

VIRTUAL LINGUISTIC LANDSCAPE: ARENA OF LANGUAGE AND IDENTITY CONTESTATION

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Abstract: This study aims to analyze the Virtual Linguistic Landscape (VLL) as an arena of language and identity contestation, focusing on two online communities in North Sumatra: the official government social media account and a local cultural community. A qualitative approach with a multimodal case study design was employed, involving online participant observation, content analysis, and semi-structured interviews with key participants. The findings reveal a clear divergence in orientation: the government primarily uses Indonesian (72%) and English (22%) for formal and globalization purposes, while the cultural community predominantly features local languages (67%) as symbols of pride and cultural resistance. Multimodal analysis indicates that government accounts emphasize official infographics and tourism promotion, whereas cultural communities creatively utilize memes, poetry, and folklore to reinforce identity. These results highlight that the digital sphere serves not only as a medium of communication but also as an ideological arena where language power and identity are negotiated. The study contributes theoretically to the development of digital linguistic landscape research and offers practical implications for government policies to better accommodate local languages in virtual spaces.

Keywords: Virtual Linguistic Landscape, identity, language contestation, multimodality, North Sumatra

1. INTRODUCTION

The rapid advancement of digital technology has brought about profound transformations in modes of communication and social interaction (Saragih, 2025). Virtual platforms such as social media, online forums, and other digital communication channels have emerged as significant arenas in which language and identity intersect, thereby extending the scope of the *Linguistic Landscape* (LL) beyond its traditional domain. Conventionally, LL has been understood as the visible display of linguistic symbols in public spaces, including shop signs, road signs, and posters (Shohamy & Gorter, 2009). In contrast, within virtual environments the linguistic landscape is no longer static; it becomes dynamic, multimodal, and inherently tied to ongoing negotiations of identity (Leung, 2020).

This development raises important academic concerns regarding the ways in which linguistic representations in digital contexts reflect, reproduce, and potentially challenge broader social dynamics. Issues such as language hegemony, the revitalization of minority languages, and the performative construction of group identities are brought to the surface in online settings. The presence of multiple languages, codes, and dialects on digital platforms generates a contested virtual landscape, marked by competing claims of authority and belonging. In this context, the urgency of scholarly inquiry lies in examining virtual space as a symbolic arena, where collective identities are negotiated and contested through strategic language choices and discursive practices.

Previous research on Virtual Linguistic Landscapes (VLL) has explored language representation on various platforms, such as Instagram (Sebba, 2019) and Twitter (Blommaert & Maly, 2019), with a focus on code-switching or the use of specific languages. However, most of these studies tend to focus solely on description, without deeply analyzing the more complex aspects of identity contestation and negotiation. The main gap found is the lack of an analytical framework that explicitly links online linguistic practices with critical social theories of power and identity. Previous studies also rarely use integrated qualitative and multimodal approaches to capture the complex dynamics between text, images, and user interactions. For example, the study by Van der Veken et al. (2020) focuses on the linguistic landscape of YouTube from the perspective of translation, but does not explicitly examine how language choice is a form of resistance to the dominance of certain languages. Therefore, this study offers a new analytical framework by combining linguistic landscape theory with identity performativity theory and critical sociolinguistic theory.

The novelty of this research lies in the use of a multimodal-performative analytical framework in examining the Virtual Linguistic Landscape (VLL). This framework views language not only as text, but also as part of the performativity of dynamic identities, where users consciously or unconsciously choose language, emoticons, memes, and other visual elements to negotiate their position in the social space. Thus, the VLL is not merely understood as a reflection of reality, but as an arena where group identities are both displayed and contested.

This approach allows researchers to observe how the dominance of a language, such as English, can be challenged by communities that use local or mixed languages, opening up new spaces for self-expression and solidarity. The main contribution of this research is to provide a more comprehensive understanding of the function of language in digital spaces, which not only serves as a means of communication but also as an instrument of struggle and identity performance. This is in line with Leung's (2020) findings, which emphasise a shift in the focus of VLL studies from merely descriptive to critical analysis that highlights power relations and language ideology.

