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Ethnolinguistic Vitality in Minority Schoolscape

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Abstract: School is often said to be a representation of society because its primary aim is to promote integration into society. This study of the landscape elements of minority language schools suggests that this type of linguistic landscape may not only reflect a change in linguistic dominance but can also play a complementary role compared to the external, out-of-school world. In this paper, the authors attempt to explore a new way of interpreting the notion of the linguistic landscape of schools. The novelty of this approach lies in the application of a spatial theoretical concept, where the schoolscape is defined as an element of autopoietic space—a self-constituting spatial element. Within this autopoietic framework, markers of ethnolinguistic vitality in the linguistic landscape of minority language schools are identified, and a set of criteria is established that can be applied to other communities. The conclusions are drawn from a comparative analysis of the linguistic landscapes of Hungarian-medium schools in Romania, Slovakia, and Slovenia.

Keywords: linguistic schoolscape; minority schools; ethnolinguistic vitality; autopoiesis

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1. Introduction

In our study, we define the concept and functions of the schoolscape, outline the theoretical framework applied in our analysis, and describe the methods and analysis of the research we conducted. An attempt is made to analyze the schoolscape based on a comparative study, interpreting the spatial understanding of language use of schoolscape within a new theoretical framework—the autopoietic approach.

Our hypothesis is that this theoretical approach provides an opportunity to map the unique elements of minority language educational environments operating across different contexts. In this interpretive framework, the specific nature of the schoolscape created in a minority environment can be demonstrated, and the concept of ethnolinguistic vitality can be enriched with new aspects.

1.1. Linguistic Landscape in Space and Time

The sociocultural importance of the study of linguistic landscape (LL) is best illustrated by the broadening of the meaning of the term since one of the first definitions of the term (Landry and Bourhis 1997, p. 25). Not only has the number of studies on the subject grown exponentially (Baur 2015), but a number of new terms have emerged that illustrate the diverse and ever-expanding possibilities of linguistic landscape research. The frequency of new terms (concepts and phrases) that can be traced back to the concept of linguistic landscape is a meta-linguistic reflection of the specialization of research in this field, as illustrated by a few examples: cityscape (Malinowski 2010), streetscape (Coupland 2010), ruralscapes (Muth 2015), semioscape, (Jaworski and Thurlow 2010), soundscape (Lamarre 2014), linguascape, graffscapes (Pennycook 2010), and cyberlandscape (Ivkovic and Lotherington 2009), etc.

The notion of visual language use is defined along the coordinates of physical and social space so that we can speak of both static and dynamic meanings. In a narrower sense, LL is defined by Landry and Bourhis (1997) as the use of visual language in public space. In a broader sense, the linguistic landscape is a multifaceted and complex concept, in that it involves a process of meaning-making, as it encompasses the discovery and creation of visible (visualized) and invisible (non-visualized, iceberg text) meanings, which can only be created in the context of space (Shohamy and Waksman 2009). On the other hand, the complexity of the concept is also demonstrated by the fact that the spaces created by the linguistic landscape can be multilingual and/or multimodal, with many other external factors taking place in the spatial experience (Yi-Fu Tuan 1977); e.g., sounds, music, smells, buildings, history, etc., include images, words, in one or multiple languages and mixed languages, hybrids and fusions (Shohamy and Waksman 2009, p. 314). In this way, the linguistic landscape can be used to describe the "oral and written linguistic practices of an individual and community" (Szabó et al. 2023, p. 199). Based on this, the linguistic landscape is always the manifestation of linguistic behavior (Gorter and Cenoz 2015). In our research context, we use term linguistic landscape from the perspective of the speaker and hearer (Jaworski and Thurlow 2010; Scollon and Scollon 2003), which synthesizes or represents a form of language behavior, visualization of certain language policies, language attitudes, and language use in general (see also Shohamy 2015).

1.2. The Schoolscape and Its Functions

The linguistic landscape applied in educational settings, named schoolscape, is a term used by Brown (2008, 2012) to denote visual language use in educational settings. In this context, schoolscape means "the visual and spatial organization of educational spaces, with special emphasis on inscriptions, images and the arrangement of the furniture" (Szabó 2015, p. 24), and in broader sense also the written, printed, digital or multimedia texts, manufactured and visualized materials, as individual and collective language practices and their socio-affective and educational tools and meanings. The characteristics of the school communication space are shaped by the communicative characteristics and specific functions of the place: didactic, organized, targeted communication situations dominate, and spontaneous, humorous, informal speech situations are also present, i.e., the language's function as a language of instruction and its interpersonal communicative role are present at the same time (Canagarajah 2018, cited in Szabó et al. 2023, p. 200).

This shows that the methodology of investigating schoolscape involves in most cases both quantitative, qualitative, mixed research designs, statistics and ethnographic, describing and participatory approaches at the same time. The dynamics of a school space (the sense of the place) are shaped by the triangle of student, teacher, and didactic goal, with the parents and direct social factors in the background (Szabó and Troyer 2020).

