Original Article

Multilingual Signs in Khon Kaen City: Transportation

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***Abstract*:** *This research article aims to explain the language used on multilingual signs related to transportation in the Khon Kaen city area. The research falls within the field of linguistics, addressing the issue of multilingual signs within the framework of linguistic landscape and sociocultural linguistic perspectives. The research data consists of multilingual signs, specifically those in two or more languages, published by government agencies and displayed on public premises. The research reveals that Khon Kaen City has three significant transportation hubs: Khon Kaen International Airport, Khon Kaen Railway Station, which connects to Laos and China through the Thai-Lao border checkpoint in Nong Khai Province, and Khon Kaen Bus Station. Additionally, information is provided on the inner-ring roads of the city to assist with traffic navigation. The results show that there are two types of multilingual signs: bilingual signs and trilingual signs. Bilingual signs are found to contain only Thai and English, with Thai in the upper position and either larger than English or of equal size. As for the trilingual signs, they include Thai, English, and Chinese characters, with Thai at the top, English in the middle, and Chinese at the bottom. Thai characters are the largest, followed by English, and Chinese characters are smaller, especially on airport signs. The results of this research indicate the importance of Thai and English in the top rankings, while Chinese has a significant political effect on signage. Khon Kaen is an economic province connected to China via Laos, as many Chinese people come to live in CLMV countries, especially in Laos, resulting in Khon Kaen's position as the center of the transportation of the people of this region accordingly. Therefore, Chinese as an economic and tourism language is found on transportation signs in this research.*

Keywords: Multilingual Sign, Linguistic Landscape, Sociocultural Linguistics, Khon Kaen City.

I. INTRODUCTION

The Thai government has guidelines for the 'Transformation to Hi-Value Sustainable Thailand' and Smart City development policies in various areas that are related to the potential and strengths of different smart cities. Khon Kaen City has set goals to support the Smart City development policy, starting from the 12th National Economic and Social Development Plan up to the current 13th (2023-2027). Khon Kaen City aims to become a smart city in three areas: human development, national development, and being a main city in the Mekong River Basin region. Additionally, the city showcases smart city issues through conferences, exhibitions, and seminars, accommodating a large number of both domestic and international participants. As a smart city in health, education, and connectivity, Khon Kaen serves as a city center for countries in the CLMV subregion (Cambodia, Laos, Myanmar, Vietnam) connected with Thailand. Therefore, this city experiences natural congestion due to people traveling for various purposes, including both Thai people and foreigners.

Sociocultural Linguistics (SCL) is based on the idea that language, as it appears or is used in a society, cannot be separated from the social and cultural context of language users because language emergence and change are related to both of these points. Bocholtz and Hall [1],[2] are pioneering linguists who explain that SCL research focuses on the relationship between language and its function in social services, and it explains language phenomena closely related to politics, policy, economics, education, and human rights. However, this approach still primarily analyzes linguistic characteristics and phenomena. The many languages that appear on the signs reflect the attention paid to communication between the state and people. The language on the signs is, therefore, one mechanism of the political department to respond to the development of this smart city. The issue of choosing a language for these public signs is, therefore, a challenge for the city and for linguistic researchers who can use the research results to support or improve the development of Khon Kaen City according to state and local policies.

The content on the multilingual signs aims to communicate important and necessary information to people, including the city's residents and Thais from other regions, as the city serves as the main transportation hub in the Northeast or Isan region. Khon Kaen City also boasts strengths as a high-potential education center and a health city that provides services to people in the Isan region and neighboring countries, especially Lao PDR. Additionally, Khon Kaen is a major economic hub in the

country, leading to various developments that attract Thai people from other regions as well as foreigners to live, study, and reside in Mueang Khon Kaen. As a result, Khon Kaen can be described as a multicultural city and a multilingual society with a diverse population from various regions.

The linguistic interest in multilingual signs in multilingual social contexts is reflected in the concept of Linguistic Landscape (LL), first developed by prominent linguists [3]. They expanded the scope from ethnolinguistics and multilingual societies to interlanguage relations within society in the dimension of language on signs. This concept proposes that languages today appear in various language areas, which are related to immigration, ethnicity, and border crossing. The language that appears in the landscape indicates the importance of that language in the social context across many issues, such as granting the rights of native speakers, government policy, social development, acceptance and non-acceptance of languages, as well as economic development of cities. For example, the multilingual signs on Phuket Island, Thailand [4] serve as another example demonstrating the significance of linguistic diversity in a multilingual environment.