In general, the purpose of this study is to analyze and interpret how the Virtual Linguistic Landscape on social media platforms becomes an arena for contestation of identity and linguistic power. Specifically, this study aims to: (1) describe patterns of language use, including code-switching, language switching, and the use of hybrid languages, in the Virtual Linguistic Landscape of specific communities; (2) analyze these linguistic practices as forms of collective identity negotiation and resistance to linguistic hegemony; and (3) develop a theoretical model that integrates the concepts of linguistic landscape, performativity, and critical sociolinguistics. The results of this research are expected to contribute significantly to the development of sociolinguistics, particularly in the subfield of digital linguistic landscapes, by offering a new, more critical and multidimensional perspective. A deeper understanding of this phenomenon will be useful for linguists, sociologists, and digital platform developers in designing strategies that are more inclusive and sensitive to linguistic diversity.

2. LITERATURE REVIEW

2.1. The Concept of Linguistic Landscape and Its Expansion

The study of Linguistic Landscape (LL) was first popularised by Landry and Bourhis (1997), who defined it as the display of language in public spaces, such as signboards, advertisements, banners, and road signs. The representation of language not only functions as a practical means of communication, but also as a reflection of social identity, ideology, and power relations within a society. Thus, LL is seen as a sociolinguistic phenomenon that can reveal the dynamics of language in everyday life.

Through the LL perspective, it is possible to observe how dominant and minority languages interact in a social space. The presence of a particular language in public spaces often signifies its social status and legitimacy, while the absence or marginalisation of a language indicates unequal power relations. This makes LL an important instrument in examining multilingualism, dominance, and language resistance within society.

With the development of digital technology, the focus of LL studies is no longer limited to physical spaces. These studies have expanded to virtual spaces and are known as Virtual Linguistic Landscapes (VLL). Ivkovic and Lotherington (2009) assert that VLL encompasses the use of language in various digital platforms, including social media, websites, online applications, and other virtual interaction spaces. This expansion opens up new opportunities to understand how language functions in a more fluid and global digital context.

In the realm of VLL, language plays a dual role, namely as a means of communication and as an ideological symbol. Language not only conveys information, but also shapes the image, identity, and position of a group in global society. Therefore, VLL studies are increasingly relevant for examining how language is used, maintained, or shifted in digital spaces, while also revealing how power, identity, and ideology are negotiated through language practices in the virtual world.

2.2. Theories and Models of Analysis

In analyzing LL and VLL, there are a number of theoretical frameworks that are often used. First, thematic analysis allows researchers to identify patterns of language use according to its communicative function, for example as a means of information, promotion, or identity (Braun & Clarke, 2019). Second, multimodal analysis emphasizes the relationship between written language, visuals, images, and other non-verbal elements that contribute to meaning (Kress & van Leeuwen, 2006). This approach is important because communication practices in the digital age are almost always multimodal, not just verbal.

Third, critical discourse analysis as proposed by Fairclough (2010) is used to examine how language in the Linguistic Landscape (LL) and Virtual Linguistic Landscape (VLL) represents power relations, ideology, and social domination. This approach positions language not only as a means of communication, but also as a social practice laden with interests and hidden meanings. Thus, critical discourse analysis opens up space to see the ideological dimensions behind language choices, placement, and context of use in public spaces, both physical and virtual (Saragih, A., & Saragih, M.(2021).

In the context of LL, critical discourse analysis can help identify how dominant languages often gain legitimacy through their more massive presence in public

spaces. For example, national or international languages tend to be positioned as symbols of modernity and authority, while local languages experience marginalisation. This phenomenon not only shows the different functions of language but also reflects the power structures inherent in language policy and social practices.

Meanwhile, in the context of VLL, critical discourse analysis reveals more complex dynamics. The presence of local, national, and international languages in the digital space often confirms the existence of identity negotiations and contests of meaning. Social media, for example, allows local communities to use regional languages as a form of resistance against the hegemony of dominant languages. This shows that digital spaces do not merely reproduce existing power relations, but also open up possibilities for cultural resistance strategies through language practices.