1.3. Topics in Schoolscape Research

The analysis of the linguistic landscape in schools allows for a multi-faceted approach. With a synchronic and diachronic analysis of the school linguistic landscape (cf. Gorter et al. 2012; Gorter 2017; Dressler 2015), we can gain an overview of the dynamic relationship between the school and its linguistic environment, between language use and the official language policy. In that context, the schoolscape can reflect a change in language dominance synchronically (Brown 2008) or even diachronically (Csernicskó and Laihonen 2016), as well as provide an up-to-date picture of minoritized languages, the status of languages, silenced and/or rejected languages (cf. Szabó et al. 2023 about Romani language use), or of languages in the course of revitalization (Laihonen 2015; Jakonen et al. 2018). The school context may also reveal the correlation between language ideologies and language behavior (Laihonen and Szabó 2017). Schoolscape analyses can offer insights into the organizational culture based on the premise that the schoolscape reflects the institution's hidden curriculum, including the transmission of norms, values, and beliefs communicated in the educational institution (Brown 2008; Tódor 2014; Szabó 2018).

It is important to emphasize, however, that when examining the internal and external dimensions of the linguistic landscape of schools, their interpretation is always context-dependent, and the socio-cultural historicity of language is essential to unravel their meaning.

The investigation of schoolscapes is also relevant for their pedagogical dimensions, because it reflects, in their indoor and outdoor context, the variety of classroom settings, educational practices, preferences for methods and procedures. As has been pointed out by Laihonen and Szabó (2017), it plays an important role in the visual socialization of individuals and may provide a motivating learning context, and "opening spaces of learning" (Malinowski 2015) for a stimulating language-learning experience (Szabó et al. 2023). The literature offers a lot of examples of how the school can provide possibilities for students to experience language diversity (Gorter and Cenoz 2015) in order to develop their resources for meaning-making and their critical thinking. Creating and analyzing the school's linguistic landscape might help in building and practicing functional language (Malinowski 2015), and in developing students' pragmatic competences and multicompetence because interpreting visual signs/engaging in visual communication involves both visual and verbal stimuli. This means, therefore, a symbolic, geo-semiotic meaning construction. The use of the educational value of schoolscape can be the aim and the tool of education (Gorter 2017). The pedagogical potential of LL in the schools was emphasized by Brinkmann and Melo-Pfeifer (2023) in developing affective and cognitive dimensions of language awareness, mediating texts, communication (Duarte et al. 2023), and LL can bridge the gap between the worlds in and outside the classroom.

These possibilities should be considered latent, potential possibilities; so, the above does not prove, with biased pedagogical optimism, that linguistic landscape elements can be used for everything, as it has also been proven that the quantity of landscape elements is not directly proportional to the effectiveness of the educational process in a given context (Biró 2016). It represents a dimension of linguistic existence that expresses place-identity and is both a field of action and a basis for action.

Gorter and Cenoz's (2015) study of the linguistic landscape was conducted in schools in the Basque Country, where three languages—Basque, Spanish and English, and in a few schools also French or German—were taught and used, and concluded that, in this environment, the LL units had informative and symbolic functions. The authors established the following categories in the formal learning context: (1) teaching languages and subject content; (2) classroom management; (3) school management; (4) teaching values; (5) development intercultural awareness; (6) promotion of the Basque language; (7) announcing collective events; (8) provision of commercial information; and (9) decoration. Tódor (2019) examined similar issues in minority school setting, in the context of Hungarian schools in Romania. In this school context, teachers felt that it was important to include the following elements in the school space: displaying rules and norms and reinforcing compliance with them; tools to support learning; student work and achievements; the school's name; everything that is beautiful and useful; and the presentation of local values. The data reflect that, from the teachers' perspective, linguistic landscape elements fulfil the following functions: (a) regulatory, organizing; (b) learning support; (c) reflective, supporting external communication; (e) aesthetic and utilitarian; (f) symbolic (function of displaying values, local identity, regional values). On the other hand, the author's study also revealed that not all teachers feel the need or feel it is their task to arrange linguistic landscape elements.

2. Theoretical Background

According to Lefebvre's (1991) approach, spaces are always carriers of meaning: "space is never empty: it always embodies a meaning" (1991, p. 154), since it can be understood as a social product. The precondition of space is the presence, action and discourse, competence and performance of the subject. Lefebvre described the social place dimensions as the spatial place, the representations of space and the representational spaces and their individual and collective form of being.

A given community must clearly define the specific characteristics that set it apart from the surrounding ethnic groups, and it is important that it wishes to retain these characteristics, which are indicators of the ethnolinguistic vitality of the given community. We assume that the quantity and quality of the language signs appearing in the linguistic landscape are directly proportional to the community's ethnolinguistic viability in a given area. A further starting point of our analysis of the landscape elements of minority language schools suggests that linguistic landscape may not only reflect a change in linguistic dominance but may also have a complementary role. For supporting the above statement, we refer to the work of Laihonen and Tódor (2017) in a Hungarian minority school in Romania, who demonstrate that a process of re-Hungarization can be detected in the schoolscapes after the 1989 revolution. In this case, the local culture and minority language, which had been sidelined, ignored and invisible until then, became strongly present in the linguistic and symbolic use of space. In this way, the linguistic landscape of the school has given rise to the construction of a linguistic world in which minoritized languages can become dominant, thus reinforcing the status of the language and the powerful use of minoritized languages in the everyday environment. We can see that the schoolscape can have a transformative role from the point of view of language use; it offers the possibility of creating a complementary linguistic world, reorganizing the external environment from within.