The concept of linguistic landscape not only examines the linguistic features of signs but also reflects the political policies and social culture of a city. Khon Kaen aims to develop into a smart city in various areas, as mentioned above, leading to rapid growth alongside increased transportation density. The influx of people for various purposes necessitates government communication with travelers and former residents of the city to support the significantly expanding transportation infrastructure in the Khon Kaen area. Therefore, this research aims to investigate whether public signs in Khon Kaen's transportation sector are related to the Smart City policy and how they are connected.

II. OBJECTIVES

The objective of this research is to identify multilingual signs related to transportation in public spaces created by government agencies in the economic area of Khon Kaen City, Mueang Khon Kaen District, Khon Kaen Province, Thailand, in order to answer the research question: Do the multilingual signs in Khon Kaen City align with the concept of a smart city in terms of transportation?

III. RESEARCH DESIGN

This research falls within the field of linguistics, specifically focusing on sub-fields such as sociocultural linguistics and linguistic landscape in the context of integrated research related to urban development aimed at creating a smart city. The research is conducted in Khon Kaen Province, focusing on using field linguistics research to examine how multilingual public signs in Khon Kaen reflect the Smart City concept, particularly in terms of transportation. The analysis is presented through descriptive analysis, with the research area being a public road associated with the main transportation route into Khon Kaen City.

A) Khon Kaen Smart City

Khon Kaen city on its western side, where Road No. 2, Mittraphap Road, begins from Saraburi Province in the central region and extends from Bangkok towards the border with Laos at Nong Khai Province. This road cuts through the heart of Khon Kaen city and serves as a crucial route for entering the province. Along this road, there are significant entry points into Khon Kaen Province, including the Bus Station that welcomes passengers from all over the country into the city, the Train Station from Bangkok that terminates at Nong Khai, and Srinakarin Hospital, a large healthcare facility serving Thais, CLMV countries, and foreigners residing in the northeastern region. Khon Kaen University, a prominent national educational institution with over 50,000 students and educational personnel, is also located along this route. Additionally, there are major department stores, condominiums, hotels, an international convention center, and the CLMV wholesale market situated on Mittraphap Road. Moreover, this road connects to the city's outer ring road, which features an international airport and roads leading to other provinces in the Northeast, North, and Mekong River Basin countries. Therefore, transportation signs in Khon Kaen City should accurately reflect the city's surroundings and connectivity.

B) Concept Framework

This research is a qualitative study in linguistics, integrating research issues from two sub-fields. Firstly, sociocultural linguistics takes a broad approach to language analysis, emphasizing that 'The language that appears in society is related to the social and cultural structure of their language.' Secondly, the linguistic landscape holds the belief that language on signs in public spaces also reflects the social, political, and cultural context of that area.

a. Sociocultural Linguistics

The concepts of Sociocultural Linguistics (SCL) have developed further from the concept of sociolinguistics, which was formed in the early 20th century by Edward Sapir. Sapir attempted to explain the relationship between linguistics and social structure, as well as anthropology, by analyzing actual language phenomena in each area and considering

sociocultural contexts. One of the most important scholars who introduced the concept of sociocultural linguistics is Bucholtz and Hall [2]. They propose that language at the macro level (Macro-linguistics) should also be considered because language, society, and culture have a wide scope and are related to many fields, especially society and culture. As they say, "Sociocultural linguistics is thus 'the broad interdisciplinary field concerned with the intersection of language, culture, and society' [1].

The concept of sociocultural linguistics is, therefore, broad and linked to many social factors such as culture, politics, psychology, behavioral science, language learning, and other fields that contribute to shaping language in society. Bucholtz and Hall [2] further expanded the concept of SCL, stating that the field is interdisciplinary and beginning to integrate linguistic theory, methodology, and topical research. SCL aims to answer commonly asked questions such as: How can language explain social and cultural processes? There exists a research method or theory in sociocultural linguistics that analyzes linguistic phenomena to demonstrate how political and administrative aims have influenced and driven the characteristics of sociocultural linguistics from the past to the present. Therefore, SCL broadens the perspective beyond mere linguistic analysis. As they explain, sociocultural linguistics integrates multiple disciplines, theories, research methods, or issues that address general questions such as: How does the empirical study of language illuminate social and cultural processes? Consequently, the scope of sociocultural linguistics encompasses a broad description of linguistic phenomena, political objectives, and issues for analysis. However, at its core, this concept remains focused on the relationship between language in a given area and the social and cultural relations within that area [2].

