

A LINGUISTIC LANDSCAPE IN THE DIGITAL ERA: A CASE STUDY IN MEDAN

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Abstract

The study investigated the linguistic landscape of downtown looks like in the digital era and how the digital era influenced changes in the linguistic landscape in downtown Medan. This study uses qualitative methods. The data collected consists of written data and the types of media on signboards in the city of Medan. Data analysis was carried out in three steps, namely: 1) data condensation, which is the process of reading the collected data and determining the data, in this case data in the form of writing and types of signboard media, 2) data display, which is displaying selected data in the form of billboards in the central area of Medan, and 3) drawing conclusions, which is finding results after analysing the data. After analysing data, it was found that 38% signage uses Indonesian, 30% uses English, 27% uses language mixing and the rest, 5% uses traditional language and other foreign languages. Conventional signage has given way to new, more dynamic, and interactive forms thanks to the digital age. These include LED boards, electronic screens, and the incorporation of digital components like social media and QR codes in signboards and advertisement. Digital media forms display more modern language choices, posing a threat to the national language and isolated regional languages in their own countries. The research highlights the linguistic landscape that has emerged in the digital era.

Keywords: Linguistic Landscape, Digital Era, Medan

Introduction

Medan, as the capital of North Sumatra, has long been famous for its cultural and ethnic diversity. Three indigenous ethnic groups, the Karo Batak, Malay, and Simalungun Batak, live in Medan. In addition to the indigenous peoples, there are other migrants, such as the Minang, Javanese, Acehnese, Bugis, Bantenese, and others. People from various ethnic groups living in the city of Medan live together in harmony (Prayoga et al., 2021). As a multicultural city, languages in public spaces are represented by various languages spoken in Medan, such as the national language, Indonesian, regional languages, and foreign languages such as English or other foreign languages. Linguistic landscape is a study of the range of languages found in a particular area. Landry and Bourhis (1997) explain the concept of linguistic landscape. The concept of linguistic

landscape is used to create appropriate language planning for use in public spaces in each country with different language phenomena. Landry and Bourhis divide public signs and private signs into two categories, each with its own function. There are two types of functions: functional and symbolic. Signs in public spaces include road signs, Place names, street names, and inscriptions on government buildings, such as ministries, hospitals, universities, city halls, schools, metro stations, and public parks. Signs in private spaces include commercial signs in front of shops and business institutions, such as retail stores and banks, as well as commercial advertisements on billboards and signs on private vehicles and public transportation.

The concept described by Landry and Bourhis (1997) provides new insights into the study of linguistic landscapes. Several researchers have studied linguistic landscapes in various fields. Shohamy and Gorter (2008) examined linguistic landscapes in relation to language policy and planning. Furthermore, there are also discussions on the linguistic landscape from the perspective of multilingualism, which discusses language variations that arise in a country or region (Barli and Bagna, 2010; Guilat, 2010; Kallen and Dhonnacha, 2010). In Indonesia itself, linguistic landscape studies exist in the form of language contestation studies (Rahmawati, 2022), studies of messages and symbols of identity (Ardhian et al., 2023), and linguistic landscape studies have been examined by Yendra and Artawa (2020), which resulted in a book on *Linguistic Landscape: Introduction, Explanation, and Application*.

In the studies described above, research on linguistic landscapes can be examined in various fields and cities such as Medan. Downtown Medan is a strategic area that reflects high economic activity and multiculturalism, as seen from the diversity of languages used in information boards, advertisements, and other digital media. Some of the signs used by the government or private parties are still in conventional form. This can be seen from several studies on the linguistic landscape in the city of Medan. Sahril et al. (2019) analysed the linguistic landscape of the city of Medan: A study of onomastics, semiotics, and space, showing that Medan city government agencies such as the Regional Tax and Retribution Management Agency use glass signboards with two languages, namely Indonesian for the name of the management agency and the word "call center" for the contact number. Then, Nurmala's (2024) research analysed the ideology on business signboards with the title "Language Ideology and Linguistic Landscape on Business Signboards in Medan," showing images of conventional business signboards in the city of Medan. Business signboards in the city of Medan still use signboards written with colored paint. These signboards can be seen on businesses such as "Warung Sop Jawa Sumatera Bakso Mataram" located at Jalan Gatot Subroto No. 160 Sei Sikambing Medan Helvetia.

