

Linguistic Landscape in Thailand: A Case Study of Languages Used on Signs at Suvarnabhumi International Airport

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Abstract

This paper focuses on the languages used on signs at Suvarnabhumi International Airport, the main international airport of Thailand and one of the leading aviation hubs in Asia. Knowing the language trend on signs at this airport could be beneficial to other airports because airport authorities could use the research results to consider which languages to include on their signs. In 2009, the biggest group of signs at the airport were bilingual Thai and English (57%), while only 2.4% of signs were trilingual (Thai, English and Chinese or Arabic or Japanese). Over a decade, by 2021, the number of Chinese tourists in Thailand was continuously increasing. This triggered the research question as to whether the increase in the number of Chinese tourists would influence the choice of languages used on signs at the airport. The current study reported that the number of signs at the airport increased 2.3 times from 401 in 2009 to 914 in 2021. The number of signs containing Chinese increased from 5.7% in 2009 to 22.1% in 2021. Moreover, the number of trilingual Thai, English and Chinese signs increased from 2.4% in 2009 to 11.7% in 2021. This implies that the number of Chinese tourists influenced the inclusion of Chinese on signs. However, the role of Chinese as a foreign language on signs was not as significant

as the role of English, the world's most important international language, which was widely used on signs at Suvarnabhumi International Airport and is still considered the principal foreign language in Thailand.

Keywords

Linguistic landscape, Linguistic landscape in Thailand, Airport, Signs, Thailand

ภูมิทัศน์ทางภาษาศาสตร์ในประเทศไทย: กรณีศึกษา ภาษาที่ใช้บนป้าย ณ ท่าอากาศยานนานาชาติสุวรรณภูมิ

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บทคัดย่อ

บทความนี้ศึกษาภาษาที่ใช้บนป้ายในท่าอากาศยานนานาชาติสุวรรณภูมิ ซึ่งเป็นสนามบินหลักของประเทศไทยและเป็นหนึ่งในสนามบินที่สำคัญของเอเชีย การรู้แนวโน้มภาษาที่ใช้บนป้ายในท่าอากาศยานนี้ สามารถเป็นประโยชน์กับท่าอากาศยานอื่นๆ ได้ เนื่องจากเจ้าหน้าที่ท่าอากาศยานสามารถใช้ข้อมูลจากงานวิจัยนี้ในการพิจารณาว่าควรเพิ่มภาษาใดบ้างลงบนป้าย ในปี พ.ศ. 2552 ป้ายที่พบในท่าอากาศยานส่วนใหญ่ คือ ป้ายสองภาษา ภาษาไทยและภาษาอังกฤษ (57%) ส่วนป้าย 3 ภาษา (ภาษาไทย, ภาษาอังกฤษ, ภาษาจีน, ภาษาอารบิก หรือภาษาญี่ปุ่น) มีเพียง 2.4% เท่านั้น กว่า 1 ทศวรรษที่ผ่านมา ในปี 2564 จำนวนนักท่องเที่ยวจีนในประเทศไทยได้เพิ่มขึ้นได้ต่อเนื่อง จึงเป็นที่มาของคำถามวิจัยว่า ปริมาณนักท่องเที่ยวจีนที่เพิ่มขึ้นนี้จะส่งผลต่อการเลือกใช้ภาษาบนป้ายในท่าอากาศยานแห่งนี้หรือไม่ งานวิจัยชิ้นนี้พบว่าปริมาณป้ายในท่าอากาศยานเพิ่มขึ้น 2.3 เท่าจาก 401 ป้ายในปี 2552 เป็น 914 ป้ายในปี 2564 ปริมาณป้ายที่มีภาษาจีนเพิ่มจาก 5.7% ในปี 2552 เป็น 22.1% ในปี 2564 ยิ่งไปกว่านั้นปริมาณป้ายสามภาษา ภาษาไทย ภาษาอังกฤษ และภาษาจีน เพิ่มขึ้นจาก 2.4% ในปี 2552 เป็น 11.7% ในปี 2564 ซึ่งแสดงให้เห็นว่าปริมาณนักท่องเที่ยวชาวจีน มีผล