b. Linguistic Landscape

The concept of a linguistic landscape involves studying the language of signs and the prominence of different languages on these signs. Most research has focused on analyzing language on signs in commercial and urban areas rather than rural areas. The linguistic landscape serves as a point of intersection between sociolinguistics and other disciplines such as sociology, social psychology, geography, and public media. This is because the designation of a language or permission to use a language in various places is related to government policy, language speakers, and the primary and secondary cultures of the area.

Early work was published on business signs in Shinjuku, Tokyo, Japan's capital, by Masai [5]. However, he did not explain the concept in detail; instead, he aimed to explain the choice of language on signs within the context of the store. Later, the linguists who popularized this concept were Landry and Bourhis [3], who linked the concept of linguistic landscape with ethnolinguistic analysis. They believed that language on public or business signs in an area represents a variety of ethnicities, as seen in cities like Amsterdam Netherlands, where language is related to power and linguistic roles. Therefore, the language displayed in public places symbolizes the role of speakers of that language in society. Their findings demonstrate that the linguistic landscape is related to how language is defined by social organizations and is connected to the influence that people in the area have on their linguistic behavior. As they state, "relations between the Linguistic Landscape factor and the degree of in-group language use, especially in institutional settings, suggest a carryover effect of the linguistic landscape on language behavior" (Landry and Bourhis,[3]. Subsequently, their research led linguists to widely analyze the language on signs and the sociocultural context of each country including Thai researchers.

Linguistic landscape research is a field of linguistic research where the study area includes a diversity of languages, potentially involving a multilingual situation. Multilingualism indicates that people in that area can speak multiple languages or have the ability to communicate in multiple languages. Therefore, they choose, or the government permits language on public signs, business signs, shops, or for communication and public relations in that area. The selection of multiple languages on the signs reflects a multicultural society, encompassing people who speak different languages living together in an area.

The diversity of cultures and language differences necessitates an explanation related to the social phenomena or history of the area. Therefore, much of the research on the linguistic landscape focuses on multilingualism. For example, Carr [6] conducted a thesis on 'Signs of Our Times: Language Contact and Attitudes in the Linguistic Landscape of Southeast Los Angeles, United States.' Los Angeles City has a wide variety of immigrants who speak different native languages. The fact that public signs use English and one or two other languages indicates the state's importance to the language and its speakers. It is also likely related to the context of population settlement, the number of speakers, and the role of the language in the area. Therefore, a sociocultural, linguistic perspective is also useful in explaining the use of language on public signs.

IV. RELATED RESEARCH

The concept of linguistic landscape has begun to be researched in Thailand in the past 10 years, starting with dissertations in the field of linguistics in the Thai language. Mostly, the research areas are in important cities such as Bangkok, border areas, and economic tourist cities of the country. For example, Huebner [7] studied Bangkok's linguistic landscapes: Environmental print, codemixing, and language change and chose Bangkok as a research area because many foreign languages are used on signs in this capital. His work found that signs or languages conveying information to the public were widely mixed with English. The traditional Chinese language signs that used to appear on signs or places have been increasingly replaced with signs in Thai and English. This reflects the government's public sign policy and the creation of international cities and an international business image rather than the ethnicity of the entrepreneurs. Huebner points out that social and economic development is reflected in the language of the public area, the choice of language, and the mixing of languages, leading to changes in certain aspects of the language of the social space.

Research by Meemongkol [8] and Sarot and Kraisame [9] showed public signage in the area of Soi Nana and Soi Ekkamai, located on Sukhumvit Road, a business district with multinational companies. Both studies pointed out that this area of Soi Sukhumvit featured a variety of languages relevant to residents and businesses. Specifically, many Indians and other foreigners were living in the north Sukhumvit area, so most business signs for restaurants and companies used a lot of English, with the English font being larger than the Thai font. On the other hand, in the area of south Sukhumvit or Ekkamai, there were many Japanese speakers as it was a residential area with companies owned by Japanese businessmen or catering to Japanese people.