Business signs in the city of Medan still use boards painted with colored paint. These signs can be seen on businesses such as Warung Sop Jawa Sumatera Bakso Mataram, located at Jalan Gatot Subroto No. 160 Sei Sikambing Medan Helvetia. The language used on these signs is Indonesian and is monolingual. In a study by Pasaribu et al. (2024) entitled *The Function of Language at Medan Train Station: Linguistic Landscape Study*, signboards with the words Stasiun Medan (Medan Station) are displayed on the outside wall in a monolingual format, but on

the inside, signboards written on digital boards contain several words such as 'Keberangkatan' (Departure) in two languages, namely Indonesian and English.

With the development of information and communication technology, the significant impact on the linguistic landscape in public spaces, including in downtown Medan, has prompted a shift from conventional signage to new, more dynamic and interactive forms, such as LED boards, electronic screens, and the use of digital elements such as QR codes and social media in signboards or advertisements. Preliminary observations conducted at several strategic points, such as Balai Kota Street, Pemuda Street, Merdeka Square, and commercial areas such as Mall Centre Point, show a shift in the media used to convey information. Shop signs, which used to be predominantly in printed or banner form, are now starting to incorporate digital elements. For example, many shops are adding Instagram accounts, WhatsApp, and even direct ordering QR codes to their banners. This shows the integration of physical and digital spaces in the form of a contemporary linguistic landscape.

One example found is the LED board owned by the Medan City Government around Merdeka Square, which displays public information in a rolling format. The language used tends to be formal, but it is displayed in a digital format that moves and changes periodically. This information function is more efficient because it is dynamic and can be updated at any time. Not only on boards owned by agencies, the influence of digitalization is also clearly visible in commercial spaces. At Centre Point Mall, TV screens are installed in a number of stores to display product promotions with predominantly English language, such as "Grab Your Deal Now!" or "Limited Time Offer." This reinforces a modern and professional image, while also showing that English is used as a symbol of urban market appeal.

In addition, the style of language used in digital signage has undergone significant changes. Language tends to be more concise, persuasive, and visually oriented. Elements characteristic of the digital era, such as abbreviations (e.g., "IG," 'WA'), emojis, and invitations such as "scan for more info" are now commonly found in public spaces. This change marks a shift in the function of language from merely a medium of information to a tool of persuasion and interaction. However, this change also has consequences for the existence of regional or traditional languages. In most of the digital signage observed, there was no use of local languages such as Batak, Deli Malay, or Hokkien. This shows that even though the digital era has brought advances in communication technology, there is a risk of losing local linguistic diversity in public spaces if there are no policies to support its preservation.

Based on the above explanation, two research questions were formulated for this study, namely what the linguistic landscape of downtown Medan looks like in the digital era and how the digital era influenced has changes in the linguistic landscape in downtown Medan. These questions guide the investigation into both the current forms and characteristics of linguistic representations in physical and digital spaces, as well as the sociolinguistic factors driving their transformation. By addressing these questions, the study aims to provide a comprehensive understanding of how digitalization reshapes language visibility, usage, and

symbolic meaning in an urban multilingual context

RESEARCH METHODOLOGY

This study uses qualitative methodology to analyse the linguistic landscape of business signs in Medan, Indonesia. The main objective of this study is to analyse the linguistic landscape found in downtown Medan in the digital era and how the digital era has influenced changes in the linguistic landscape in downtown Medan. The data collected consists of written data and media types on signs found in the city of Medan. A purposive sampling strategy was used to select a variety of signboards from various business locations, including restaurants, hotels, learning centres, supermarkets, and other businesses, thus providing representative coverage of the city's linguistic landscape. Data was collected through careful observation, in which the researcher thoroughly analysed signboards, focusing on the type of media and language choice (traditional, national, or foreign). There are 92 data taken that consists of shop name signage, billboard, and traffic light sign. Data collection involved documentation through photographs taken with a digital camera. Data collection was conducted from January 2024 to October 2025 around downtown Medan.

