background signage and other artefacts visible in photographs. The corpus contained, for example, many photographs from classroom settings which are not reproduced here in order to protect those photographed (mainly school pupils).

Further coding was conducted for the 'sign-makers' (i.e. tweeters) and the topics/sentiments expressed in their tweets. Semantic units that form the VLL, in common with physical LLs, are constructed entirely by humans. It is therefore important to understand *who* has created the signs that make up the landscape and for *what* purpose. Information on the tweeters included in the present corpus was derived from their Twitter biographies. Tweeters were divided between organisational and individual (or personal) accounts—for example, the Twitter account for a school was coded as 'organisation', while a teacher tweeting from their personal account was coded 'individual'. Tweeters were further categorised according to the domains in which they are (professionally) active. Such information is, however, not always decipherable from Twitter biographies.

The full coding procedure is outlined in Fig. 8.

Corpus compilation and coding were conducted on an internet browser not previously used by the researcher/author, who also remained logged out of their personal Twitter account. This was to avoid any influence tracked from previous online behaviours and personal Twitter preferences. The study was conducted on a computer of the University of Hamburg, whose location is identifiable as being in Germany. Following the coding and categorisation of tweets included in the corpus derived from Twitter’s ‘advanced search’ function, the same search was conducted on ‘*erweiterte Suche*’—i.e. a search was conducted for tweets containing #coeEDL posted on 26 September 2019 via the German-language settings. A summary examination of the ‘top’ tweets compiled from this search was conducted, revealing significant and notable differences to the first corpus of ‘top’ tweets gathered from the ‘advanced search’ (i.e. in English) function.

Research ethical guidelines of the Association of Internet Researchers were followed.

- Coding list #coeEDL
- Language(s) in text of tweet (specify) +
 - Single language (s)
 - Bilingual (b; same concept expressed in two languages)
 - Mixed (m; different concepts expressed in different languages)
 - Other modalities
 - Photo
 - Image
 - Video
 - GIF
 - Hyperlink
 - Emoji
 - + visible language(s)
 - Tweeters
 - Organisation or individual +
 - Language teaching and learning (LTL)
 - Language other (e.g. professional translation)
 - Education (not directly referencing LTL)
 - Politics
 - Embassies/consulates
 - Public bodies (e.g. employment agencies)
 - Commercial bodies (i.e. those selling a service or product)
 - Other (to refer to accounts not covered by the above or where available information is unclear)
 - Tweet topics
 - The EDL
 - Multilingualism
 - LTL
 - Meta-language
 - Language other (e.g. language policy, facts/trivia)
 - Promotion (of a service or product)
 - Social
 - Other

Fig. 8 Coding list applied in study; adapted from McMonagle et al. (2019)

6 Findings

As noted above, the tweets analysed for this exploratory study were selected by the Twitter algorithm as most relevant, based on *inter alia* their popularity and the default search settings. The most popular tweet in the corpus, as measured in ‘likes’ and ‘retweets’, was posted by astronaut, Luca Parmitano (see Fig. 9).

With 1,572 likes and 258 retweets, this tweet was by far the most popular in the corpus. The next most popular tweets were retweeted 130 and 109 times, respectively (e.g. Fig. 10).

Around half of the tweets were retweeted fewer than ten times, and 90% were liked fewer than ten times (e.g. Fig. 11).

Just what makes the selected ‘top’ tweets ‘relevant’ is not empirically verifiable as the selection rests with the Twitter algorithm. Even so, the tweets displayed above indicate trends identified throughout the corpus, and which will now be discussed in more detail.



Fig. 9 Most popular ‘top’ tweet in #coeEDL corpus, 26 September 2019



Fig. 10 Third most popular tweet in the #coeEDL corpus

6.1 The VLL—What Languages Were Visible in Tweets?

The primary aim of this exploratory study is to describe the languages used in tweets containing #coeEDL and posted on 26 September 2019. All 50 tweets coded for the present study contained English in the main body of text (as per the tweets displayed in Figs. 9, 10 and 11). 46 of those tweets were composed in English only, while three contained one other language (French, Italian, Spanish), but were not bilingual, and one tweet was composed using a mix of English, French, Romanian, Spanish and Russian. The dominance of English is notable in an event that aims to promote multilingualism. It is even more notable that this dominance does not emerge from institutional language policies (op. cit.), but from social media users who, in theory at least, are located across Europe (if not the world) and speak and learn different languages.

Yet tweets are also constructed as “modal ensembles” (Kress, 2010), and all tweets in the present corpus contained a modality other than text. The corpus was highly visual with 27 tweets displaying photographs (as in Fig. 9) and 17 tweets other types of images (such as in Figs. 10, 11 and 12); six tweets contained hyperlinks, five had embedded video, two applied GIFs. In nine tweets, multiple modalities were included alongside one another. A multimodal examination reveals a much more multilingual VLL than just textual coding: while 12 of the ‘added’ modalities displayed English



Fig. 11 Example of tweet from #coeEDL corpus with relatively few likes and retweets

only, 18 showed multiple languages including Albanian, Arabic, Catalan, Danish, French, Hebrew, Irish, Korean, Latvian, Swedish, Russian, to name but a few (as in, for example, Fig. 11). A total of 18 tweets showed no other languages in added modalities. This was due to photographs of just people or natural landscape (without any visible signage), items of food or other artefacts, or logos without text (e.g. Fig. 12).

The salience of English in the emerging VLL of the EDL on Twitter is tempered somewhat by a multimodal analysis of the semiotic signs that make up the corpus. Images like that displayed in Fig. 11—the same term or phrase displayed in different languages—are common in European celebrations of multilingualism. While we cannot determine the language practices or skills of those posting such ‘ready-made’ images, they are posting in line with the aims and spirit of the EDL, namely to value and promote language diversity in Europe. Such displays therefore represent a type of ‘symbolic multilingualism’ in the VLL, also conveyed in the ‘meta-language’ of many tweets (see next section). Furthermore, many tweets composed in English only described the value of languages and/or referred to language learning activities (as in Figs. 9 and 11). The tweeters behind these messages, as well as the topics conveyed, will be described next.



Fig. 12 Example of tweet from #coeEDL corpus displaying image without text/language

6.2 *The Messengers and Their Messages*

36 of the 50 tweets (i.e. around $\frac{3}{4}$) were posted by ‘organisations’, 12 came from ‘individual’ accounts. Two accounts were categorised ‘other’. Accounting for both organisations and individuals, ‘education’ was highest represented (18 accounts), followed by ‘language teaching and learning’ (LTL; 14 accounts). In both these categories, primary, secondary and higher education were represented. The remaining tweeters were categorised as follows: Public bodies (5), commercial bodies (3), language other (2), politics (1), embassies/consulates (1), other/unknown (4).