By combining critical discourse analysis with other frameworks, this research can provide a deeper understanding of how language operates in the public sphere. Not only as a means of communication, language also functions as an arena for social and ideological legitimation, where meaning is continuously produced, negotiated, and contested. Thus, the use of this multidimensional approach allows researchers to uncover broader power relations implied in linguistic practices, both in physical and virtual landscapes.

2.3. Recent Research on VLL

Recent research shows that digital spaces increasingly serve as arenas for contestation over language and identity. Jinzheng and Tantiniranat (2023) found that universities in China tend to feature the national language and English on their official websites to build an international image, while local languages are less accommodated. These findings indicate a trend toward globalization that may shift the role of minority languages in academic and institutional settings.

Li (2023) adds that VLL can either strengthen linguistic diversity or weaken the existence of minority languages, depending on the actors and strategies employed. Meanwhile, Androutsopoulos (2020) emphasizes the importance of multimodality in VLL, where local languages are often present through memes, popular images, or creative videos. In addition, Cenoz and Gorter (2021) introduce the concept of pedagogical translanguaging, which shows the potential of VLL in strengthening the position of local languages through more flexible and inclusive learning practices.

2.4. Gaps in the Literature

Although research on VLL is growing, there are still gaps that remain to be explored. First, most research focuses on formal institutions, such as universities or international organizations, while local cultural communities that play an important role in language preservation are rarely the center of study. Second, previous research has highlighted the dominance of national and international languages, while the resistance strategies of local communities in preserving regional languages have not been comprehensively studied.

Furthermore, research on VLL in Southeast Asia, particularly Indonesia, remains limited despite the region being known for its high linguistic diversity. In fact, the multilingual context in Indonesia offers great potential for understanding how languages interact in virtual spaces. Thus, there is still significant room for research on how local communities utilize digital media as a means of contestation and preservation of linguistic identity.

2.5. Research Contribution

This research seeks to address an existing gap by examining two distinct online communities in North Sumatra: official local government accounts and local cultural communities. The comparison is significant because it illustrates a clear difference in orientation between formal actors, who tend to prioritize national and international languages, and cultural communities, who actively seek to revitalize the use of regional languages. By employing a multimodal approach combined with critical discourse analysis, the study is able to uncover the ideological dynamics embedded in linguistic practices within virtual spaces.

A key contribution of this research lies in its emphasis on cultural resistance as demonstrated by local communities. The findings reveal that these communities should not be perceived merely as passive groups subjected to marginalization. Instead, they emerge as active agents who creatively engage with digital platforms to sustain and recontextualize the relevance of regional languages. Their strategies include the production of multimodal content such as memes, folklore adaptations, and artistic expressions that reassert the value of linguistic diversity in digital culture.

Therefore, this study not only expands the growing body of literature on Virtual Linguistic Landscapes (VLL), but also provides practical insights into the formulation of inclusive language policies. Specifically, it highlights the importance of incorporating regional languages into official government platforms and social media initiatives. In doing so, it underscores how digital spaces can serve as arenas for negotiation, where linguistic diversity is preserved, promoted, and reimagined within broader sociopolitical contexts.

3. METHODOLOGY

This study uses a qualitative approach with a multimodal case study design to deeply analyze the phenomenon of virtual linguistic landscapes. This approach was chosen because of its focus on interpretation and holistic understanding of complex language practices in virtual spaces, rather than statistical generalization (Creswell, 2014). Case studies allow researchers to conduct detailed investigations in one or more specific online communities, which serve as the main arena for language and identity contestation (Stake, 1995). Therefore, the research subjects are not a large number of individuals, but rather active members of two to three specific online communities. Key participants will be selected through purposive sampling, namely those who are considered most informative and representative for understanding the dynamics under study (Patton, 2015). Although this research is conducted in virtual space, physical location is irrelevant; instead, the geographical focus is on the online platforms that are the objects of analysis. In this study, 430 posts from two different communities will be analyzed: the local cultural community and the official account of the North Sumatra regional government. This data provides an initial picture of the language preferences chosen by both communities to assert their identities.