ต่อการเพิ่มภาษาจีนลงบนป้าย อย่างไรก็ตาม บทบาทของภาษาจีนในฐานะภาษาต่างประเทศบนป้าย ยังคงไม่สามารถเทียบเท่ากับบทบาทของภาษาอังกฤษ ซึ่งเป็นภาษากลางที่สำคัญที่สุดของโลกได้ ภาษาอังกฤษได้ถูกใช้อย่างแพร่หลายในท่าอากาศยานนานาชาติสุวรรณภูมิ และยังคงเป็นภาษาต่างประเทศหลักที่สำคัญในประเทศไทยอีกด้วย

คำสำคัญ

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Introduction

The tourism industry has long been considered one of the most important sectors generating income for Thailand, and it is seen by the government as a key driver of economic development (Ministry of Tourism and Sports of Thailand, 2022). Prior to the COVID-19 outbreak in 2020, Thailand welcomed 39,916,251 tourists in 2019, in comparison with 14,149,841 tourists visiting in 2009 (Ministry of Tourism and Sports of Thailand, 2022). It can be seen that in just over a decade, the number of international visitors to Thailand increased 2.8 times.

It is interesting that in 2009, there were 815,708 Chinese tourists, while in 2019, there were 10,997,169 Chinese tourists visiting Thailand (Ministry of Tourism and Sports of Thailand, 2022), which indicates that the number of Chinese tourists increased around 13.5 times. Owing to the dramatic rise in the figure of Chinese tourists, the researcher hypothesized that the Chinese language should be more regularly used on signs at Suvarnabhumi Airport and questioned whether the role of Chinese would be more important than the role of English on signs at the airport or not. These hypotheses led to the two research objectives given below.

Research Objectives

The objectives of this research are

- 1) To explore the relevance between the rise in the number of Chinese tourists and the presence of the Chinese language on signs at Suvarnabhumi Airport; and
- 2) To find out about the role of the Chinese language on signs at the airport in comparison with English and other foreign languages.

Literature Review

As this paper focuses on the languages used on signs, it directly involves the linguistic landscape, which is the study of language texts in public areas (Shohamy, 2019). In addition, because the work also looks at the roles of various languages on signs, it is closely related to the field of multilingualism or the use of more than one language (Rubino, 2019). This section discusses some of the important studies on linguistic landscape and multilingualism worldwide and in Thailand.

Linguistic Landscape and Multilingualism on Signs

Landry and Bourhis (1997, p. 25) defined ‘linguistic landscape (LL) as “the language of public road signs, advertising billboards, street names, place names, commercial shop signs, and public signs on government buildings combine to form the linguistic landscape of a given territory region, or urban agglomeration”. The studies of the linguistic landscape started from the assumption that signs can express other things beyond just the languages they displayed (Kallen, 2010). It is believed that the linguistic landscape can reveal the social context or the multilingual nature of a society if more than one language is found (Gorter, 2006).

Previously, most of the linguistic landscape studies were conducted under the theme of multilingualism in order to find out which language was dominant in multilingual cities as presented in the work by Backhaus (2007), Lawrence (2012) and Rubino (2019).

Backhaus (2007) conducted his research into multilingualism in Japan, with a focus on power and solidarity in society. The signs were divided by the sense of ownership into *official*, or the signs that belonged to the government, and *nonofficial* or the signs that belonged to private businesses. The research found that multilingual signs could still be found in many places around Tokyo and that both official and nonofficial multilingual signs contained more English than Japanese. In relation to Backhaus’ work, this research hypothesized that in spite of Thailand being a monolingual society, the signs at Suvarnabhumi Airport should

contain more English than Thai, owing to the fact that non-Thai travelers cannot read Thai. In addition, there should be an increase in the number of signs with the Chinese language in comparison with the data in 2009 because of the dramatic rise in Chinese visitors to Thailand in recent years before the pandemic started in 2020.