Tweets were further coded for content and sentiment (‘topics’, as per coding scheme above). A tweet could be coded using more than one topic code. Perhaps unsurprisingly, the largest topic to emerge from the corpus is ‘The EDL’ (coded 29 times). Some tweets referred only to the EDL (e.g. “*Happy European Day of Languages!!*”) or combined the announcement of the event with LTL activities (coded 12 times; e.g. “*Thanks to our Portuguese teacher, [name], for giving our First Year a taste of the Portuguese Language & Culture to mark European Day of Languages 2019*”). Other tweets coded for the LTL topic did not make an explicit reference to the EDL, although their inclusion of the relevant hashtag informs readers that the event was a factor in deciding to post LTL content (e.g. “*... pupils enjoying*

their morning learning Gujarati ...”). This content analysis shows that, although English is salient in the emergent VLL, the message remains focused on language learning and multilingualism.

Seven tweets were coded with the topic ‘meta-language’ as they described the value or purpose of multilingualism and/or language skills (e.g. “... [name] has found that a working knowledge of another language has helped him to form lasting bonds with colleagues & contacts in other countries”). Others (six in total) used the event to promote their products or services, for example publishers advertising multilingual books or universities seeking enrollments for language courses.

A further important topic was ‘social’ (coded 17 times), in reference to the more personal and everyday information posted by users. Twitter is, after all, a social networking site where tweeters also share *inter alia* information about their lives, anecdotes and memes. We see some of these ‘social’ aspects in Figs. 9 and 11, as one makes a reference to friends and the other to the activity of walking. Both tweets were thus coded for multiple topics. Other tweets were entirely ‘social’ in the content they shared (e.g. “Popcorn at the ready!” alongside a photograph of pupils seated in a cinema). Tweeters do not have to be any more specific in the content they share when they have a target audience in mind who will (presumably) understand the relevance of the respective post.

6.3 ‘Erweiterte Suche’

As indicated above, the same search but with less extensive coding and analysis was conducted via the German-language settings on Twitter. The ‘*erweiterte Suche*’ function returned ca. 80 ‘top’ tweets—more than those returned by ‘advanced search’. An initial glance at this corpus instantly reveals differences when compared with the corpus described above. The first four ‘top’ tweets are composed in German with added modalities displaying different languages. The following ca. 30 ‘top’ tweets were also contained in the ‘advanced search’ corpus (i.e. those composed in English and described above). The subsequent ca. 50 tweets were composed in a range of different languages, including Catalan, Esperanto, French, Irish, Occitan, Spanish, Turkish and Welsh—a VLL that would appear to correspond more to the multilingual bottom-up practices and participatory possibilities theorised in the introduction to this chapter. Notably, contained in this corpus is a tweet posted by astronaut, Luca Parmitano, in Italian. The tweet contains the same content and modalities as Fig. 9. The difference not only lies in the fact that it appears here in Italian, but that the Italian tweet received more than 500 likes and around 3,300 retweets—more than the same tweet composed in English (op. cit). Although the researcher had attempted to build a corpus of the most ‘popular’ tweets containing #coeEDL and posted on 26 September 2019, this makes apparent that multiple VLLs of the EDL exist on Twitter, with technical factors determining who gets to experience which version.

7 Discussion

Tweeting is a sociotechnical event in which user motivations and desires are both enabled and constrained by the technology of the platform. The aim of this study was to explore the visibility and saliency of languages in tweets posted by users applying the hashtag #coeEDL. The ‘top’ 50 such tweets posted on 26 September 2019 were analysed as semiotic signs that construct the VLL in a participative way. These tweeters (or sign-makers) are not restricted by institutional language policies. Yet the corpus of tweets analysed for this exploratory study points to the dominance of English with ‘symbolic multilingualism’ added via different media. While much has been written about the hegemony of English in Europe, we urge a more nuanced understanding of the trend as it emerged here. Firstly, English is the most learned foreign language in Europe; for many users, posting content in English means posting in one’s L2 (or L3, etc.), implying individual multilingual practice. Secondly, English is the global *lingua franca*. Of course, this is not a value-free statement on a particular mode of being; the status of English is imbued with ideology that places all languages on social, economic and cultural hierarchies. It is, for instance, indicative of its institutionally accepted prestige that the official EDL hashtag (#coeEDL) uses the English acronym. As perceived *lingua franca*, some social media users will opt to use English in order to reach broad audiences (a practice also supported by the preceding point). By tweeting about the EDL, users are also conveying something about themselves, whether working in educational professions or expressing a sense of identity. Thirdly, the Twitter algorithm presented us with an English-dominant corpus, presumably as the respective search ran according to Twitter’s default settings. When the same search was conducted on German-language settings, a corpus emerged showing a much more multilingual VLL. In the context of this study, then, the VLL of the EDL is not ‘fixed’. Rather, we see the effects of algorithmic culture that adapts and transforms according to use (Roberge & Seyfert, 2016, p. 7).

The inscrutability of algorithms—they are ultimately protected as trade secrets—is underlined by the growing awareness of their influence in our everyday lives, as taken up in recent years by scholars of social and cultural studies (Dourish, 2016). We have seen from the two corpora that were algorithmically generated for the present study that researchers of VLLs must also be aware of this agency when scrutinising the visibility and saliency of languages in spaces that are collaboratively constructed by myriad users. The call to adopt an algorithmic lens becomes more urgent as our lives increasingly take place online and, consequently, research on VLLs becomes increasingly relevant and necessary to the expanding area of linguistic landscaping.

VLLs present many more opportunities for language displays, but algorithmic culture plays a role in determining how much of that diversity internet users may experience. Akin to research in physical spaces, and as conducted in the present study, the VLL is interpreted according to analyses of its constituent semantic units as created by users. However, the sorting and prioritising of those semantic units occur within a broad sociotechnical assemblage made up of “a plethora of actors, both human and non-human” (Roberge & Seyfert, 2016, p. 2). In other words, just as

tweeting is a sociotechnical event, and hundreds of millions of tweets are sent every day, algorithms are in constant negotiation with such flows of data. Roberge and Seyfert (2016) describe this dynamic as an “in-betweenness”. Unlike the physical LL, Web 2.0 VLLs, in their unpredictability, can be characterised as ‘in-between spaces’. Depending on one’s location and online behaviours, the VLL may be experienced differently, which has implications for raising language awareness.

Gorter (2006) asserts that “studies of linguistic landscape should aim at discovering patterns in the underlying diversity” (p. 88). We therefore call for extended and varied ways of approaching VLLs from below. Of course, not all corpora need to be algorithmically generated. Tweets can be followed and compiled ‘in real time’, or by using the ‘latest tweets’ search. Different corpora can be compiled through different language settings and their heterogeneity, topics and actors compared. The VLLs of other social media platforms, which have different (while also similar) functions should also be investigated for patterns emerging from different user demographics. This exploratory study opens up many more gaps than it can possibly fill.