In order to grasp as precisely as possible the mechanisms of functioning of the schoolscapes in minority settings, we want to invoke the meaning of a spatial concept, which is essentially the concept of *autopoiesis*, a Greek origin word adapted from biology. Our hypothesis is that, building on the excellent descriptions of Luhmann (2006); Faragó (2017) and others, the concept used to describe the dynamics of spaces can be applied to the linguistic landscape of schools as a subset of space and its visual language use. Based on its etymological meaning, the term autopoiesis is perhaps most accurately defined as self-creation. Its spatial–temporal meaning is an internally directed and controlled emergent operational form in which resilience, opportunism, and value choice are present, a self-generating series of activities based on the interpretation of external influences, a process of survival and the achievement of one's own goals. Our hypothesis is that the linguistic landscape of the minority language schools under study cannot be merely seen as a response to the external environment but rather as an autopoietic space component unit. The schoolscape can therefore be understood as a self-generating and renewing adaptive use of visual language. This model can be used to illustrate how a school's linguistic landscape functions within a broader external linguistic environment. As a result, studying the linguistic landscape becomes central to both the synchronic and diachronic analysis of linguistic behavior and phenomena since the school's linguistic landscape reflects the internal mechanisms that shape "what and how the system adopts from its environment" (Faragó 2017, p. 18).

Our research focuses on the linguistic landscape of autochthonous minority language schools, which operate in specific legal contexts and linguistic environments and produce linguistic output, i.e., text, discursive and sociocultural practices, and pedagogical communication. To analyze the linguistic landscape in such a context is not a simple cataloging of signs and things in space, but mostly a geo-semiotic exploration (Scollon and Scollon 2003) of representations of space in the school. The texture of space affords opportunities to read the dimensions of social acts (Proshansky et al. 2014), which can be interpreted as spatial practice, "spatializing culture" (cf. Setha 2014) and its reflection in "discursive transformations of space" (Setha 2014, p. 72).

Based on the arguments presented above, we formulate our research question, namely, whether the linguistic landscape observed in the educational institutions we study supports our hypothesis that the schoolscape can be examined as an autopoietic, self-reproducing entity. In other words, can the school environment function as a self-sustaining and adaptive mechanism, preserving and transmitting internal community values while integrating external socio-political influences to maintain and enhance linguistic resilience?

3. Demographic Indicators of the Investigated Locations

In our study, we investigate institutions in the language of instruction of historical Hungarian minorities in Slovenia, Slovakia, and Romania, all of them Hungarian-language schools.

The 1920 Treaty of Trianon following the First World War dramatically reshaped the territory of the Kingdom of Hungary. Hungary lost about two-thirds of its territory and one-third of its Hungarian-speaking population. The new nation states that were created were home to a significant number of ethnic Hungarians. Members of the Hungarian community in these countries have become a minority and there are currently seven countries outside Hungary where there is a significant Hungarian minority: Romania, Slovakia, Serbia, Ukraine, Serbia, Croatia and Austria. According to the 2021 census data, they are the largest minorities in both Romania and Slovakia. Hungarians in Slovenia are one of the smallest Hungarian communities living outside the borders of Hungary (the exact figures are shown in Table 1). The members of Hungarian minority beyond the Hungarian border are now bilingual, using their mother tongue as well as the official language of their country.

Table 1. Demographic indicators of the sites surveyed.

Country	Total Population of the Country	Total Number of Hungarians	Proportion of Hungarians in the Total Population	Number and Proportion of Primary Schools (ISCED 1, 2)
Romania[1]	20,121,641	1,227,623	6.1%	1338 schools, 10.9%[2]
Slovakia[3]	5,449,270	422,065 + 34,089[4] = 456,154	7.75%	235 schools, 10.9%[5]
Slovenia[6]	2,108,000	6700[7]	0.31%	4[8] schools 0.9%

Demographic data on their context are summarized in Table 1.

In the course of our research, we visited three countries, Romania and Slovakia, both of which have a significant Hungarian minority, and Slovenia, which has one of the smallest Hungarian minorities. While the wider area around the schools is also generally dominated by ethnic Hungarians in Romania and Slovakia, in Slovenia, the proportion of ethnic Hungarians in the wider area is negligible.

Romania and Slovakia have well-developed minority education systems, with sufficient numbers of educational institutions for the minority population. In terms of type, there is minority mother tongue education at the primary and secondary school levels. This means that in both countries, primary and secondary education in these institutions is provided in the minority language, with the state language being taught to students as a separate subject as part of their education (Vančo 2017, 2020). Both countries offer the possibility of higher education in the minority language, although to different degrees: in Romania, this possibility is more extensive.