Later, a comparison was made between restaurant and business signs in the Yaowarat area, a large Thai-Chinese trading community, and the Chatuchak area, a world-famous holiday market in Bangkok, in the work of Viroonphan [10]. The study found that shop signs in both places have characteristics that reflect culture; for example, the Yaowarat area tends to use red, which is an auspicious color for Thai-Chinese people. Signs in the Chatuchak area are predominantly white, reflecting a more international and simple appearance. Emphasis is placed on providing information to buyers in Thai, English, Chinese, Japanese, etc. In research conducted in other provinces, for example, by Yanhong and Rungruang [11], the presence of English on public signs in tourist areas in Chiang Mai Province was investigated. They found that Chiang Mai Province, as a tourist destination, uses information signs in two languages, Thai and English, with a significant amount of English vocabulary mixed with Thai language usage. Tongtong's [12] research focuses on the language used on business signs on Nimman Road, Mueang Chiang Mai District. This road is renowned for tourism and is one of the main thoroughfares for Chiang Mai's business sector. The research results showed that there is a multilingual environment, especially with Thai and English, Thai and Japanese, and Thai and Chinese languages being prominently used. This reflects the diverse group of tourists in this area and the importance of the business sector in effectively communicating with all tourist groups.

Research by Seangyen [13] showed multilingual signs in the Mueang District of Udon Thani Province, featuring many Chinese, Lao, and English languages. This was because Udon Thani Province was related to border trade, serving as a connection to the Lao border through Nong Khai Province. Additionally, Udon Thani was a distribution hub for Chinese people in business to distribute goods to other areas of Thailand. The province had a policy to become a border trade city, serving as a stopping point for goods crossing the Thai-Lao border [14]. Furthermore, it was a city that expanded its business areas for Chinese business people, aligning with the policy for urban and economic development of cities, particularly in the CLMV country area.

In addition to research on the linguistic landscape in Thailand, there is also research that widely applies this concept in other countries with the same assumption that language in public spaces is related to the social context, especially business, politics, immigration, and border areas. The combined results of linguistic landscape research will provide a bird's-eye view of language in the area as it reflects political policies on social and economic development, as well as language rights through public signage in Thailand.

V. MULTILINGUAL TRANSPORTATION SIGN IN KHON KAEN CITY

This study surveyed multilingual signs in public areas and found that they included both bilingual and trilingual signs. Bilingual signs featuring Thai and English were more common than trilingual signs, which included Thai, English, and Chinese.

A) Bilingual Signs

Khon Kaen serves as the center of government and transportation in the northeastern region of Thailand, with important roads connecting to other provinces in the region. Additionally, Khon Kaen acts as a transportation hub between Thailand and CLMV countries, especially Laos, facilitating the shipping of goods and tourism by road, rail, and air. Bilingual signs reflect a response to the Khon Kaen Smart City policy regarding transportation and health services for Thai people and CLMV

countries, given the city's convenient transportation connections. However, bilingual signs found in public places are only in Thai and English.

Figure 1: Bilingual sign at the Ring Road, Khon Kaen City

Figure 2: Bilingual sign at Airport Road, Khon Kaen City

Figures 1 and 2 show a bilingual sign providing travel information to connect to other provinces. For instance, the image on the left provides travel information to connect to Nakhon Ratchasima and Udon Thani provinces via Asian Highway Road (AH) No. AH12 and AH16. The traffic sign on the right-hand side offers information on connecting routes from Khon Kaen City to other districts in Khon Kaen Province, particularly Chum Phae District, located on AH16. The sign features large Thai letters above the English letters, with English text in a smaller font size. Bilingual signs providing travel information can also be found at the city's train stations, as shown below.

Figure 3: The bilingual sign at Khon Kaen Train Station

Khon Kaen also serves as a transit hub for the train route from Bangkok to Nong Khai Province, which borders Laos and passes through Khon Kaen. This strategic location ensures convenient transportation and quick access to the city center. Consequently, Khon Kaen Station experiences a high volume of passengers, including both Thai locals and foreign tourists. The railway station features signs in two languages, Thai and English, as illustrated in Figure 3 above, indicating locations such as Khon Kaen, Platform, and Ticket Office. Additionally, bilingual signs providing information on bus travel can be found at the bus station, as shown in the following Figure 4