Data collection was conducted using three complementary techniques. Online participant observation will be the initial stage, in which researchers join communities and passively observe interactions to understand the context and patterns of internal communication (Hine, 2015). Next, online content analysis will be applied to collect data in the form of posts, comments, and various multimodal elements (images, videos, memes) that shape the linguistic landscape. This data will be systematically archived (Kress, 2010). To complement the understanding, semi-

structured online interviews will be conducted with several key participants, allowing researchers to explore their motivations, perceptions, and interpretations of the language practices they engage in (Flick, 2014). These interviews can be conducted through online communication media such as chat or video calls. The entire data analysis process will use thematic analysis to identify patterns and themes, critical discourse analysis to examine the power relations and ideologies behind language choices (Fairclough, 2010), and multimodal analysis to understand how non-linguistic elements interact with text in creating meaning (Kress & van Leeuwen, 2006).

3.1. Research Flow Design

Broadly speaking, this research process is divided into four main phases that are interconnected. The first phase is the preparation phase, which includes identifying problems, formulating specific research questions, and conducting an in-depth literature review to build a theoretical framework. In this phase, researchers will also determine sampling strategies and select relevant online communities. The second phase, the data collection phase, involves the execution of the methods described above, namely online participant observation, content analysis, and in-depth interviews. The collected data will then enter the third phase, which is the data analysis phase. In this phase, the data will be organized, transcribed, and analyzed using thematic, critical discourse, and multimodal methods. After the analysis process is complete, the final phase is the synthesis and reporting phase, in which the research findings are interpreted and linked back to the research questions. Conclusions will be formulated, and the final results will be presented in the form of a comprehensive scientific report, contributing both theoretically and practically to the study of the digital linguistic landscape.

4. RESULTS

4.1. Language Representation in the Virtual Linguistic Landscape

In the initial stage, this study analyzed the distribution of languages used in online community posts. The analysis was conducted on 430 posts from two different communities: local cultural communities and the official account of the North Sumatra regional government. This data provides an initial overview of the language preferences chosen by both communities to assert their identities.

Table 1. Language Distribution in Two Online Communities in Sumatera Utara

Community	Indonesia Language	Regional Languages (Batak/Melayu)	English Language	Total Uploads
Sumatera Utara Regional Government (n=250)	72%	6%	22%	250
Local Cultural Community of Sumatera Utara (n=180)	28%	67%	5%	180

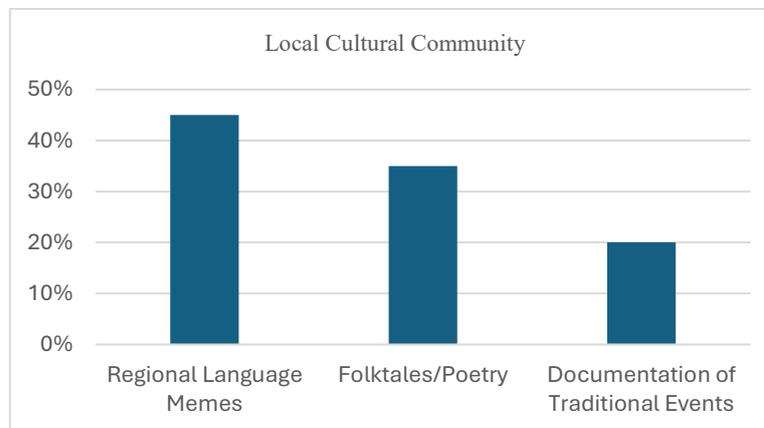
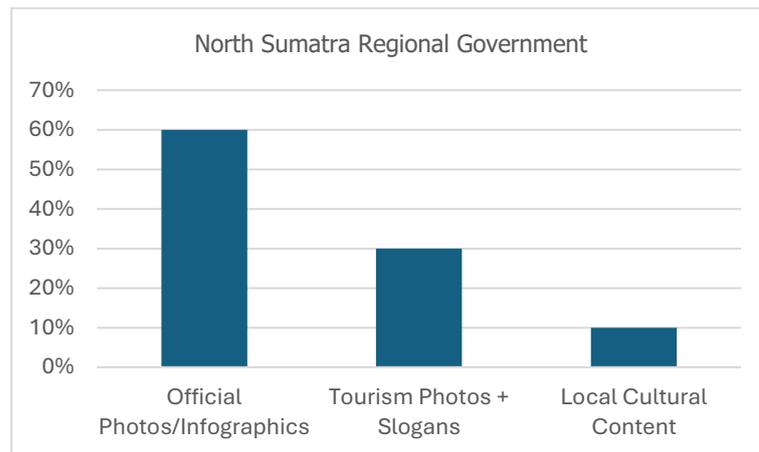
The table shows a very significant difference: local governments use Indonesian (72%) more as the formal language of administration, and English (22%)