Slovenia has a much lower proportion of minorities than the other two countries. In Prekmurje, bilingual education, compulsory for both the majority and minority, was introduced in the 1959/1960 academic year. The minority Hungarian language is taught in mother-tongue and second-language groups in separate curriculums. In bilingual education, the distribution of languages varies: in the lower grades of primary school, the ratio of majority and minority languages is 50–50%, in the fifth and sixth grades, it is 60–40%, and in the eighth grade, it is 70–30%. In the 2013/2014 school year, the Bilingual Primary School in Lendva/Lendava introduced a program of parallel teaching of reading and writing in the two languages (Kolláth 2009, 2011).

4. Methods

Our research on the school linguistic landscape is part of a broader study examining the teaching of state languages. During our research, we visited Hungarian-language elementary schools in Romania, Slovakia, and Slovenia, where we attended 5 to 7 lessons

at each location. In each case, we received permission from the school administration to document and later analyze the linguistic landscape. A condition for taking the photographs was that they could not contain any information that would identify children. In each school, we conducted guided interviews with the school administration and willing teachers about the institution's situation and the methods of teaching the state language. Our interviews also included questions about how the linguistic landscape is situated and its perceived importance in the school setting.

Using the data obtained from the guided interviews, the documentation of the linguistic landscape was not limited to simple photographic documentation but also outlined its roles, such as how elements of the classroom landscape were used, or how certain language use patterns were interpreted. Thus, we carried out a participatory recording of data, which translates into photographs and recordings of conversations. These were analyzed as both quantitative and qualitative indicators based on the criteria of a database we have compiled.

During our research trips, we visited a total of 11 educational institutions, with the exact details provided in Table 2. This research was conducted between 2019 and 2020.

Table 2. The research locations.

Country	Number of Institutions Visited	Number of LL Units Used for Analysis
1. Romania	4	96
2. Slovakia	4	80
3. Slovenia	3	94

We photographed all signs placed on the exterior surfaces of the visited schools, at the entrance, and in the hallways, as well as in the classrooms where we attended lessons. In the institutions we visited, we took approximately 400 photographs, which we compiled into a database. This served as the raw material for our research. During processing, we excluded photos that were duplicates (i.e., multiple shots of the same item) or unsuccessful (e.g., blurry, with reflections making analysis difficult, etc.). Thus, our cleaned database consists of 270 photos. Following selection, the database contains 96 images from Hungarian schools in Romania, 80 images from Hungarian schools in Slovakia, and 94 images from Hungarian schools in Slovenia.

The selection of signs as LL units for our database was made according to the following geo-semiotic analysis criteria (Scollon and Scollon 2003): (1) code preference, and (2) discourse topic characteristics. To the above-mentioned indicators, we added an aspect related to the elements of local minority culture, namely, the way in which minority culture is visualized (what kind of modality can be observed in minority culture representations). Our understanding of the recorded linguistic landscape elements was supplemented by notes of the conversations organized during our visits. We participated in more than 16 conversations of the sites we visited. This type of complementary approach allows both the external observer to objectively record the data and for an introspective understanding of the phenomenon, i.e., a local interpretation of space and self-reflection that reflect the environmental experience.

5. Discussion

5.1. Language Choices in Textualizing Space

The linguistic landscape within the school space defines the linguistic framework that applies in that area. At the beginning of our analysis, we grouped the elements into top–down and bottom–up sub-groups. With this classification, we followed the binary classification of official and nonofficial items, proposed by Landry and Bourhis (1997). The top–down category includes those signs that are required to be displayed in schools under the relevant legislation[9]. This includes elements that were received from official documents and signs relating to danger or health. These inscriptions accounted for about

20% of the inscriptions in the database and were written in the official language of all three countries. However, in Slovakia and in Romania, it is possible to display such inscriptions bilingually in the minority language.[10] When we asked why these signs were only in the official language, we were told that they were provided centrally and that the cost of having them in the minority language would be borne by the school budget. We received a similar answer to our question in Romanian and Slovakian schools. Moreover, these items in the official language are such a familiar part of the linguistic landscape outside the school, and the information on them is so simple and understandable to all, that one respondent said, "I had not even realized that it should be in the minority language". It is important to point out here that the above dichotomy is education–culture-dependent and determined by the nature of the centralization of education. In line with the function of space, a significant number of landscape elements can be linked to the learning process, its organization, management and products. They are complemented by general information that is not subject-specific but can be considered common knowledge (e.g., selective waste collection, environmental awareness, combating AIDS). Visualization of behavioral norms (e.g., regarding interpersonal communication) can also be included in the category of common topics. In addition, the presence of risk discourses (Syrjälä 2023) is also highlighted, since they are more prominent in the post-COVID-19 period (e.g., wearing masks, washing hands properly) but include, for example, advertising to fight AIDS and to combat bullying. This category also includes information of a preventive nature, such as danger zones, emergency numbers, etc. (see pictures 1, 2, 3). Spatial orientation (see picture 4 and 5) is usually guided in all three locations by bilingual signs, sometimes including their digital versions, as they are addressed to both newcomers and those inside the building. Signs with universal indications are often multimodal texts but often appear only in pictorial form (e.g., parking lot, disabled access, traffic signs, smoke-free area).