A question that arises here: does this even matter to anyone beyond scholars of languages and linguistic landscapes? Users can choose who to follow, thus curating their online spaces according to interests. When we consider the aims of the EDL—to promote Europe’s language diversity and language teaching and learning—we observe that the tweets analysed for this study respond to those aims. The tweets do not just acknowledge the event itself but express the virtues of multilingualism. We also see tweets depicting activities around language teaching and learning, either in a general way or relating specifically to the EDL. The problem with restricted and selective views of the VLL is that, as our lives increasingly take place online, and when algorithms play a role in delivering content, users cannot have a full knowledge experience. Furthermore, marginalised languages and cultures may not always benefit from tech company algorithms that prioritise commercial interests or other agendas (e.g. Silva & Kenney, 2018). Just as scholarship has played a major role in bringing physical linguistic landscapes to the attention of educators and learners, it too has a role to play in bringing to light the extent of heterogeneity that (potentially) makes up the VLL in which users might find themselves as participants and creators.

As participants in and creators of bottom-up VLLs, educators and learners can also play a role in critically evaluating such spaces. This is especially the case as the online and offline have converged through participatory culture. Moreover, the impact of new media and technologies on learning has been discussed for some time (e.g. Barrot, 2021; Kukulska-Hulme, 2009; Lotherington, 2011; Lotherington & Jenson, 2011; Sauro & Zourou, 2019). In educational environments, local or international websites, to take a Web 1.0 perspective, can be examined for linguistic representation, keeping in mind the audiences they (potentially) reach. Advanced competence in all relevant languages is not required for such an exercise—in common with linguistic landscaping in the physical world, such examinations may increase language awareness and lead to incidental language learning as diverse terms, scripts and sounds are encountered in the virtual semiotic landscape. Equally, in a carefully designed age- and subject-appropriate way, learner groups may select virtual posts from their own (and shared) “affinity spaces” (Gee, 2005) to form a corpus for analysis. Groups

may follow events on social media (as per the present study) or compile a corpus of geotagged posts from the physical LL, such as tourist attractions (Hiippala et al. 2019), to appraise the languages and messages encountered. Imperative to such exercises is that educators also become aware of their own multiliteracy practices and what influences them.

Finally, this study set out with the plea to extend LL research to virtual spaces as they increasingly make up our daily environments—environments that we also have a hand in constructing. Yet, unlike physical LLs, social media VLLs depict highly dynamic and unpredictable ‘in-between’ spaces. To better understand these spaces, researchers must also pay attention to the technical features of the platforms themselves, at times requiring an algorithmic lens for critical evaluation. A critical lens can also be applied within educational environments, as indicated by the rich and varied approaches described in the chapters of this book. Such approaches may be further extended or adapted to include virtual elements that enhance critical thinking and language awareness through ‘real-world’ materials.

References

- Androutsopoulos, J. (2014). Computer-mediated communication and linguistic landscapes. In J. Holmes & K. Hazen (Eds.), *Research methods in sociolinguistics: A practical guide* (pp. 74–90). Wiley.
- Androutsopoulos, J. (2015). Networked multilingualism: Some language practices on Facebook and their implications. *International Journal of Bilingualism*, 19(2), 185–205.
- Barrot, J. S. (2021). Social media as a language learning environment: A systematic review of the literature (2008–2019). *Computer Assisted Language Learning*. <https://doi.org/10.1080/09588221.2021.1883673>
- Barton, D., & Lee, C. (2013). *Language online*. Routledge.
- Ben-Rafael, E., & Ben-Rafael, M. (2019). *Multiple globalizations: Linguistic landscapes in world-cities*. Brill.
- Biró, E. (2018). More than a Facebook share: Exploring virtual linguistic landscape. *Acta Universitatis Sapientiae, Philologica*, 10(2), 181–192.
- boyd, d., Golder, S., & Lotan, G. (2010). Tweet, tweet, retweet: Conversational aspects of retweeting on Twitter. *HICSS-43*, January 6. IEEE: Kauai, Hawaii. <http://www.danah.org/papers/TweetTweetRetweet.pdf>.
- Camp, J., & Chien, Y. T. (2000). The internet as public space. Concepts, issues, and implications in public policy. *Computers and Society*, September 2000, 13–19.
- Herring, S. C. (Ed.). (1996). *Computer-mediated communication: Linguistic, social and cross-cultural perspectives*. John Benjamins.
- Council of Europe. (2001). *The Common European Framework of Reference for Languages: Learning, Teaching, Assessment*. Council of Europe.
- Council of Europe. (1992). *The European Charter for Regional or Minority Languages*. Council of Europe.
- Crystal, D. (2011). *Internet linguistics*. Routledge.
- Crystal, D. (2001). A language revolution: From reluctance to renaissance: <https://www.davidcrystal.com/Files/BooksAndArticles/-4131.pdf>. Retrieved November 2021.
- Deumert, A. (2014). *Sociolinguistics and mobile communication*. Edinburgh University Press.
- Dourish, P. (2016). Algorithms and their others: Algorithmic culture in context. *Big Data and Society*, 3(2), 1–11.

- European Centre for Modern Languages (ECML) (2021). *European Day of Languages, 26 September*: <https://edl.ecml.at>. Retrieved November 2021.
- European Union. (2021). *European Years*. https://european-union.europa.eu/priorities-and-actions/eu-priorities/european-years_en. Retrieved November 2021.
- Eurostat. (2019). *What languages are studied the most in the EU?* <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20190925-1>. Retrieved November 2021.
- Fulcher, G. (2004). Deluded by artifices? The Common European Framework and harmonization. *Language Assessment Quarterly*, 1(4), 253–266.
- Galloway, A. R. (2006). *Gaming: Essays on algorithmic culture*. University of Minnesota Press.
- Gazzola, M. (2006). Managing multilingualism in the European Union: Language policy evaluation for the European Parliament. *Language Policy*, 5, 393–417.
- Gee, J. P. (2005). Semiotic social spaces and affinity spaces: From the age of mythology to today's schools. In D. Barton & K. Tusting (Eds.), *Beyond communities of practice: Language, power and social context* (pp. 214–232). Cambridge University Press.
- Gorter, D. (2006). Further possibilities for linguistic landscape research. In D. Gorter (Ed.), *Linguistic landscape (A new approach to multilingualism)* (pp. 81–89). Multilingual Matters.
- Hiippala, T., Hausmann, A., Tenkanen, H., & Toivonen, T. (2019). Exploring the linguistic landscape of geotagged social media content in urban environments. *Digital Scholarship in the Humanities*, 34(2), 290–309.
- Ivkovic, D., & Lotherington, H. (2009). Multilingualism in cyberspace: Conceptualising the virtual linguistic landscape. *International Journal of Multilingualism*, 6(1), 17–36.
- Jones, E. H. G., & Uribe-Jongbloed, E. (Eds.). (2013). *Social media and minority languages*. Multilingual Matters.
- Keles, U., Yazan, B., & Giles, A. (2020). Turkish-English bilingual content in the virtual linguistic landscape of a university in Turkey: Exclusive de facto language policies. *International Multilingual Research Journal*, 14(1), 1–19.
- Koskinen, K. (2013). Social media and the institutional illusions of EU communication. *International Journal of Applied Linguistics*, 23(1), 80–92.
- Kraus, P. A., & Kazlauskaitė-Gürbüz, R. (2014). Addressing linguistic diversity in the European Union: Strategies and dilemmas. *Ethnicities*, 14(4), 517–538.
- Kress, G. (2010). *Multimodality: A social semiotic approach to contemporary communication*. Routledge.
- Krzyżanowski, M., & Wodak, R. (2011). Political strategies and languages policies: The European Union Lisbon Strategy and its implication for the EU language and multilingualism policy. *Language Policy*, 10, 115–136.
- Kukulka-Hulme, A. (2009). Will mobile learning change language learning? *ReCALL*, 21(2), 157–165.
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology*, 16(1), 23–49.
- Lee, C. (2016). *Multilingualism online*. Routledge.
- Leppänen, S., Kytölä, S., Jousmäki, H., Peuronen, S., & Westinen, E. (2014). Entextualization and resemioticization as resources for identification in social media. In P. Seargeant, P. & C. Tagg (Eds.), *The language of social media. Identity and community on the internet* (pp. 112–136). Palgrave Macmillan.
- Lotherington, H. (2011). *Pedagogy of multiliteracies*. Routledge.
- Lotherington, H., & Jenson, J. (2011). Teaching multimodal and digital literacy in L2 settings: New literacies, new basics, new pedagogies. *Annual Review of Applied Linguistics*, 31, 226–246.
- McCulloch, G. (2019). *Because internet*. Riverhead Books.
- McDermott, P. (2017). Language rights and the Council of Europe: A failed response to a multilingual continent? *Ethnicities*, 17(5), 603–626.
- McMonagle, S., Cunliffe, D., Jongbloed-Faber, L., & Jarvis, P. (2019). What can hashtags tell us about minority languages on Twitter? A comparison of #cymraeg, #frysk and #gaelge. *Journal of Multilingual and Multicultural Development*, 40(1), 32–49.