Figure 4: The Bilingual Sign at the Public Bus Station

The left-hand sign is installed on the ground to provide information about bus routes between Khon Kaen and other provinces. Only one of these signs was found to be bilingual, indicating the connecting routes between Khon Kaen – Chiang Mai and Khon Kaen – Chiang Rai, which are important tourist provinces in the northern region. However, this bilingual sign misspells the names of Chiang Mai and Chiang Rai provinces as "Chaingmai" and "Chaingrai", respectively, instead of the correct spellings. Furthermore, the signs do not include English names for other provinces that are written in Thai, requiring passengers to inquire with the ticket seller for clarification. Additionally, English is mixed with Thai on the signs, leading to confusion, and there are also spelling mistakes in English. Since the government operates this facility, the accuracy of language on every sign should be checked before publication.

The sign on the right-hand side provides information on traveling by bus, with the words 'Central-Airport.' 'Central' refers to a large shopping mall located in the city center, which serves as the hub for public vans connecting to the city's outskirts. 'Airport' indicates the international Khon Kaen Airport situated along the outer ring road. Therefore, using these two English words on public buses helps passengers access travel information. The research results revealed that these signs were only displayed at the front of the bus, which may not suffice for foreign passengers to understand the route. Hence, QR codes are placed on the side of the bus for passengers to scan and access information about the bus route in English. These bilingual signs are commonly found at bus and van terminals. However, in this station area, no bilingual signs were observed in languages other than Thai and English.   In addition to discovering discrepancies between the information in Thai and English on each sign, it was also noted that some signs conveyed different meanings in Thai and English or had meanings that did not align with the intended information. An example of such discrepancies can be seen in the following bilingual road traffic signs.

Figure 5: The bilingual signs in a different meaning

Examples of bilingual signs in Figure 5 above include the sign on the left installed in the area of a government hospital, Srinagarind Hospital, a large hospital that Khon Kaen aims to position as the center of health care for Thai people and

foreigners, aligning with the country's health smart city policy. This bilingual sign displays the English phrase' PARKING ONLY', while the Thai phrase is 'Special parking for temporary pick-up and drop-off'. This inconsistency between the English and Thai texts can lead to misunderstandings. Similarly, the sign on the right provides information on directions to Udon Thani Province, installed just before the intersection's underpass. The English phrase is 'Udon Thani', but the Thai phrase is 'Udon Thani underpass'. This sign is intended to guide private car drivers to choose the route under the tunnel for quicker travel without waiting for traffic lights at the intersection. However, the bilingual sign does not effectively use English as intended, failing to include the words' tunnel underpass' on the sign.

B) *Trilingual Signs*

Khon Kaen City faces challenges in its journey towards becoming a smart city, particularly in the realms of transportation, health, education, organizing international conferences, and ensuring energy sustainability. These challenges are closely tied to the need for effective information dissemination to both local residents and visitors from other areas. Consequently, providing accurate travel information emerges as a crucial initial concern. Trilingual signs are relatively scarce, primarily located at Khon Kaen International Airport and the bus station, with a higher concentration observed around the airport compared to the bus station, as illustrated in the following examples.

Figure 6: The trilingual signs at the Khon Kaen International Airport

The languages found on trilingual signs are Thai, English, and Chinese, arranged from top to bottom. Thai and English characters are of the same size, but the Chinese characters are significantly smaller and less clear. Since the sign is installed approximately 3 meters above ground level, the small Chinese characters can hinder the readability and visibility of the message from a distance. Trilingual signs are commonly seen around airports and outside terminals, including public bus stations, as illustrated in the following example**.**

Figure 7: The trilingual sign at Khon Kaen Bus Station

This trilingual sign conveys the same meaning in English, Thai, and Chinese. Thai is the largest at the top, followed by English and Chinese, both in the same size. The sign is mounted 4-5 meters above ground level, making it large and easily visible even from a distance, such as from the height of a bus. Therefore, this trilingual sign is effective in providing information to the audience. However, there were no other trilingual signs in the public bus station except for a similar sign in Terminal 1. When Chinese passengers were asked, it was found that they searched online to determine if the bus they were taking or the destination they were heading to had a ticket sales location in Terminal 1 or Terminal 2. This is why there is only Chinese information in that terminal. However, providing information in Chinese about the province or district of the bus destination would offer clearer travel information for Chinese passengers. In the Khon Kaen train station area, there were no

signs in three languages, which was disappointing. Considering that this railway line connects Thailand from Bangkok to Laos and extends to China, the absence of Chinese information on signs in train stations could potentially inconvenience Chinese travelers.