The city centre of Medan was chosen because of its high traffic volume and business density, creating an optimal environment for observing a variety of signboards. Data collection techniques used field notes and observation. Data analysis used the method described by Miles, Huberman, and Saldana (2014) in three steps, namely: 1) data condensation, which is the process of reading the collected data and determining the data, in this case data in the form of writing and types of signboard media, 2) data display, which is displaying selected data in the form of billboards in the downtown area of Medan, and 3) drawing conclusions, which is finding results after analysing the data.

FINDING AND DISCUSSION FINDING

The linguistic landscape Look of downtown Medan in the Digital Era

The linguistic landscape (LL) of downtown Medan today reflects multilingualism, globalization, and digital commercial influence. Public spaces are increasingly filled with signs, billboards, and advertisements that blend Bahasa Indonesia with English, other foreign languages and traditional languages. This mixture of languages reveals Medan's dynamic urban identity, where local and global elements coexist. Based on the data, it was found that 38% signage uses Indonesian, 30% uses English, 27% uses language mixing and the rest, 5% uses traditional language and other foreign languages. The use of digital signage is about 10% from the data found. Examples can be seen in some shop signages such as Master Cheese Pizza and Dunia Musik & Sports located on Kesawan Street and Lembur Kuring is located on T. Amir Hamzah Street. The pictures are as follows.



Figure 1. Master Cheese Pizza Figure 2. Dunia Musik & Sports



Figure 3. Lembur Kuring

Based on the pictures above, the language choice used by the businessman are variant. In figure 1, English used with the combination of pizza imagery. Then in figure 2, the name of the business signboard used language mix between Indonesian and English. While in figure 3, the signage uses traditional language (Sundanese). The three signage are in conventional signs. The imagery of decoration or the food served to be more information given. There is not a digital touch such as LED or other electrical equipment on the signage. Digital connectivity such as Instagram, Facebook or TikTok are not displayed but there is the information address and phone number displayed in the example of figure 2.

The other examples are displayed differently in the billboard for Azarine (a skincare brand) located on Juanda Street Medan near the traffic light. The billboard is made of synthetic plastic, and it is not the digital billboard. The use of mixed language that is Indonesian and English. In the billboard, the slogan "No Panik di Bawah Terik!" illustrates the code-mixing that appeals to younger, urban, and digitally literate audiences. The statement "No Panik" is in English lexical borrowing that adds a sense of modernity, trendiness, and cosmopolitan identity, aligning with global beauty and advertising standards. Then, the Indonesian phrase "di bawah terik" maintains local intelligibility, ensuring inclusivity for the public. Besides, the visual emphasis on branding and digital connectivity with the logos of Shopee, TikTok, and Instagram. Moreover, the influence of popular culture with the use of celebrity imagery from Korean Pop idol *Dino* of Seventeen and bright aesthetics to attract attention in a competitive urban space. Then there is digital sign located on Brigjen Katamso Street Medan near the traffic light. The sign shows the sign of direction. The sign uses digital signs to show traffic lights and signs of instruction and information. Generally, the sign uses Indonesian language.

Indonesian language used for government sign. the digital connectivity such as barcode sign is also displayed. Traffic lights now use LED screens or digital signage, displaying messages such as advertisements, government appeals, and social campaigns. The area around traffic lights serves as a strategic point for public communication — digital advertising there signals a shift from static billboards to an ever-changing semi-virtual linguistic space. The pictures can be seen below.