- International Telecommunications Union. (2020). *Measuring digital development. Facts and figures 2020*. ITU Publications.
- Page, R. (2012). The linguistics of self-branding and micro-celebrity in Twitter: The role of hashtags. *Discourse and Communication*, 6(2), 181–201.
- Phillipson, R. (2003). *English-only Europe?* Routledge.
- Roberge, J., & Seyfert, R. (2016). What are algorithmic cultures? In R. Seyfert & J. Roberge (Eds.), *Algorithmic cultures. Essays on meaning, performance and new technologies* (pp. 1–25). Routledge.
- Sauro, S., & Zourou, K. (2019). What are the digital wilds? *Language Learning and Technology*, 23(1), 1–7.
- Schiffman, H. F. (1996). *Linguistic culture and language policy*. Routledge.
- Seargeant, P., & Tagg, C. (2014). Introduction: The language of social media. In Seargeant, P., & Tagg, C. (Eds.), *The language of social media. Identity and community on the internet* (pp. 1–20). Palgrave Macmillan.
- Silva, S., & Kenney, M. (2018). Algorithms, platforms, and ethnic bias: An integrative essay. *Phylon*, 55(1–2), 9–37.
- Socialtracker. (2021). *Top Twitter users. Most followers*. <https://www.socialtracker.io/toplists/top-100-twitter-users-by-followers/>. Retrieved November 2021.
- Statista. (2021). *Countries with the most Twitter users 2021*. <https://www.statista.com/statistics/242606/number-of-active-twitter-users-in-selected-countries/>. Retrieved November 2021.
- Striphas, T. (2015). Algorithmic culture. *European Journal of Cultural Studies*, 18(4–5), 395–412.
- Twitter. (2021). *Search result FAQs*. <https://help.twitter.com/en/using-twitter/top-search-results-faqs>. Retrieved November 2021.
- Wright, S. (2009). The elephant in the room: Language issues in the European Union. *European Journal of Language Policy*, 1(2), 93–119.

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Conclusion: Linguistic Landscapes in Education—Where Do We Go Now?



Mónica Lourenço and Sílvia Melo-Pfeifer

Abstract This concluding chapter wraps up the main findings of this edited book, from a transversal perspective, and highlights future directions in the studies *of*, *through* and *with* linguistic landscapes. Accordingly, we claim that linguistic landscapes are concomitantly an object, a theoretical and an ethical lens, and a method allowing the study of societal and individual multilingualism in education settings and beyond. Furthermore, studying linguistic landscapes in education and using linguistic landscapes in education can help researchers and practitioners reinvent multilingual pedagogies and regard students' and teachers' repertoires (linguistic, sensorial, semiotic, and spatial) as entangled and embodied.

Keywords Linguistic repertoire · Semiotic repertoire · Spatial repertoire · Translanguaging · Theoretical lens · Ethical lens

1 Introduction

This volume has brought together a number of international researchers in the field of language education and language teacher education. Their perspectives help us frame the current state of integrating linguistic landscapes in the interconnected fields of educational research and practice.

The focus on language teaching and learning through linguistic landscapes allowed us to expand the pedagogical and didactic focus of the study of linguistic landscapes, already announced by Cenoz and Gorter (2008), while at the same time developing connections with more established sociolinguistic *foci*. Teaching and learning with/from the linguistic landscape was particularly visible through the

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analysis of specific pedagogical sequences, where the discussion of linguistic landscapes was the object of classroom interaction in diverse European settings, from primary to secondary education. The studies highlighted how linguistic landscapes can contribute not only to developing knowledge of specific target languages but also to developing transversal competencies that can be reinvested in the learning of different languages (see, for example, Lopéz & Dooly and Kruszynska & Dooly, in this volume). Alongside this more specific potential in terms of linguistic gains, working with linguistic landscapes also showed positive effects in terms of developing personal and social skills, leading students to engage in intergenerational dialogue (see, for example Cadi et al., in this volume). Importantly, the studies revealed the plasticity of linguistic landscapes as a learning object and as a learning tool: firstly, they were integrated both as the subject of the classroom (sometimes included in school projects), therefore becoming the theme students and teachers talked about; secondly, they became the material through which issues such as students' linguistic repertoires were discovered, introduced and discussed (Oyama et al., in this volume).

As the chapters in this volume show, linguistic landscapes can be used as a prompt to introduce multilingual pedagogies in the classroom and as resources to support them. As key elements of the work with linguistic landscapes, we could recall the centrality given to learners' voices and actions, as well as the enhancement of their critical thinking and reflexivity, far beyond the acquisition of declarative knowledge or drill skills (see the chapters included in Part 1). More than the reproduction of knowledge, students were called to produce it, and to engage with means of creating and interpreting knowledge relevant to them. Most of the studies referred to the importance of engaging students as co-ethnographers of their own environments and to bring their newly constructed knowledge to the classroom, the school, and the community (Oyama et al., in this volume; Cadi et al., in this volume). We claim that this role assigned to students can leverage their awareness of their own languages and languages around them, of linguistic injustice, social inequalities and language-based inequalities in education.