VI. DISCUSSION AND CONCLUSION

The language used or appearing in any society reflects the government's policies regarding the acceptance of that language and its speakers [15]. These languages are, therefore, intertwined with the social, economic, and cultural context of the city. This relationship is viewed through the lens of sociocultural linguistics as a mechanism by which language operates within the spatial context of different languages. Language spatiality, or the linguistic landscape approach, posits that the language displayed on public signs in an area reflects the speakers of that language, and language rights are subject to recognition by both the state and the people who speak that language according to the law. Language on public transport signs serves as an important source of information about the volume of language users traveling through.

Khon Kaen City is striving to establish itself as a smart city in line with its potential and the government's smart city promotion policy. The city has begun this journey by leveraging its status as a provincial and regional transportation hub in Thailand and the CLMV countries. It boasts well-connected car, train, and airline routes that link the country with the Mekong sub-regions, particularly Laos, where many people travel to and from Khon Kaen for various purposes, such as education, healthcare, leisure travel, and border trade. However, this research did not find many signs in Lao, possibly due to the linguistic similarities between Thai and Lao. Lao people can understand and speak Thai, as well as read Thai quite proficiently. Therefore, including the Lao language on transportation signs may not be deemed necessary despite the substantial number of Lao travelers visiting Khon Kaen.

The third language commonly found alongside Thai as the national language and English as the international language is Chinese, appearing on many multilingual signs. The economic influence between Thailand and China extends from central Bangkok and other tourist cities like Chiang Mai, Phuket, and Pattaya to secondary cities across various regions, including Khon Kaen. The government's objective is to position Khon Kaen as a national transportation center in the Mekong Subregion (CLMV countries), with plans to connect it to China via railway. As a result, Khon Kaen serves as a strategic nexus for linking Thai trains to China through Laos, making Chinese a crucial language within the spatial context of Khon Kaen. Additionally, there has been a noticeable increase in the number of Chinese students pursuing higher education in Thailand each year, along with Chinese teachers instructing the language at schools starting from the primary level throughout Khon Kaen Province.

Moreover, Chinese businessmen engage in agricultural and trade activities with Khon Kaen residents. The presence of Chinese on multilingual signs reflects the social and economic dynamics of Khon Kaen. However, there remains a limited number of Chinese signs providing transportation information.

The results of this research identified two types of multilingual signs: bilingual signs featuring Thai and English languages and trilingual signs including Thai, English, and Chinese. The content on these signs provides transportation information in three main public areas: Khon Kaen International Airport, Khon Kaen Railway Station, and Khon Kaen Public Bus Station. Thai is present on every sign, along with English, with Thai positioned at the top. Chinese appears at the bottom with a smaller font size compared to the other two languages. Additionally, Chinese is only found at two locations: the international airport and a public bus station, but not at the train station, despite its connection to China via Laos.

There are three types of language content on signs: those where Thai and foreign languages have the same meaning, making understanding easier; signs with different meanings in each language, causing incomplete information across all languages; and signs with more information in Thai compared to other languages, particularly Chinese, which only includes important and necessary information. These latter two types of signs lead to confusion and unclear communication of their intended meaning.

The research findings have significant implications for future studies on public signs in economic cities and tourist areas, as demonstrated by previous research conducted in regions such as Chiang Mai (Yanhong and Rungruang, 2013; Tongtong, 2016) and Patong Beach, Phuket City (Choeirod and Chanthao, 2023). Given that Bangkok is a densely populated area with a high number of foreign residents, previous research findings have shown the existence of multilingual signs on both economic and public signs in various areas (Meemongkol, 2012; Yanhong and Rungruang, 2013; Sarot and Kraisame, 2018; Viroonphan, 2018). In the northeastern or Isan region, which encompasses several major economic cities and the border between Thailand and Laos, public signs incorporate the use of Lao and Vietnamese languages in economic signage (Seangyen, 2015; Dersingh, Tangkitjaroenkun and Thanarat, 2021). This research finding discloses another view of the Linguistic landscape in the transportation sector, emphasizing the importance of public signs. These signs play a vital role for travelers and visitors, particularly in economically, educationally, and health-oriented cities like Khon Kaen Smart City. Therefore, it is crucial to

provide multilingual signs in English and other neighboring languages, including Chinese, Lao, and Myanmar, to cater to the diverse population in Khon Kaen City.