In 2012, Lawrence (2012) conducted research into the existence of English, Korean, 'Konglish' (a mixture of English and Korean), and Chinese on public signs in seven regions of Seoul, the capital city of South Korea. The signs were analyzed based on (1) languages, (2) locations and (3) domains. The study revealed that there was an inverse correlation between English and Korean. If English signs increased, Korean signs would decrease, and vice versa. On the other hand, there was a positive correlation between English and Konglish, so if English signs increased, Konglish signs would also increase. Lawrence (2012) came to the conclusion that in the linguistic landscape of contemporary Korea, English was regarded as the dominant foreign language, which also served as a marker of modernity, luxury and youth.

Rubino (2019) conducted research into bilingualism on signs in two areas in Sydney, Australia, where Italian immigrants and Italian Australians lived. The signs were categorized into two main groups, namely bilingual English and Italian signs, and trilingual Italian, Italian dialect and English signs. The work focused on the use of the languages in shops and restaurants in order to index 'Italianness' and appeal to customers by letting them feel a sense of authenticity and/ or professionalism. The research found that most of the bilingual English-Italian signs displayed the same messages, using English with smaller letters underneath the Italian to help readers feel that Italian was the principal culture; hence, the Italianess. Moreover, English was added as a complementary language for communicating with customers of non-Italian descent. The results from Rubino's research could be similar to the use of English on signs at Suvarnabhumi Airport in that English is widely used for communication and clarification of the original language, Thai.

Linguistic Landscape in Thailand

Huebner (2006) did his research into the linguistic landscape in Bangkok, Thailand by collecting data from fifteen areas to discover the influence of English as a global language on Thai society by focusing on the codemixing between English and Thai signs and the influence of other foreign languages on signs. Huebner (2006) categorized signs into *government* and *nongovernment* to see which language played a leading role on signs owned by the two groups. The research revealed that there were more monolingual Thai signs than bilingual Thai and English signs among the government signs, while the nongovernment signs contained more bilingual Thai and English than monolingual Thai.

Ngampramuan (2009) conducted research into the linguistic landscape on signs at major public transport hubs in Thailand with a focus on the role of English for wider communication on signs in three major public transport hubs, namely (1) Suvarnabhumi International Airport, (2) Don Muang Airport, which was then used for domestic flights, and (3) the Southern Bus Terminal, which was used mainly by local people. The signs were categorized based, first, on the sense of ownership into *official* and *commercial* and, second, on the languages they displayed, namely monolingual, bilingual, trilingual and multilingual, to see the role of foreign languages, if any, on signs in these transport hubs.

At the three transport hubs, Ngampramuan found that there were 401 signs in total: 125 official signs (31.2%) and 276 commercial signs (68.8%). The results showed that English was the most frequently used foreign language on signs at Suvarnabhumi Airport, as there were 383 signs (95.5%) containing English out of 401 signs, but there were only 23 signs (5.7%) containing Chinese. In the official group, there were 21 monolingual English signs (5.2%), while there were 117 monolingual English signs (29.1%) in the commercial group. The numbers of bilingual Thai and English signs were quite similar for both groups: 96 official Thai and English signs (23.9%) and 99 commercial Thai and English signs (24.6%). There were only 10 trilingual signs (2.4%), which displayed Thai, English

and Japanese or Arabic or Chinese. In addition, all of these 10 signs belonged to the commercial group, which means there were no trilingual signs that belonged to the airport (Ngampramuan, 2009).

Although other foreign languages, namely Japanese, Arabic and French were present on some of the signs, their roles were not significant as there were only 8 signs (1.5%). Finally, the research concluded that the existence of English on signs was associated with the target audience and the number of international visitors at each data collection site because English signs were found at Suvarnabhumi Airport the most, followed by Don Muang Airport and the Southern Bus Terminal (Ngampramuan, 2009).

In another study, Suaykratok (2018) stated in his work about the inclusion of a minority language on public signs in the South of Thailand that the inclusion of the minority language, or Malaysian, on signs would make visitors from Malaysia feel more welcome, and feel better about Thailand. Similarly, as one-thirds of the international tourists visiting Thailand in 2015-2019 were Chinese, the present researcher hypothesized that the airport should display more Chinese signs so that Chinese tourists could feel more welcome.