At the same time, the volume presented a number of perspectives on initial foreign language teacher education that allowed us to perceive how working with linguistic landscapes can enhance teacher professional development, mainly with regard to the use of situated multilingual pedagogies (see, for instance, Andrade et al., in this volume; Brinkmann & Melo-Pfeifer, in this volume). Teachers referred to the added value of engaging with linguistic landscapes as a way to foster students' participation in the classroom, to make them feel more competent in the treatment of different languages in the otherwise still very monolingual and monoglossic foreign language classroom. In another vein, the volume also stressed the way student teachers and in-service teachers can collaborate to co-create meaning on linguistic landscapes and even challenge research perspectives that they view as distant from their working fields (Araújo e Sá et al., in this volume). Additionally, it becomes visible that further research on the pedagogical and didactic potential of linguistic landscapes in language education, in general, and in minority languages, more particularly,

can gain from a more sustainable collaboration between students, researchers and teachers (Duarte et al., and Gonçalves & Guissemo, in this volume).

The volume already points towards new avenues in the studies of linguistic landscapes and how they can enrich the field of language education and language teacher education, adding to the arguments already mapped in the Introduction. Authors reflected on new perspectives such as material culture (Aronin et al., in this volume), sensescapes (Prada, in this volume) and digital linguistic landscapes (McMonagle, in this volume) as new fields of research and pedagogical use, thus connecting senses, the materiality of multilingualism, and the digital practices of teachers and students, framing them as promising research objects and lenses to the field of linguistic landscapes. Nevertheless, as a volume ends, new perspectives emerge and lenses are sharpened to imagine new research fields and pedagogical practices around the use of linguistic landscapes in language and teacher education. Some of the topics we will introduce in the next section are not new *per se* and were, in some cases, already present in some contributions. Still, we feel that more focused attention or more specific treatment in the field of language and teacher education is needed.

2 Linguistic Landscapes as a *Theoretical Lens*

Theoretical is a neologism introduced by Melo-Pfeifer and Chick (2020), which merges the words “theoretical” and “ethical” to identify concepts and perspectives that imply a positive, affirming, empowering, and celebratory attitude towards linguistic and cultural repertoires and experiences. In this section, we claim that linguistic landscapes can be a “theoretical” concept, meaning both a lens to engage with and challenge theoretical developments in the research on individual and societal multilingualism, and a lens to cover and analyse pressing and interdisciplinary issues in education. Despite the intermingled character we want to convey to theory and ethics, we present some possible developments in the area of linguistic landscapes by accentuating one or the other in the two subsections that follow.

2.1 *Linguistic Landscapes as a Theoretical Lens*

An issue that deserves more attention in the field is definitely the way in which linguistic landscapes, encompassing more than words and languages, can help us conceptualize “translanguaging” in language education. Stating this research need is not an innocent utterance: it serves to underline that translanguaging is not reduced to the use of linguistic repertoires. This might come as a surprise to our readers as they might be used to associate translanguaging with the holistic use of linguistic resources by an individual. Nevertheless, if we consider the seminal work of Garcia and Li Wei (2014), translanguaging is about the use of the whole repertoire of semiotic resources, thus meaning the assemblage of all sense makers and sense containers in

one's repertoire. Repertoires, from this perspective, should not be limited to linguistic ones, but embrace multimodality. Stretching this idea even further, repertoires should embrace multisensoriality (Pennycook & Otsuji, 2015; Prada, in this volume), if we shift the attention from an etic to an emic perspective that places the individual at the centre of the research on understanding, meaning making and meaning co-construction.

We could thus argue that the studies on translanguaging and the expansion of this concept go hand in hand with the evolutions observed in the studies on linguistic landscapes (and also on literacy): already in the introduction to this volume, we noticed how studies on linguistic landscapes abandoned a purely linguistic perspective to embrace more holistic views of semiosis and multimodality. These conceptual evolutions, both on translanguaging and linguistic landscapes, challenge a glottocentric perspective on researchers' analysis of both phenomena and position embodiment and emplacement at the centre of individuals' perception and interpretation of social spaces. This more unified perspective of individual's repertoires (spacial, linguistic, multimodal, material, and sensorial; see Mills, 2016) can be well apprehended by the metaphors "semiotic assemblages" (Pennycook, 2019), "unified entanglement" (Sherris & Adami, 2019, chapter 1), "multisensory assemblage" (Pennycook, 2022), and even "osmose" (Prada & Melo-Pfeifer, forthcoming). Altogether, these point towards a comprehension of human activity as not merely cognitive, not merely mediated by languages, and not merely dependent on the individual. They rather focus on the way languages, senses, semiotic material, and spatial repertoires frame and provide affordances to processes of meaning-making, which are always situated. Using the osmose metaphor, Prada and Melo-Pfeifer (forthcoming) explain that not all translanguaging processes, in a theory of language, make use of all the repertoires at the same level: even if translanguaging is multidetermined, individuals interpret the saliency of each meaning-maker in the *hic et nunc* of the situation and make use of them according to their needs and goals. Nevertheless, studies on the field of literacy, as in the fields of translanguaging and linguistic landscapes, are still mostly dominated by the visual and by words (Mills, 2016).

Transferred into the field of linguistic landscapes, translanguaging allows us to define linguistic landscapes as multilayered and made of different meaning makers, these being apprehended individually by using linguistic, sensorial, spatial, or/and semiotic repertoires. As perception takes place in time and space, this could also entail that the same linguistic landscape and the same linguistic landscape item can be perceived differently by individuals in different times and spaces. This might occur because different languages and senses, for example, lose or gain protagonism according to how individuals use and combine their repertoires, or because different *stimuli* become salient, redundant or meaningless. It can also occur because individuals acquired more knowledge (political, historical, etc.) to interpret the signs around them. Individuals make use of different repertoires, combining them in a way that is meaningful to them according to the situation: they translanguage to co-create meaning and interact *in* and *with* a specific "scenario".

It can thus be postulated that analysing linguistic landscapes from a translanguaging perspective entails much more than identifying and counting languages, much more than analysing linguistic and semiotic patterns: this etic perspective can be enriched by an emic perspective that places the individual at the centre of the research, cognitively, emotionally, and physically. On the other hand, analysing translanguaging using linguistic landscapes brings the full range of repertoires to the forefront of the research, thus challenging logocentric perspectives on translanguaging. Taken together, this more ecological view of both translanguaging and linguistic landscapes decenters visibility and language in both research fields and calls for a diversification of research methods. And together, even if they take a language-centred approach, they make it clear how difficult it might be to even identify the languages at play, thus contributing to a more fluid perception of language and languaging, both at the individual and societal level. Accordingly, linguistic landscapes and translanguaging can be thought of as research objects that are more individually apprehended through phenomenological stances, i.e., “a perspective that privileges how individuals interact with the LL (and the non-linguistic dimensions that frame it) through their own means, utilising their own resources and repertoires, which change and flow, and which inform (and are informed by) individual historical formations and socio-cognitive affordances” (Prada, in this volume).