Figure 4. Conventional Advertisement
Billboard



Figure 5. Digital Traffic Light
Sign

Then, there is a digital billboard advertised the *Fritto Chicken* product located on Putri Hijau Street. The billboard displays the product name offered by the Fritto Chicken restaurant with the price below such as the meal and the drink. Besides, the visual emphasis on branding and the imagery of the products. Digital connectivity with the logos of Facebook, TikTok, Instagram and YouTube are also available. The logo of Halal is also displayed. The use of Indonesian and English language makes the advertisement is more global and modern. The picture of the billboard is as below.



Figure 6. Digital Advertisement Billboard

The Digital Era Changes in the Linguistic Landscape in Downtown Medan

The digital era has significantly transformed the linguistic and visual character of Medan's urban spaces in several ways. The global branding in urban advertisement increasingly adopts English slogans to align with global digital markets. The examples of the slogan in the billboard for Azarine "No Panik" echoes social media tone and global consumer trends. The billboards nowadays feature e-commerce and social media icons, linking physical advertisements with digital platforms that show online integration. Besides, the visual design follows digital aesthetics such as clean layout, pastel color and influencer imagery. The language used is code mixing such Indonesian and English. Global icons (Korean wave, Western branding) coexist with local linguistic elements. The digital era has blurred the boundary between online and offline communication. Billboards in downtown Medan are no longer merely physical signs but extensions of online marketing ecosystems—reflecting how urban space and digital culture now co-construct identity and consumer behavior.

The development of information and communication technology has had a significant impact on the linguistic landscape in public spaces, including in downtown Medan. The digital era has driven the transformation from conventional signage to new, more dynamic and interactive forms, such as LED boards, electronic screens, and the use of digital elements such as QR codes and social media in signboards or advertisements.

Observations conducted at several strategic points, such as Balai Kota Street, Pemuda Street, Merdeka Square, Sisingamangaraja Street, and T.Amir Hamzah Street show a shift in the media used to convey information. Store signs are still used to be dominantly in printed or banner form, but for some billboards and traffic light signs displayed advertisements near the traffic light and direction are now beginning to incorporate digital elements. For example, many advertisements and signs directions are adding Instagram accounts, WhatsApp, and even direct ordering QR codes to their signage. This shows the integration of physical and digital spaces in the form of a contemporary linguistic landscape. One example found is the LED board owned by the Medan City Government around Merdeka Square, which displays public information in a rolling format. The language used tends to be formal, but it is displayed in a digital format that moves and changes periodically. This information function is more efficient because it is dynamic and can be updated at any time.

Additionally, the language style used in digital signage has undergone significant changes. Language tends to be more concise, persuasive, and visual-oriented. Elements characteristic of the digital era, such as abbreviations (e.g., "IG," "WA"), emojis, and invitations such as "scan for more info" are now commonly found in public spaces. This change marks a shift in the function of language from merely a medium of information to a tool of persuasion and interaction. However, these changes also have consequences for the existence of regional or traditional

languages. In most of the digital signage observed, there was no use of local languages such as Batak, Deli Malay, or Hokkien. This shows that although the digital era has brought advances in communication technology, there is a risk of losing local linguistic diversity in public spaces if there are no policies to support its preservation.

Thus, it can be concluded that the digital era has completely changed the linguistic landscape in downtown Medan, in terms of media, language style, and communicative function. The digital linguistic landscape not only expands the reach of communication but also changes how language is understood and used in a social context that is increasingly connected digitally.

DISCUSSION

The findings of this study reveal how the linguistic landscape of Medan has evolved significantly in response to the digital era. Traditionally, linguistic landscape research has focused on physical space such as streets, shops, and public signage—to analyze the visibility and function of languages in each area. However, the emergence of digital communication platforms has expanded the notion of “space” to include online environments such as social media, e-commerce platforms, and digital advertisements (Blackwood et al, 2016). In Medan, this shift is particularly visible as the city’s multilingual identity—dominated by Bahasa Indonesia and language mixing, English is now reproduced and reinterpreted in virtual spaces. Other languages such as Japanese, Italian, French, and Mandarin also appear in the shop signage predominantly.