Examining the correlation between language choice and the top–down and bottom–up features of the linguistic landscape, our data show that a relevant difference in the three educational spaces is precisely the language choice strategies (Table 3). A predominance of top–down state language choice and bottom–up mother tongue choice (in the case of Slovakia and partly Romania) can be shown, while bilingualism is present in both LL subgroups (top–down and bottom–up). The linguistic landscape of the Slovenian school shows a strong bilingual educational space, characterized by 'bottom–up' bilingual landscape elements.

Table 3. Top–down and bottom–up elements according to language choice.

LL Type	Top-Down_ moL_hu	Top-Down_moL_offiL	Top-Down_ biL	Bottom-Up_moL_hu	Bottom-Up_moL_offiL	Bottom-Up_ biL	Others
Romania	5 (5.2%)	3 (3.1%)	5 (5.2%)	17 (17.7%)	13 (13.5%)	25 (26%)	29 (30%)
Slovakia	2 (2.5%)	11 (13.75%)	8 (10%)	27 (33.75%)	19 (23.7%)	5 (6.2%)	8 (10%)
Slovenia	7 (7.4%)	6 (6.3%)	6 (6.3%)	14 (14.8%)	10 (10.6%)	48 (51%)	3 (3.1%)

Legend: top-down_moL_hu: top–down, monolingual Hungarian (mother tongue); top-down_moL_of: top–down, monolingual official language; top-down_ biL: top–down, bilingual official language and Hungarian (mother tongue); bottom-up_moL_hu: bottom–up, monolingual Hungarian (mother tongue); bottom-up_moL_of: bottom–up, monolingual official language; bottom-up_ biL: bottom–up, bilingual official language and Hungarian (mother tongue).

Language choice decisions in the linguistic landscape of the educational institutions we studied are summarized in Figure 1 below. In the visited institutions, we found two types of linguistic arrangement: (a) a complementary relationship between L1 and L2, which means that if information is communicated in one language, it is not conveyed in the other, or (b) a parallel use of L1 and L2, which means that what is said in one language is repeated in the other. The third language (English) appears most prominently in the Slovenian LL units, while the mother tongue focus is a dominant feature in every school.

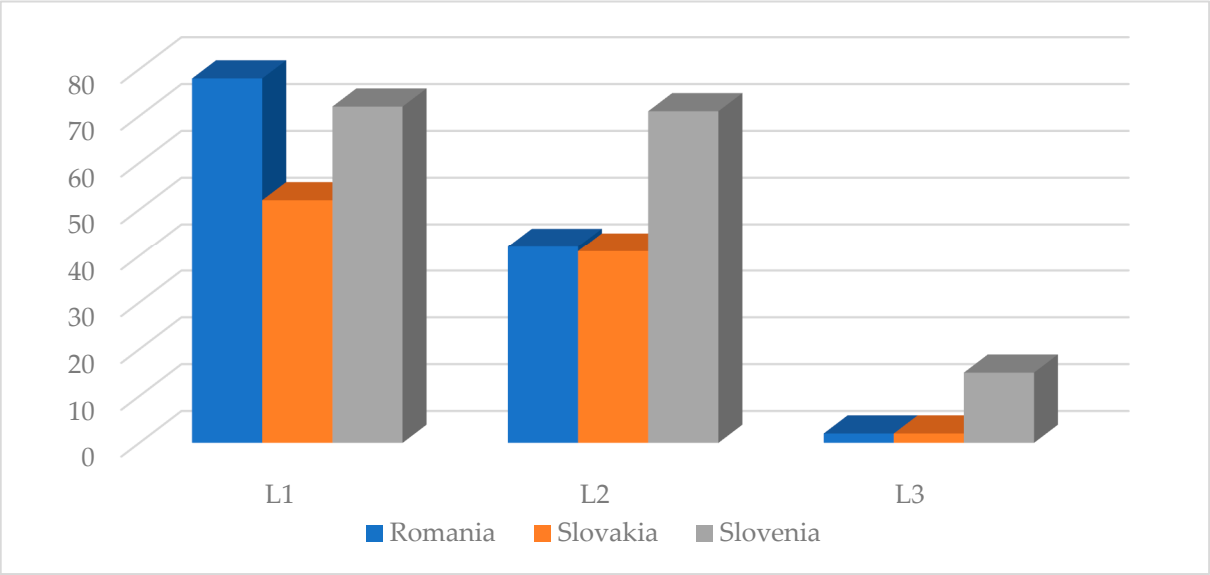

Figure 1. Language choice (language preferences) in LL (Romania: N = 96; Slovakia: N = 80; Slovenia: N = 94; data collection: 2019–2021; L1 = Hungarian; L2 = Slovak/Slovenian/Romanian; L3 = English).