In terms of relevance for language and teacher education, understanding linguistic landscapes as a multisensorial entanglement needing a broader perspective of translanguaging to be apprehended could be useful both as means to read linguistic landscapes and as a goal of working with linguistic landscapes. Melo-Pfeifer and Araújo e Sá (2018) make the case that translanguaging should be conceived both as a tool to learn (“translanguaging to learn”) and a goal from learning (“learning to translanguaging”). As a tool to learn, the authors point out that translanguaging “becomes a means of performing multilingually” (p. 875); as a goal, translanguaging “allows the multilingual subject to present themselves as a life-long learner, as each newly learnt item can be (...) reused in forthcoming communicative events” (p. 876). Such a perspective highlights the potential of linguistic landscapes for acquiring and using “bits of languages” (Blommaert, 2010) and other communicative resources, which become reinvested in language learning and communicative situations.

2.2 *Linguistic Landscapes as an Ethical Lens*

A second issue that was highlighted in this volume and, from our point of view, deserves broader attention from both research and practice is the use of linguistic landscapes as a lens to cover and analyse pressing and interdisciplinary (societal) issues in education.

If we look at our world today, we realise how important it is to educate learners to overcome linguistic and cultural boundaries, to think critically, to collaborate and be creative, thus coping with the challenges but also benefiting from the opportunities that a globalised, multicultural and interdependent space creates. Schools are not (or should not be) isolated bubbles, detached from the world outside, but instead claim their role as spaces where issues of sustainable development, global citizenship, or social (in)justice are critically discussed and acted upon (see Jucker & Mathar, 2015 on the role of school in an education for sustainable development). More than enacting a socialising purpose, schools should be oriented, as Biesta (2009 and 2020) claims, towards “subjectification”, impacting on learners as individuals through enhancing their competencies and their freedom to “to act in and with the world in a ‘grown-up’ way” (Biesta, 2020, p. 89), i.e., in a non-*egological* way of existing and leading one’s life.

The language classroom has long been identified as a privileged space to discuss social issues and to help learners build an internal learning compass that will allow them to make informed and ethical decisions in the future. Languages are not mere communication tools, but valuable means to learn about oneself and about others, as well as to interact with the social world, other cultures and worldviews. As research highlights, language education may promote learners’ respect for diversity and foster their social responsiveness, thus contributing to democratic intercultural citizenship (Byram & Wagner, 2018; Porto & Byram, 2015) and global citizenship (Lourenço & Simões, 2021; Tarozzi & Torres, 2016).

In a seminal article on critical approaches to teaching and learning English as a foreign language, Pennycook (1999) put forward the notion of a “pedagogy of engagement”, signalling how these approaches have come to focus not only on identifying situations of inequality, discrimination, resistance and struggle, but also on transforming these conditions. More recently, Laadegard and Phipps (2020) reignited the debate by emphasising the need for researchers to move away from *talking about* intercultural issues and social injustice to *doing* intercultural communication and promoting a social justice agenda. These examples and similar ones from recent research seem to suggest that we are witnessing an “ethical turn” or, at least, an “ethical revival” in language education studies. This revival calls for a *renaissance* of the critical and transformative approaches of the 1960s and 1970s, for the integration of pedagogy and research with current social and political issues, and for getting students, teachers and researchers actively involved in advocacy work.

Research on linguistic landscapes has not been immune to these calls. When analysing the expansion of the field, Shohamy and Pennycook (2022) alert to the relevance that the pedagogical action focused on the development of student activism has taken in the literature. Research in this volume and elsewhere has also underlined the pedagogical potential of linguistic landscapes in the development of active and committed participation, focused on social transformation. Most studies place linguistic landscapes within a broader framework of globalisation, diversity and social justice, in which the emphasis is on inequalities in the public space (Gorter & Cenoz, 2020) or hierarchies expressed in the unequal representation of communities in a given social context (Gorter, 2013). The aim is often to change students’

(and teachers’) views of languages and representations of a given community and to foster the development of critical thinking in relation to existing hierarchies (see, for instance, Duarte, Veenstra & van Dijk, in this volume).

Other studies in this volume emphasise students’ agency in changing situations of social and linguistic inequality through their ability to reconstruct the linguistic landscape. Some of the modules developed by the LoCALL project teams in five European countries (available in <https://locallproject.eu/resources>) suggest that the linguistic landscape can act as a resource to make students aware of their role in the reconstruction of more inclusive and sustainable cities, either through drawing their “imagined” linguistic landscape or by creating and displaying multilingual stickers about causes close to their hearts (see, Lourenço et al., in this volume).

Pervasive to all studies is an understanding of the potential that the exploration of linguistic landscapes can have in casting light on linguistic (in)visibility and (in)equity, in particular at a micro level. Indeed, linguistic landscapes may help students identify and come to terms with their own plurilingual repertoires and the ones of others, while simultaneously helping teachers to recognise and value linguistic and cultural diversity as an asset. This is fundamental to promote inclusion inside the classroom. Moreover, linguistic landscapes can cater for the inclusion of people with different embodied repertoires, if we consider that the linguistic landscape is not only visual but can also be tactile, as Braille (see the previous point on multisensoriality). In this respect, linguistic landscapes transcend ocularcentrism, departing from the assumption that it is something that is read, with the eyes, and meant only for those who can see or read (Prada, in this volume).

All in all, the literature suggests that linguistic landscapes can function as an ethical tool that can help students (and teachers) become more aware of social and linguistic injustices and transform them into language policy agents committed to making their communities, schools and classrooms more inclusive spaces (Lourenço & Melo-Pfeifer, forthcoming).

3 Further Perspectives

In this section, we put forward future perspectives for research and practice on and about linguistic landscapes, focusing on epistemological, pedagogical and teacher education issues and drawing on the work brought together in this volume.