One major trend identified in this study is the increasing use of English as a symbol of modernity and global connectivity. English appears prominently in digital billboard even when the primary target audience is local. This reflects a global linguistic trend in which English functions as a prestige language, indexing cosmopolitan identity and professionalism (Pennycook, 2017). Nevertheless, English is not replacing local languages; rather, it often coexists with Indonesian or local dialects, resulting in hybrid linguistic expressions such as “No Panik”. These blends indicate a creative negotiation between global and local linguistic identities—a process sometimes described as glocalization.

Another key finding concerns the persistence of local identity through language choice. While many digital businesses adopt English for branding purposes, local languages and Indonesian continue to dominate informal online interactions. Users frequently switch between languages depending on context and audience, revealing dynamic code-switching practices. This behavior demonstrates how digital spaces serve as a mirror of Medan’s diverse sociolinguistic realities, maintaining ethnic and cultural ties even in virtual communication.

Moreover, digital technology has democratized linguistic expression. Unlike physical signage, which requires significant cost and access to public space, digital platforms allow individuals to participate in shaping the linguistic landscape

more freely (Androutsopoulos, 2015). In Medan, small business owners, influencers, and ordinary users contribute to the city's evolving online linguistic profile. This shift challenges traditional hierarchies of linguistic authority and introduces more diverse, grassroots voices into the public linguistic space.

Finally, the study highlights that Medan's digital linguistic landscape is not merely a reflection of linguistic diversity but also a tool for identity construction and socio-economic positioning. Language choices online often signal class, education, and cultural capital. For example, English-dominant content is associated with upward mobility and global awareness, while Indonesian and regional languages convey authenticity and local belonging. This interplay reveals how digital communication both reshapes and reinforces existing social structures.

CONCLUSION AND SUGGESTION CONCLUSION

This study has examined how the linguistic landscape of Medan has transformed in the context of the digital era, demonstrating that online spaces have become an essential extension of the city's multilingual environment. The findings show that digital platforms—such as social media, e-commerce sites, and online advertisements—serve as new arenas where linguistic choices reflect identity, modernity, and cultural belonging.

Indonesian is still dominantly used on shop signage. Language mixing and English has emerged as a symbolic language in Medan's digital landscape, often used to convey prestige, professionalism, and global connectivity. Furthermore, the study reveals that digital spaces empower individuals to participate in shaping the linguistic landscape more actively. Unlike traditional physical signage, which is often controlled by institutions such as traffic light sign, online language use allows for broader participation from diverse social groups. Through this, Medan's digital linguistic landscape not only mirrors the city's sociolinguistic diversity but also contributes to the construction of identity, community, and social distinction.

In conclusion, the linguistic landscape of Medan in the digital era represents a complex interaction between global and local influences. It highlights the adaptability of language users in navigating technological and cultural changes while maintaining their local identity. Future research could further explore comparative analyses between Medan and other Indonesian cities or investigate how emerging technologies—such as AI-driven translation tools—might further shape linguistic practices in digital spaces.

SUGGESTION

Based on the findings and conclusions of this study, several suggestions can be proposed for future research, educators, policymakers, and society. Future studies could expand the scope of this research by comparing Medan's digital linguistic landscape with other Indonesian cities or even international contexts. Such comparative research would help identify broader patterns of language use in

digital spaces. In addition, future researchers could employ multimodal analysis not only examining not only text but also visuals, emojis, and hashtags but also to gain a deeper understanding of how language functions symbolically in online environments. For educators and linguists, the findings highlight the increasing importance of digital literacy and multilingual competence in modern communication. Educators are encouraged to integrate studies of digital language practices into language and communication curricula. By doing so, students can become more aware of how language is used strategically in online platforms and how linguistic choices shape identity, branding, and cultural expression. For the public, internet users and digital content creators should be more conscious of the language they use online, as it contributes to the broader linguistic identity of the community. Promoting respectful, creative, and inclusive language use can strengthen Medan's cultural identity and foster social harmony in both online and offline spaces.

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