In addition to language preference, it is also worth considering the type of LL elements that are generally present in the school environment. Figure 2 summarizes monolingual and bilingual items in Hungarian-language schools. Since we understand the linguistic landscape as a world that is shaped, created and experienced, this aspect provides a summarizing answer to the linguistic manifestations that are evoked in the given environment by the elements we are investigating. We can see that minority monolingual communication is strong in both education institutions, while official administration outside the school is carried out in the official languages (Romanian, Slovak and Slovenian). Correlating their content with language choice, specialization of L1 and L2 functions, which Tódor (2019) argued for in Hungarian-medium schools, is again observed in the current sample from Romania and Slovakia: in general, everything that is related to the domain of formal communication (rules, laws, etc., usually written and edited texts) calls for the use of the majority language, while minority language is mostly the language of inner communication, curriculum and/or internal work, and therefore more often the language of locally produced, even handmade signage (e.g., results of project activities).

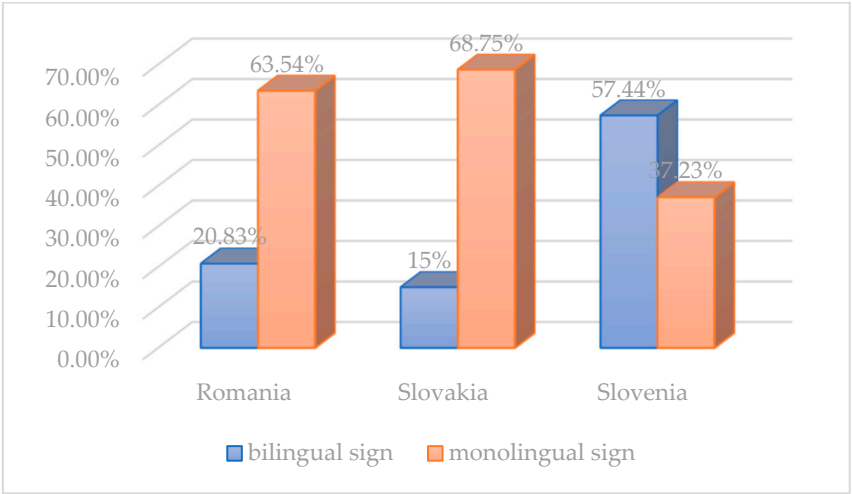

Figure 2. Monolingual or bilingual signage.

The data clearly show how the school linguistic landscape defines the linguistic framework that is relevant within that space. In our case, Hungarian is the language used in schools in Slovakia and Romania, whereas the Slovenian school landscape shows a different configuration, where the presence of parallel bilingualism LL is strengthened by the principles of organizing education.

Comparing language choice in the schoolscape with language choice in the signs of areas inhabited by the Hungarian ethnic minority reveals a clear difference. According to (Szabómihály 2020)'s data from the linguistic landscape of 82 villages and towns in southern Slovakia, the representation of Slovak text is at least 80%, but there are settlements where more than 90% of the media contain Slovak text. The proportion of minority Hungarian inscriptions is much lower, ranging from 25 to 55%. The information content of Slovak–Hungarian and multilingual signs is characterized by duplication, i.e., repetition of the same information, usually translation of Slovak source text into other languages, mainly into Hungarian. Overall, we can say that the linguistic landscape of the school, compared to the linguistic landscape of the wider external environment, is organized in a complementary way in the schools we studied. Complementarity in this case means that the linguistic landscape of the school, although it shows linguistic relations outside the school through top–down elements, overlaps the linguistic distribution of the linguistic landscape outside the school and compensates for it with a broader offer of minority culture with the aim of strengthening and preserving minority identity, and can thus be understood as a response to a deficit.

By analyzing the relationship of LL units according to language choice, the following configurations, patterns (structures, arrangements) can be modeled as it shown in the Table 4.

Table 4. Configurations models of language choice.

Configuration I (Romania, Slovakia)	**Configuration II (Slovenia)**
◆ External communication: official monolingualism and parallel bilingualism ◆ Internal communication: mother tongue dominant language use, specialization of language functions ◆ Identity elements: use of canonized literary and cultural figures, historical, local and regional symbols	◆ External communication: parallel bilingualism ◆ Internal communication: parallel bilingualism ◆ Identity elements: historical, school-specific, creative, individual symbols

A common feature of these institutions is that they represent the specific environment for the minority schools. In interpreting these arrangements, the insights gained from interviews and field visits revealed that the use of visual language in educational spaces aims to create "rescue and preservation islands" while simultaneously reinforcing minority self-preservation. This involves establishing a written communication space where the minority language is predominant and the cultural values specific to the minority are prominently displayed. In the interviews with representatives of institutions, there was a constant search for a response to improve efficiency, as reflected in the learning support materials and landscape elements that were individually created or developed. All this was expressed in one of the schools in Slovakia as follows: "These schools, where they operate, generally have roles beyond just education and upbringing. In many small settlements, there are hardly any other cultural institutions left, and often the school is the only one that still represents our culture". Or as a parent from a Hungarian school in Romania put it, "We are at home here. It is up to us to carry this forward. And the family and the school have a key role to play in this". Thus, starting from the particularities of the school space, we need to place the dynamics of the environment built by LL in a much broader context.