3.1 On Research

In the field of research, if we embrace a more encompassing perspective of what linguistic landscapes are, it seems essential to follow some of these aims:

- describe and analyse how spatialised, linguistic, semiotic, and sensorial repertoires combine to co-construct the meaning of the linguistic landscape; we hypothesise that their combination constructs meaning that can not be reduced to the one constructed by each repertoire taken separately (the same space apprehended through sight, hearing or smell, by foot or in a wheelchair, for example). From this perspective, the combination of repertoires (in the sense of osmose already evoked) creates a multisemiotic third space (a metaphor inspired by Bhabha, 2004), something intrinsically new and unique to each individual and to each individual in his/her encounter with a specific linguistic landscape;
- expand the languages that constitute the object of analysis, by understanding how individuals produce, react to, and interact with multimodal and multisensorial languages (such as Braille) in the linguistic landscapes, thus exploring issues of inclusion and equity in the access to information in the public spaces, at large, and in educational spaces, more specifically;
- adopt a spatialised perspective on linguistic landscapes that takes the senses and the body as participating (if not central) in the interpretation of the linguistic landscape. This would allow researchers to tackle issues related to the accessibility of linguistic landscapes by people with reduced mobility (using wheelchairs, for example) or with some physical conditions or sensory disabilities;
- analyse the accessibility of linguistic and semiotic landscapes for children at school or in kindergarten, when children are framed as the intended audience of the signs;
- analyse raciolinguistic, sexist and misogynist ideologies in the linguistic landscape, in general, and in educational scenarios, more specifically. In education, the linguistic landscape of textbooks of different school subjects would be a possible way to tackle this research field helping students and teachers understand that signs are not neutral but (re/de)construct ideologies in public spaces;
- understand if and how students participate in the co-construction of the linguistic landscapes of their learning spaces (at school and in the classroom, at home, in libraries, in museums, etc.), how they transgress imposed top-down linguistic landscapes in their learning environments, and how they dialogue with them, through languages and materialities (for example, stickers or scratching). Such a perspective would add to the important literature focusing on authorship in the linguistic landscape.

3.2 On Classroom Pedagogies

In the field of pedagogical practice, if we want to promote students' critical language awareness, foster their participatory agency and support them in developing an ethical perspective aligned with the principles of respect and social justice, it seems important to consider the following aspects when integrating linguistic landscapes either as a theme or as a tool in the classroom:

- engage students as co-ethnographers of their own environments and provide them with relevant opportunities to bring their own knowledge and “lifeworlds” into the classroom. This can be carried out, for instance, as a project work where students are invited to discover the languages that “live” in their houses (see López & Dooly, in this volume);
- promote a working environment that allows students to voice their own opinion and to reflect about (and value) their (plurilingual) identity and the one of others. Inviting the students’ parents or grandparents to tell the story of their family and of their languages can be a possibility (see Cadi et al., in this volume);
- develop projects of an interdisciplinary nature that bring together different school subjects (History, Geography and Arts) to support students in making connections between curriculum content;
- foster students’ ability to connect indoor and outdoor learning (and vice versa) by engaging them and their parents for a walk through the city’s linguistic landscape where they can learn about the world (and the curriculum) through languages;
- bring creative resources and hands on approaches into the classroom to explore linguistic landscapes with the students, such as making collages, writing poems, making stickers, or using apps, such as the LoCALL App, which may promote student motivation, collaboration and autonomy (see Marques et al., in this volume);
- use linguistic landscapes to introduce pressing (glocal) societal issues, such as migration, poverty, inequality, discrimination, and sustainable development. It is possible, for instance, to link linguistic landscapes with the SDGs (Sustainable Development Goals) namely with SDG10—reduced inequalities, SDG11—sustainable cities and communities, or SDG16—peace, justice and strong institutions;
- use linguistic landscapes as a tool to allow students to detect situations of social and linguistic injustice and (re)consider their role in changing those situations, contributing to more inclusive and sustainable communities;
- collaborate with non-formal education contexts, such as NGOs, civil society organisations, welcoming (refugee) centers, etc., to discover other ways of looking at the city(’s linguistic landscape) and designing more appropriate and meaningful solutions to the issues affecting the community;
- integrate linguistic landscapes across the school curriculum, including also adult education, where learners can be actively involved in mapping, reflecting about, and acting upon the linguistic landscape within citizen science and service learning approaches.

3.3 On Teacher Education

Research bridging linguistic landscapes and teacher education is still scarce, despite some laudable work carried out with pre-service language teachers (see, for instance, Hancock, 2012). Studies show how exploring linguistic landscapes can help teachers

become more aware of linguistic diversity in the schools they will teach; recognise their students' plurilingual repertoires and cultural backgrounds; develop critical language awareness towards issues of linguistic (in)equity; and (re)consider their teaching role (see Andrade et al., Araújo e Sá et al. and Brinkmann & Melo-Pfeifer, in this volume). Given the relevance of these results, we anticipate that research in this field will continue to grow. Future research might focus on the following issues:

- explore how working with linguistic landscapes can contribute to promoting teachers' professional development, considering not only the domains of professional knowledge and pedagogical practice, but also the domain of professional identity (i.e. beliefs, values and commitment teachers hold toward being a teacher);
- analyse the contribution of linguistic landscapes in shaping teachers' awareness of their ethical and political role in a world of superdiversity and their ability to become agents of change in their own communities;
- focus on in-service teachers of different subjects and on the "spaces" they find in the curriculum to integrate linguistic landscapes;
- investigate the themes and issues that teachers approach while exploring linguistic landscapes and the challenges they face, for instance, in what concerns classroom interaction management, design of appropriate material, or dealing with monolingual ideologies;
- conduct studies of comparative and international nature involving teachers in different countries to explore how they integrate linguistic landscapes in different contexts, according to their sociolinguistic and curricular realities;
- (micro)analyse classroom interaction to investigate how language awareness, critical literacies, and beliefs about languages, speakers, and societies emerge during the work with linguistic landscapes and how they are collaboratively negotiated (accepted, challenged, or refuted).

Concerning the practice of teacher education, it seems important to:

- integrate multilingual pedagogies in teacher education programmes, so that teachers feel prepared to promote practices that are more inclusive and respectful of the (multilingual, sensorial and other repertoires of) their students;
- link linguistic landscapes with societal issues and concerns, such as intercultural dialogue, (global) citizenship, sustainable development, peace and conflict, or social justice, in teacher education programs;
- invite teachers to explore and question their own values and assumptions about (as well as their attitudes towards) languages and diversity;
- stimulate teachers' reflection about the ethical and political dimensions of their own practices, specifically, and about language education, in general;
- provide opportunities for teachers to experiment with linguistic landscapes, designing, implementing and evaluating pedagogical activities with their students within an action-research approach;
- support teachers (of all subjects) to integrate linguistic landscapes in the curriculum, by promoting their autonomy as curriculum managers;

- invest in continuing professional development to support teachers in integrating and promoting multilingual pedagogies, in general, and linguistic landscapes, in particular;
- develop communities of practice involving pre-service and in-service teachers (as well as researchers) to share their experiences (the challenges but also the opportunities of) integrating linguistic landscapes in the classroom.

4 Concluding Remarks

As in other (emergent) research fields, researchers are cautious about “conceptual stretching” (Collier & Gerring, 2009, p. 16), pursuing a balance between ways to bring their research fields further without decharacterising them. Viewing concepts from a too narrow perspective can hinder the evolution of a research field, by limiting the questions being asked or the researchers being included in a dialogue; expanding them to all-encompassing ones can also be dangerous, as it might lead to a loosed community of researchers, to lack of specificity in the research field (in the definition of new research questions, for example), and to ambiguous data gathering. As explained by Collier and Gerring (2009), concepts are not only elements of a theoretical system, but likewise tools for fact-gathering, serving as data containers (p. 36). Our perspective is that the widening of the concept allows for the apprehension of a diversity of researchers’ points of view and contributes to the evolution of the research field, having a multiplier effect at the level of study objects and work methodologies.