for tourism and global branding purposes. In contrast, local cultural communities emphasize regional languages (67%), making them a symbol of ethnic identity preservation. This data indicates two different orientations: one focused on broad reach and modernity, the other on traditional roots and local identity.

4.2. Multimodal Practice: Language, Visuals, and Identity

In addition to language, the study also examines how visual elements (images, memes, illustrations) combine with text to construct meaning. This analysis highlights multimodal practices that shape the virtual linguistic landscape.

Figure 1. Distribution of Multimodal Elements in Both Communities

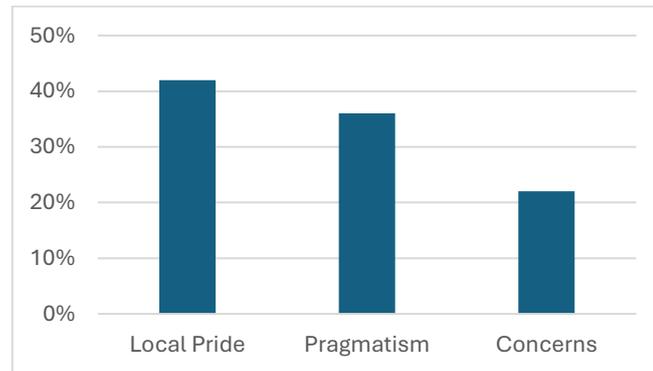


The graph shows that local governments predominantly use official infographics (60%) and photos of tourist destinations (30%), with only a small amount of local cultural content (10%). This demonstrates the main function of government accounts as a medium for public information and promotion. In contrast, cultural communities are more creative in their use of memes (45%) and folk tales/poetry (35%), which emphasize cultural identity expression and strengthen the function of regional languages in informal communication.

4.3. Participants' Perceptions of Language Representation

To gain a deeper understanding of the reasons behind language choice, the study conducted interviews with 12 key participants from both communities. The results are summarized in the form of main themes.

Figure 2. Participants' perceptions of language representation (N=30, questionnaire results)



The majority of participants (42%) emphasized local pride, especially from cultural communities, who feel that the use of regional languages strengthens emotional closeness. As many as 36% emphasized pragmatism, especially from government communities, who view Indonesian and English as more effective for reaching a wide audience. Meanwhile, 22% voiced concerns that regional languages are increasingly marginalized in official media.

4.4. Critical Discourse Analysis: Language Ideology

At the discourse level, the use of language in both communities contains different ideologies.

- a. English in government accounts promotes modernity, globalization, and international tourism.
- b. Indonesian serves as a symbol of formality and state legitimacy.
- c. Regional languages in cultural communities serve as a form of cultural resistance, fighting against the symbolic domination of foreign and national languages, and emphasizing the uniqueness of ethnic identities in North Sumatra.

Discursively, the use of language by both parties reflects very different ideologies. Government accounts adopt English to promote modernity, globalization, and international tourism, in line with the global image they want to build. Meanwhile, the use of Indonesian serves as a symbol of formality and state legitimacy, strengthening the government's position as the official representative. On the other hand, the regional languages used by cultural communities represent cultural resistance. The use of these languages deliberately counters the symbolic dominance of foreign and national languages, while also affirming the uniqueness and ethnic identity of North Sumatra. Thus, the choice of language is not merely a means of communication, but a manifestation of the different identities and ideological struggles between the government and local communities.