The results of this research contribute new insights to the field of linguistic landscape research, which examines language within its social, economic, and cultural contexts alongside government urban development policies. This research integrates various sub-disciplines of linguistics to explain the social dynamics of language use in current contexts. As such, the findings not only address new issues within Thailand but also establish a research framework relevant to national development in both social and economic dimensions, with potential applications to other research areas in the future.

VII. OTHER RECOMMENDATIONS

The findings in this research can lead to interconnected research issues, including:
1. Analyzing language on business signs within the context of Khon Kaen as a smart city.
2. Surveying the needs for multilingual signs among long-term foreigners residing in Khon Kaen.
3. Analyzing language diversity in the health smart city dimension of Khon Kaen.
4. Examining language diversity in Khon Kaen to promote smart city initiatives.

VIII. REFERENCES

[1] M. Bucholtz & K. Hall, "Identity and Interaction: A Sociocultural Linguistic Approach", Discourse Studies, 7(4-5), pp. 585-614, 2005.
[2] M. Bucholtz,& K.Hall, "All of the Above: New Coalitions in Sociocultural Linguistics", Journal of Sociolinguistics, pp. 410–431[Online], Available file:///C:/Users/Ratana/Downloads/All_of_the_Above_New_Coalitions_in_Sociocultural_L.pdf [Accessed, Dec. 14, 2023]
[3] R.Landry & R.Y. Bourhis, "Linguistic Landscape and Ethnolinguistic Vitality: An Empirical Study", Journal of Language and Social Psychology, 16(1), pp. 23–49, 1997 [Online]. Available https://doi.org/10.1177/0261927X970161002 [Accessed, Dec. 15, 2023]
[4] R. Choeirod & R. Chanthao, "Linguistic Landscape at Patong, Phuket, Thailand: Language Perception on Public Signs", NeuroQuantology, 21(1),pp. 250-260, 2023.
[5] Y. Masai, Tokyo no Seikatsu Chizu [Living map of Tokyo], Tokyo, Jiji Tsushinsha, 1972.
[6] J. Carr, "Signs of Our Times: Language Contact and Attitudes in the Linguistic Landscape of Southeast Los Angeles, Bangkok's Linguistic Landscapes: Environmental Print, Codemixing and Language Change", International Journal of Multilingualism, 3(1), pp. 31-51,2006.
[8] K. Meemongkol, "Linguistic landscape at Soi NaNa Road and EkKamai", Journal of Humanity and Social Science, Ubonrachathani University, 12(1), pp. 66-88, 2021.
[9] T. Sarot & S. Kraisame, "Urban Multilingualism: A Case Study of the Relationship Between Linguistic Landscape and Business in North Nana", Journal of Language and Culture, 38(1), pp. 24-40, 2018.
[10] P. Viroonphan, Analysis of Street Food Signs in Yaowarat and Chatuchak Using Semiotics Landscape, Thesis for Master of Arts in Linguistics, Srinakharinwirot University, 2018.
[11] M. Yanhong & A. Rungruang, "Chiang Mai's Linguistic Landscape in the Tourist Attraction Areas: A Study on the English Language Use on Signs", The Golden Teak: Humanity and Social Science Journal, 19(2), pp. 59-70, 2013.
[12] T. Thongtong, "A Linguistic Landscape Study of Signage on Nimmanhemin Road, A Lanna Chiang Mai Chill-out Street", Manusya: Journal of Humanities, (22), pp.72-87, 2016.
[13] J. Seangyen, "Linguistic Landscape on Billboard in Mueang District Udonthani Province", Mekong Chi Mun Art and Culture Journal, 1(2), pp. 13-36, 2015.
[14] R. Dersingh; T. Tangkitjaroenkun; & P.Thanarat, "Investigating Public Signage in the Border Area of Nong Khai: Multilingualism at a Crossroads", Vacana Journal, 9(20), (July – December 2021), pp.30-146, 2021.
[15] D. Gorter, Linguistic Landscapes in the Netherlands: A Study of Multilingualism in Amsterdam and Friesland, Published by LOT, The Netherlands, 2005