5.2. Spatializing of the Ethnolinguistic Vitality

We examined which elements appeared in the Romanian, Slovak, and Slovenian Hungarian-language schools we studied and that reflect the specific characteristics of minority schools. In this context, the unique dimension of the minority schools we studied, namely, the presence of elements expressing local minority identity, can be identified. In the corpus of images that we have compiled, the following thematic levels and proportions have been found, with the remark that they may have been reorganized since the moment of our visit.

Thematic structure of schoolscape (see Table 5):

1. External communication, elements appearing in individual school logo with local characteristics and with lifestyle norms: a bee, book, tree, sun, nature, etc. (e.g., pictures 7, 8). Picture 7 shows one of the symbols of the eco school with bilingual names of the school and with Hungarian and Slovenian flags; the other picture is monolingual in the Slovene language: Eco school—as lifestyle.
2. Elements of school history and naming institutions, history of the school, biography of the name-giver, and his/her statue or portrait (e.g., pictures 9, 10, 11, 12). Picture 10 shows the statue of the school's namesake placed at the entrance. Picture 11 depicts the school's name and type, presented only in the minority language. While this information is also required to be displayed in the state language on the school's exterior wall, the interior emphasizes minority language, and, because of the hand-made nature of the sign, it also shows a strong link to folk culture. Canonized elements related to the history of minorities: flag, kings, crown, national anthem, showcasing traditions (e.g., pictures 11, 12). Image 11 features the cross, a religious symbol of Hungarian community, and the flags. Picture 12 depicts a corridor staircase where important Hungarian historical events and their dates are listed.
3. Canonized elements related to the literature of minorities, connected to the curriculum (e.g., picture 8). The picture chosen as an example shows portraits of writers and poets whose works are studied in literature classes.
4. Local, regional values and symbols: woodcarving, cross, local coat of arms, wood-carving, embroidery, quotes, flag, values, dialects, folk costumes, leather work, school gate (e.g., pictures 13, 14, 15, 16). Picture 14 shows an owl, a symbol of knowledge, with the names of the teachers at the school between its wings. Picture 15 shows the gate of a school, with a typical Romanian Hungarian element, a Szekler gate. This gate has many local symbols: sun, moon, cradle, owl, etc. The carving was made in the local community. The inscription on the gate is in Hungarian only and the text is as follows: The roots of learning are bitter, but the fruits are sweet. Picture 16 depicts a flower motif, and the motif is typical Hungarian folk style.

Holistically examining the presented data, it is clear that the school environment presents a multimodal linguistic landscape that is self-creative in shaping the environment in which a particular culture and its language can be strengthened, preserved and thus sustained. External (top–down) elements do not determine the "internal evolution" of creating the minority school linguistic environment. The school linguistic landscape continuously shows functioning and development according to local needs and values. This allows for the utilization of local conditions, which enhances the resilience, responsiveness and adaptability of the examined community.

Table 5. Elements of local identity.

	Slovenia (*N* = 94)	**Slovakia (*N* = 80)**	**Romania (*N* = 96)**
External Communication	Individual school logo with local characteristics: bee, book, tree, sun, nature	Individual school logo with local characteristics: Béla Bartók, (Hungarian composer, who collected in the region Hungarian folk songs), plant motifs	Individual school symbols: tulips, other floral motifs, cradle, bulb
School history and name	The elements of the logo also appear in the interior	School history, life of the namesake, statue, portrait	School history, life of the namesake, statue, portrait
Canonized elements related to the history of minorities	Flags	Flag, national anthem, "iconic national poem Szózat", King Matthias	Flag, national anthem, "iconic national poem Szózat", King Matthias
Literary canonization	Related to curriculum	Related to curriculum	Related to curriculum
Local regional values, symbols	Woodcarving	Woodcarving	Cross, village coat of arms, wood carvings, embroidery, quotes
Local culture	Local dialect	Projects of pupils, local dialect	Projects of pupils, local dialect, tulip, lily

It should be noted here that the elements of the linguistic landscape outside of schools for Hungarian minority communities living in the Carpathian Basin (Romania, Slovakia, Slovenia) also display multimodal elements that refer to local values and symbols. However, the linguistic landscape of schools and the linguistic landscape of settlements differ in two main aspects:

1. In the case of signs appearing in the external environment of settlements, the state language is prominently present (c.f. Csernicskó 2019; Laihonen 2012; Mrva and Szilvássy 2011; Tódor 2018), whereas the linguistic landscape of schools shows a predominance of minority language use.
2. The multimodal visual elements established in settlements appear within the boundaries not defined by physical space, and not in a structured manner throughout the space, and thus do not proportionally surpass the linguistic framework defined by the majority language. In contrast, the elements of the school's linguistic landscape appear in a physically confined, structured, and targeted manner (for didactic purposes, cultural heritage presentation, etc.), contributing to the greater emphasis on the minority language within a specific space. The presence of these elements in the schoolscape helps create a structured linguistic and visual environment within the language and cultural values characteristic of minority.