4.5. Synthesis of Findings

Based on the overall analysis, it can be concluded that the Virtual Linguistic Landscape in North Sumatra shows the following dynamics:

1. Language Distribution: Local governments are oriented towards nationalism and globalization, while cultural communities are oriented towards locality.
2. Multimodal Practices: Government content is formal and informative, while cultural communities are more expressive, creative, and cultural.
3. Participant Perceptions: There is a tug-of-war between pride in regional languages and the pragmatism of cross-audience communication.
4. Language Ideology: The online arena has become a space of contestation where regional languages survive through community creativity, despite being suppressed by the dominance of national and international languages.

Thus, this study shows that the virtual linguistic landscape in North Sumatra is not merely a medium of communication, but also a symbolic political arena where identity, power, and language ideology are negotiated.

5. DISCUSSION

The results of the study indicate that the virtual linguistic landscape in North Sumatra reflects a clear contestation between national, international, and local language representations. These findings are consistent with the concept of linguistic landscape, which is understood as a symbolic space where ideology, power, and identity are negotiated (Shohamy & Gorter, 2009; Li, 2023). In this context, language exists not only as a means of communication, but also as a marker of social position, legitimacy, and group representation strategies.

In the online realm, local governments tend to prioritise the use of Indonesian and English to project a modern, formal, and global image. Conversely, local cultural communities emphasise regional languages as symbols of resistance and ethnic pride. This difference in orientation shows how virtual space has become an important arena for the negotiation of identity, where various social actors use language choices to assert their respective positions, interests, and cultural values.

5.1. Language Orientation: National-Global vs. Local-Cultural

The language distribution found in this study shows a pattern of dual linguistic orientation. The data shows that government accounts tend to use Indonesian 72% of the time and English 22% of the time, while cultural communities are more dominant in using regional languages with a percentage of 67%. This pattern is in line with the findings of Jinzheng & Tantiniranat (2023) in a study on the virtual linguistic landscape in Chinese universities, which confirms the function of the national language and English as instruments of internationalisation, while local languages are marginalised. Thus, it can be concluded that digital space reflects a language hierarchy similar to that of the formal institutional sphere.

However, unlike the results of Jinzheng & Tantiniranat's (2023) study, this study found active resistance from local communities through social media. Regional languages not only survive as a means of communication but are also creatively reproduced through various forms of expression such as memes, poetry, and folklore. This phenomenon reinforces the argument of Cenoz & Gorter (2021), which

emphasises the significant role of grassroots communities in maintaining multilingual vitality in the digital public sphere. In other words, social media has become an arena where regional languages gain new representation, while also affirming the importance of community participation in maintaining linguistic diversity.

5.2. Multimodality and Language Creativity

Multimodal analysis in this study shows differences in visual and linguistic orientation between government accounts and cultural communities. The government tends to emphasise the use of official infographics and tourist photos as a means of conveying formal information. Meanwhile, cultural communities make greater use of memes and other forms of creative expression, which not only convey messages but also build emotional closeness with the audience. This difference in function confirms that the government acts as a provider of institutional information, while cultural communities position themselves as social connectors that foster affective bonding with their followers.

These findings are in line with the views of Kress and van Leeuwen (2006), who emphasise that multimodality is not merely a complement to text, but an essential part of the process of social meaning construction. The fact that cultural communities are able to combine regional language texts with popular visuals demonstrates the process of adapting local languages into contemporary digital cultural practices. This also confirms the results of Androutsopoulos' (2020) research, which examined the multimodal practices of online communities in Europe, where similar forms of creative expression serve to expand the living space of local languages while strengthening collective identity in the digital context.