Methodology

The data, i.e., the photos of signs in this research, were collected from Suvarnabhumi Airport between June and August 2021. Prior to taking photos of signs at the airport, it was necessary for the researcher to send a letter to the authorities and ask them for permission for safety and security reasons. The data were collected from all main areas at the airport, ranging from the arrival hall, the departure hall, check-in counters and all the way to the gates. All signs that were salient to travelers were collected and counted as part of the data. Repetitive signs, which were exactly the same, such as the exit sign, would be counted as one. In total, 914 signs were used for data analysis in this research.

With regard to the research methodology, linguistic landscape studies allow researchers to apply various kinds of methodology and multidisciplinary approaches for a better understanding depending on each individual study (Gorter, 2006). This study deployed mixed methods as the data were collected from the real world setting, Suvarnabhumi Airport, and then categorized based on the ownership and languages. The analyses were based on the number of signs, related theories in previous studies, the researcher's observations and analyses and the information from interviews with some airport officials.

In general, data in linguistic landscape studies are categorized based on the sign ownership into *top-down* (a sign that belongs to the state and/ or central bureaucracies), and *bottom-up* (a sign that belongs to autonomous social actors or individuals) (Shohamy, 2006; Backhaus, 2007; Ngampramuan, 2016). Therefore, in this research, signs would be also categorized based on the ownership into top-down and bottom-up to see which group contains more English or Chinese signs. The term 'top-down' in this paper, refers to the signs owned by the airport, and 'bottom-up' refers to signs belonging to airlines, commercial shops and private businesses.

In addition, in order to study multilingualism on signs, Buchstaller and Albanides (2019), Ngampramuan (2016) and Rubino (2019) noted that signs can be categorized based on the languages they display into *monolingual signs*, containing only one language; *bilingual signs*, containing two languages; *trilingual signs*, containing three languages, and *multilingual signs* containing more than three languages. To examine the language trend of signs at Suvarnabhumi Airport, the data in this paper would also be categorized into (1) the ownership – top-down and bottom-up – and (2) the languages on signs – monolingual, bilingual, trilingual and multilingual – to see the language trend in each type of ownership.

Results

The results based on the two research objectives can be found in Table 1.

Table 1 Languages on Signs at Suvarnabhumi Airport

	Monolingual				Bilingual			Trilingual			Multilingual		Total
	Thai	English	Chinese	Others	Th+ Eng	Eng+ Ch	Others	Th+Eng+Ch	Th+Eng+Jap	Others	Others		
Top-down	21	90	5	8	208	24	30	55	1	2	6	33	483
Bottom-up	10	136	12	2	118	44	13	52	1	27	9	7	431
Total	31	226	17	10	326	68	43	107	2	29	15	40	914

Th = Thai, Eng = English, Ch = Chinese, Jap = Japanese

According to Table 1, it can be seen that there were 914 signs found at the airport in 2021, which increased 2.3 times in comparison with the data at the same airport in 2009. In 2021, there were relatively fewer more top-down signs (52.8%) than bottom-up signs (47.2%), while there were clearly more bottom-up signs (68.8%) than top-down signs (31.2%) in 2009.

The biggest group of signs was bilingual signs (47.8%), followed by the group of monolingual signs (31.1%) in second place and the group of trilingual signs in last place (15.1%). In comparison with the data in 2009, the number of trilingual signs increased 13.8 times to 138 signs in 2021. Nevertheless, in 2021, there was only a small percentage of multilingual signs (0.5%). There were also 40 signs labelled 'Others' as they did not fall into any of the aforementioned categories because they contained only pictures, maps, numbers, symbols or QR codes.

Based on the group of monolingual signs, for both top-down and bottom-up signs, monolingual English signs were more frequently found than other languages at Suvarnabhumi Airport (see Figure 1). In addition, the languages found on monolingual signs were English (24.7%), Thai (3.4%) and Chinese (1.8%). The other 10 monolingual signs contained Arabic, Japanese, Korean, and Vietnamese.