This internal functioning of the schoolscape ensures the system's protection, self-sustainability, and continuous reproduction. In this process of self-creation (in relation to the external and internal environment), we identified complementary and reproductive linguistic and cultural arrangements. Based on the above arguments, we believe that it is reasonable to conclude that autopoietic interpretation of the linguistic landscape in schools of the minority context under study allows for a better understanding of the functioning of ethnolinguistic vitality. In this process, the indicators of the ethnolinguistic vitality emerge as they operate in the everyday life of schools. Although triggered by different social contexts, they can be generalized from the data of the communities studied into the following main markers of ethnolinguistic vitality of historical minorities: (a) the presence of minority language in LL across the most diverse linguistic registers (formal and informal), (b) the presence of elements of minority culture which are not specifically related to the curriculum (literature, history), (c) the presence of folk elements, traditions

(folk costumes, dialects, handcrafts) and tools of minority culture, and (d) the creative use of specific symbols of the minority culture, e.g., conscious management of L1, L2 and L3 language use.

6. Conclusions

One of the key contributions of our comparative study to the analysis of the dynamic process of the schoolscape is the demonstration that the schoolscape can also be interpreted as an autopoietic space. Within the schools we studied, the linguistic landscape forms an integral part of the community's culture and socialization capacity. These findings are applicable to both Romanian and Slovakian Hungarian schools that exist within broad Hungarian communities, as well as Slovenian–Hungarian bilingual schools in Slovenia—despite the fact that Slovenian Hungarian-language schools are part of a significantly smaller Hungarian-language community.

We have demonstrated that educational institutions create linguistic landscape structures in which they continually renew themselves through self-(re)production. Minority schools in our research function as entities that can be defined by their internal characteristics and operations. Within this framework, the linguistic landscape is understood not as a simple reaction to external events but as an autopoietic spatial element that ensures internal functioning by validating local resources while also meaningfully considering factors outside the school. The space is created with verbal and non-verbal elements that reflect the features the community deems important to preserve, thereby playing a role in maintaining the ethnolinguistic vitality of the communities under study. In our study, we applied a new approach to identify the markers of ethnolinguistic vitality, which we believe can offer a valuable interpretive perspective for understanding the mechanisms of the linguistic landscape (LL) in other communities.

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Institutional Review Board Statement: The authors declare that in the 11 Hungarian language schools in Slovakia, Romania and Slovenia visited in 2022, the authors obtained verbal consent for the documentation and analysis of the linguistic landscape documented and for informal interviews with the teachers working in the schools in all the cases. No audio or audiovisual recordings of the interviews were made. Our research has not violated any privacy rights. In Slovakia, in the year of the research there were no rules or regulations on the requests for school visits so far and a verbal agreement with the school management is sufficient.

Informed Consent Statement: Informed consent was obtained from all subjects involved in this study. We received permission from the local school board to visit, document and investigate the linguistic landscape of the school. The photographs depict no children, study does not involve humans or animals.

Data Availability Statement: Data available on request due to ethical reasons. The data presented in this study are available on request from the corresponding authors.

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Notes

[1] Based on the 2011 census.
[2] Source: 2019/2020: http://statisztikak.erdelystat.ro/cikkek/a-romaniai-magyar-iskolahalozat-szerkezete/67 (accessed on 10 August 2024).
[3] Based on the 2021 census.
[4] In 2021, those completing the census questionnaire were given the option to indicate a second nationality: 5.6% of the population used this option. Of these, 34,089 indicated Hungarian as a second nationality.
[5] Number of primary schools in the 2019/2020 school year. Source: https://www.cvtisr.sk/cvti-sr-vedecka-kniznica/informacie-o-skolstve/statistiky/casove-rady.html?page_id=9724 (accessed on 10 August 2024).
[6] 2021 census data.
[7] Source: https://www.peoplegroups.org/explore/GroupDetails.aspx?peid=980 (accessed on 10 August 2024).
[8] Source: https://eurydice.eacea.ec.europa.eu/national-education-systems/slovenia/statistics-educational-institutions (accessed on 10 August 2024).
[9] Toró points out in his study (Toró 2023) that in the Hungarian language schools in Romania investigated by him have bilin-gualism defined by many structural and institutional factors influencing the ethnic affiliation of the schools such as the headmasters and management, the proportion of Hungarians in the administrative unit, the proportion of Hungarian students, and type of school.
[10] Law No. 184/1999 on the Use of National Minority Languages Pursuant to Act No. 184/1999, information concerning threats to the life, health, safety or property of citizens of the Slovak Republic must be displayed in the public domain in a minority language in addition to the official language. This obligation must be fulfilled in the municipalities where the national minority language may be used officially.

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