In this conclusion and in line with the chapters of the volume, two main stretchings were addressed, even if they are not equally new to the field of linguistic landscapes. One, of pedagogical nature, is related to the use of linguistic landscapes in the classroom (predominantly in foreign languages) and in teacher education programs. It was the intention of the editor and authors to provide further evidence sustaining multilingual teacher education and multilingual pedagogies at school through the use of linguistic landscapes. A second stretching, this time more conceptual, is related to the understanding of linguistic landscapes at the intersection of languages, signs, and senses, combined in time and space. Such a conceptual stretching adapted to education fields, we claim, may contribute to more holistic visions of communication, decentering the role of languages, taken isolatedly (monoglossic stance) and separated from other meaning-makers (glottocentric stance). This more holistic perspective has the potential to enrich classroom activities around the perception of communication in a foreign language or in different languages simultaneously, and around the strategies and repertoires students can use in different situations to co-construct meaning in multilingual and intercultural encounters.

Taken together, these stretchings might contribute to a more critical, inclusive, and holistic perspective on (language and teacher) education. They might contribute to thinking about how inequalities in education are constructed through and beyond

languages and reimagine multilingual pedagogies that embrace students as a whole, not limited to their linguistic repertoires. Where do we (want to) go now?

References

- Bhabha, H. (2004). *The location of culture*. Routledge.
- Biesta, G. (2009). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability*, 21(1), 33–46. <https://doi.org/10.1007/s11092-008-9064-9>
- Biesta, G. (2020). Risking ourselves in education: Qualification, socialization, and subjectification revisited. *Educational Theory*, 70(1), 89–104. <https://doi.org/10.1111/edth.12411>
- Blommaert, J. (2010). *The sociolinguistics of globalization*. Cambridge University Press.
- Byram, M., & Wagner, M. (2018). Making a difference: Language teaching for intercultural and international dialogue. *Foreign Language Annals*, 51(1), 140–151. <https://doi.org/10.1111/flan.12319>
- Cenoz, J., & Gorter, D. (2008). The linguistic landscape as an additional source of input in second language acquisition. *IRAL*, 46, 267–287.
- Collier, D., & Gerring, J. (Eds.). (2009). *Concepts and method in social science. The tradition of Giovanni Sartori*. Routledge.
- García, O., & Wei, L. (2014). *Translanguaging. Language, bilingualism, and education*. Hampshire: Palgrave Macmillan.
- Gorter, D. (2013). Linguistic landscapes in a multilingual world. *Annual Review of Applied Linguistics*, 33, 190–212. <https://doi.org/10.1017/S0267190513000020>
- Gorter, D., & Cenoz, J. (2020). Theoretical development of linguistic landscape studies. *Linguistic Landscape*, 6(1), 16–22. <https://doi.org/10.1075/ll.00020.gor>
- Hancock, A. (2012). Capturing the linguistic landscape of Edinburgh: A pedagogical tool to investigate student teachers' understandings of cultural and linguistic diversity. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (Eds.), *Linguistic landscapes, multilingualism and social change* (pp. 249–266). Peter Lang.
- Jucker, R., & Mathar, R. (Eds.). (2015). *Schooling for sustainable development in Europe*. Springer.
- Ladegaard, H. J., & Phipps, A. (2020). Intercultural research and social activism. *Language and Intercultural Communication*, 20(2), 67–80. <https://doi.org/10.1080/14708477.2020.1729786>
- Lourenço, M., & Simões, A. R. (2021). Teaching and learning for global citizenship in the EFL classroom – towards a pedagogical framework. In S. Saúde, M. A. Raposo, N. Pereira & A. I. Rodrigues (Eds.), *Teaching and learning practices that promote sustainable development and active citizenship* (pp. 86–106). IGI Global.
- Lourenço, M., & Melo-Pfeifer, S. (2022). A paisagem linguística: uma ferramenta pedagógica no âmbito de uma educação plurilingue e para a cidadania global [The linguistic landscape: a pedagogical tool for plurilingual and global citizenship education]. *Diacrítica* (Special issue “Ensino/aprendizagem e aquisição de línguas estrangeiras – interconexões”). <http://diacritica.ilch.uminho.pt/index.php/dia/index>
- Melo-Pfeifer, S., & Chik, A. (2020). Multimodal linguistic biographies of prospective foreign language teachers in Germany: reconstructing beliefs about languages and multilingual language learning in initial teacher education. *International Journal of Multilingualism*. [Ahead of print] <https://doi.org/10.1080/14790718.2020.1753748>
- Melo-Pfeifer, S., & Araújo e Sá, M. H. (2018). Multilingual interaction in chat rooms: Translanguaging to learn and learning to translanguaging. *International Journal of Bilingual Education and Bilingualism*, 21(7), 867–880. <https://doi.org/10.1080/13670050.2018.1452895>
- Mills, K. (2016). *Literacy theories for the digital age. Social, critical, multimodal, spatial, material and sensory lenses*. Multilingual Matters.

- Pennycook, A. (1999). Introduction: Critical approaches to TESOL. *TESOL Quarterly*, 33(3), 329. <https://doi.org/10.2307/3587668>
- Pennycook, A., & Otsuji, E. (2015). Making scents of the landscape. *Linguistic Landscape*, 1(3), 191–212. <https://doi.org/10.1075/ll.1.3.01pen>
- Pennycook, A. (2019). Linguistic landscapes and semiotic assemblages. In M. Pütz & N. Mundt (Eds.), *Expanding the linguistic landscape. Linguistic diversity, multimodality and the use of space as a semiotic resource* (pp. 75–88). Multilingual Matters. <https://doi.org/10.21832/9781788922166-007>
- Pennycook, A. (2022). Street art assemblages. *Social Semiotics*. [Ahead of print] <https://doi.org/10.1080/10350330.2022.2114731>
- Porto, M., & Byram, M. (2015). A curriculum for action in the community and intercultural citizenship in higher education. *Language, Culture and Curriculum*, 28(3), 226–242. <https://doi.org/10.1080/07908318.2015.1087555>
- Prada, J., & Melo-Pfeifer, S. (forthcoming). The sense-appeal of translanguaging: the role and nature of sensoriality in meaning-making. *Journal of Multilingual and Multicultural Development*.
- Sherris, A., & Adami, E. (Eds.). (2019). *Making signs, translanguaging ethnographies*. Multilingual Matters.
- Shohamy, E., & Pennycook, A. (2022). Language, pedagogy, and active participant engagement: Gaze in the multilingual landscape. In R. Blackwood & U. Rønynland (Eds.), *Spaces of multilingualism* (pp. 31–47). Routledge.
- Tarozzi, M., & Torres, C. A. (2016). *Global citizenship education and the crises of multiculturalism*. Bloomsbury.

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