5.3. Participant Perceptions: Pride and Concerns

The results of the questionnaire and interviews revealed a diversity of attitudes towards language among participants. A total of 42% of respondents emphasised local pride as the main motivation for using regional languages, while 36% showed a pragmatic orientation by emphasising the practical functions of the dominant language, and 22% expressed concerns about the potential marginalisation of regional languages. This distribution pattern is in line with Li's (2023) findings, which show that in virtual spaces, local languages tend to be positioned as symbols of identity and emotional expression, while the dominant language is chosen for its instrumental value in broad communication and social mobility.

However, unlike Li's (2023) study, which highlights the passive tendency of local communities in preserving language, this study reveals a more proactive dynamic in the cultural communities of North Sumatra. These communities do not merely preserve regional languages as symbols of identity, but also actively produce creative content, such as digital folklore, memes, and poetry in local languages. These forms of cultural production can be understood as practices of resistance against the dominance of national and global languages, while also affirming the role of grassroots communities in maintaining linguistic vitality through adaptive strategies in the digital realm.

5.4. Language Ideology and Identity Contestation

Critical discourse analysis in this study reveals three layers of ideology operating in the virtual linguistic landscape. First, English represents the ideology of modernity and globalisation, functioning as a symbol of connection with the international world. Second, Indonesian affirms the legitimacy of the state, in line with its position as the national language that governs formal and institutional communication. Third, regional languages become a means of cultural resistance, presenting local identities in a digital space saturated with the hegemony of the dominant language. These three layers show that language practices in virtual spaces are not neutral acts, but rather laden with ideological content.

This pattern of contestation reinforces Shohamy's (2018) argument that the linguistic landscape is always political. In the digital era, this political nature has become increasingly fluid and dynamic because interactions are no longer limited by physical space. Languages exist in the virtual arena with functions that either clash or synergise, resulting in complex configurations of meaning. This shows how language practices are also social practices that reflect power relations in society.

In addition, the findings of this study add a new dimension to the study of the linguistic landscape, particularly with regard to the position of regional languages. While in the physical landscape, such as city signs, the national language tends to dominate (Backhaus, 2007; Li, 2023), a shift has occurred in the virtual landscape. Digital spaces actually allow regional languages to have a more balanced bargaining position through the production of creative content by local communities. Thus, social media not only functions as a means of communication but also as an arena for ideological negotiation where regional languages gain a wider space for representation.

5.5. Consistency and Contradictions with Previous Studies

In general, the results of this study are in line with the findings of Jinzheng & Tantiniranat (2023) and Li (2023) regarding the role of globalization in promoting the dominance of English and national languages. However, there is an important difference: this study highlights the creativity of local communities that utilize digital platforms to resist the marginalization of regional languages. This is the novelty aspect of the study, which shows that language contestation in virtual spaces is not only in the form of subordination, but also active resistance through innovative multimodal strategies.

Thus, this study proves that the Virtual Linguistic Landscape in North Sumatra is a complex space for language ideology contestation. The local government emphasizes formal and global functions, while cultural communities prioritize cultural functions and resistance. The overall findings support linguistic landscape and multimodality theories, while expanding them with empirical evidence that local communities have resilience and innovative strategies in maintaining their identity through social media.

6. CONCLUSION

This study shows that the Virtual Linguistic Landscape (VLL) in North Sumatra is a complex arena of language and identity contestation. Official local government accounts tend to use Indonesian and English as symbols of formal legitimacy and globalization strategies, while local cultural communities emphasize regional

languages as expressions of pride and cultural resistance. Multimodal practices reinforce these differing orientations: the government highlights informative and promotional content, while cultural communities prioritize creative expression through memes, poetry, and folklore. This confirms that digital space functions not only as a medium of communication, but also as an ideological field where the power relations of language and identity are negotiated.

Theoretically, this study expands the study of linguistic landscape by showing that local languages not only serve as symbols of heritage, but can also be creatively mobilized in virtual spaces to maintain relevance and identity. Practically, these findings encourage local governments to be more inclusive in presenting regional languages in official media, so that a balance between nationalism, globalization, and locality can be maintained. Thus, this research contributes to the development of digital linguistic landscape theory while offering more equitable language policy recommendations in the era of globalization.

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