Figure 1 A monolingual English sign (bottom-up)

Note. From Wipapan Ngampramuan

As for the category of bilingual signs, both top-down and bottom-up signs mainly used Thai and English ($n = 326$ or 35.6%) as the two main languages (see Figure 2), while there were only 68 signs (7.4%) containing English and Chinese (see Figure 3). Finally, the other 43 bilingual signs (4.7%) contained English and Arabic, Japanese, Korean, Russian, or Vietnamese.



Figure 2 A bilingual Thai and English sign (top-down)

Note. From Wipapan Ngampramuan



Figure 3 A bilingual English and Chinese sign (bottom-up)

Note. From Wipapan Ngampramuan

Regarding the group of trilingual signs, there were only three languages commonly found together, namely Thai, English and Chinese (11.7%) (see Figure 3). The proportion of these trilingual signs was quite similar for both top-down ($n = 55$) and bottom-up ($n = 52$). It can be seen that the number of trilingual signs at Suvarnabhumi Airport in 2021 was 13.8 times higher in comparison with the number of signs in 2009.

Apart from English, Thai and Chinese, other foreign languages found on multilingual signs were Russian, Arabic, Japanese and Korean (see Figure 4), but the number of multilingual signs at this airport was rather low ($n = 15$ or 1.6%).



Figure 4 A multilingual English, Chinese, Korean and Russian sign (top-down)

Note. From Wipapan Ngampramuan

Discussion and Conclusion

According to the numerical results in Table 1, it can be summarized that, in 2021, signs at Suvarnabhumi Airport significantly increased 2.3 times from 401 signs in 2009 to 914 signs. In addition, in 2021, the role of Chinese on signs at Suvarnabhumi Airport markedly increased in comparison with its role at the same airport in 2009. Despite the high rise, out of 914 signs, there were 241 signs (26.4%) containing Chinese, while there were 705 signs (77.1%) containing English. This can lead to the conclusion that although the role of Chinese as a foreign language on signs at Suvarnabhumi Airport has definitely increased, it is still not as prevalent as the role of English, which has been used as the main foreign language on signs at Thai airports for a long time.

Regarding the division of signs based on ownership into top-down and bottom-up to see the number of signs in each group, and the language choices in comparison with the previous study in 2009, the current research shows that top-down signs increased 3.8 times from 125 signs to 483 signs in 2021. Interestingly, in 2009, the airport did not have any trilingual sign (0%) but mainly bilingual Thai and English signs; however, in 2021, the airport owned 58 (6.3%) trilingual signs, 55 of which contained Thai, English and Chinese (6.0%). Based on an interview with an airport official who was directly involved with the sign-making process, he revealed that the airport saw the importance of Chinese as the third language on signs as there had been a growing number of Chinese tourists visiting Thailand in recent years. In addition, if possible, the airport planned to replace all bilingual Thai and English signs with trilingual Thai, English and Chinese signs because of the usefulness of the Chinese language, since most of the Chinese visitors could not understand English as easily as Chinese. As long as these visitors needed to follow the airport's strict regulations, signs were considered necessary as a medium for communication between the airport authorities and the Chinese tourists because not many officers at the airport could speak Chinese. Therefore, if the signs contained information in Chinese, Chinese tourists could easily follow the

airport instructions and regulations. Apart from Thai, English, and Chinese, in 2021, other foreign languages found on signs (2.5%) were Russian, Japanese, Arabic, Korean and Vietnamese.

As for the group of bottom-up signs, in 2021, the number of signs increased 1.5 times from 276 signs to 431 signs. In the past, the number of bottom-up signs ($n = 276$) was 2.2 times higher than the top-down signs ($n = 431$), while at present, the number of top-down signs ($n = 483$) was higher than the bottom-up signs ($n = 431$). According to an interview with another airport official, the airport has tried to have more signs in all necessary areas to facilitate movement and instruct not only Chinese but also other international tourists because the officers took the view that signs were permanent, and they could give information to visitors every day and at any time. If signs were useful and clear enough, people did not have to ask for more information from the airport staff. This could help to reduce the staff's work and save time for visitors rather than waiting in line to ask for help.

In 2021, bilingual Thai and English signs were still the biggest category at the airport as they were in 2009. The official who was interviewed admitted that it was easier to add more Thai and English signs because most of the airport officers knew these two languages. However, if it was necessary to make a Chinese sign, they sometimes needed to wait for help from the staff members with a good knowledge of Chinese or ask for help from other government agencies if signs required long Chinese messages. They did not want to use 'Google Translate' or other translation software, as it could incorrectly translate messages, which could lead to problems for passengers and adversely affect the image of the airport and the country. Nevertheless, if the airport could get some help with the Chinese language and an increased budget, the airport would like to change bilingual Thai and English signs into trilingual Thai, English and Chinese signs to make Chinese tourists feel more welcome and enable them to understand the information and regulations at the airport more easily. However, the airport considered having Chinese as an additional language besides English but not replacing English

as English could still reach wider groups of audience and make the airport look international and standard like other international airports in the region and around the world.

In conclusion, in response to the two research objectives, the researcher has discovered that the rise in the number of Chinese tourists positively influenced the presence of more Chinese signs at Suvarnabhumi Airport in 2021, as the number of Chinese signs increased 13.8 times from 10 to 138 signs in 2021. In addition, the airport plans to add more Chinese messages on their new signs to complement English but not to replace English, so English would still keep its position as the main foreign and international language at Suvarnabhumi Airport. In addition, with regard to the language frequency on signs at the airport, it can be summarized that the language that was most frequently found on signs was English, followed by Thai and Chinese, in that order. Despite having other foreign languages – Russian, Japanese, Arabic, Korean and Vietnamese – on signs, these languages played very minor roles at the airport.

Based on the results and discussion, this paper suggests that, if possible, other airports in Thailand should include more Chinese messages on signs, as they could enhance Chinese tourists' understandings about the regulations, procedures and other information at the airports, which could help to lessen the work of airport officials, as well as making Chinese visitors feel more comfortable. At other international airports that are not regularly visited by Chinese tourists, English should still be the most useful international language, as it can reach a greater number of visitors than any other languages and will give the airports an appearance that follows the standards of other international airports around the world.

References

- Backhaus, P. (2007). *Linguistic landscape: A comparative study of urban multilingualism in Tokyo*. Multilingual Matters.
- Buchstaller, I., & Alvanides, S. (2019). Investigating the bilingual landscape of the Marshall Islands. In M. Pütz, & N. Mundt (Eds.), *Expanding the linguistic landscape: Linguistic diversity, multimodality and the use of space as a semiotic resource* (pp.203-228). Multilingual Matters.
- Gorter, D. (2006). Introduction: The study of the linguistic landscape as a new approach to multilingualism. *International Journal of Multilingualism*, 3(1), 1-6.
- Huebner, T. (2006). Bangkok's linguistic landscapes: Environmental print, codemixing and language change. *International Journal of Multilingualism*, 3(1), 31-51.
- Kallen, J. L. (2010). Changing landscapes: Language, space and policy in the Dublin linguistic landscape. In A. Jaworski & C. Thurlow (Eds.), *Semiotic landscapes: Language, image, space* (pp. 41-58). Continuum.
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology*, 16(1), 23-49.
- Lawrence, B. (2012). The Korean English linguistic landscape. *World Englishes*, 31, 70-92.
- Ministry of Tourism and Sports of Thailand. (2022). *Tourism receipts from international tourist arrivals 2009 (Statistics)*.
<https://www.mots.go.th/news/category/539>
- Ministry of Tourism and Sports of Thailand. (2022). *International tourist arrivals to Thailand 2020 (Jan-Dec)*.
<https://www.mots.go.th/news/category/599>

- Ngampramuan, W. (2009). *Linguistic landscape: A case study of signs in major transport hubs in Thailand* [Unpublished master's thesis]. The Open University.
- Ngampramuan, W. (2016). *English as a lingua franca in Thailand: A case study of English used on signs in tourist domains* [Unpublished doctoral dissertation]. University of Nottingham.
- Rubino, A. (2019). Multilingualism in the Sydney landscape: The Italian impact. In A. Chick, P. Benson, & R. Moloney (Eds.), *Multilingual Sydney* (pp. 180-192). Routledge.
- Shohamy, E. (2006). *Language policy: Hidden agendas and new approaches*. Routledge.
- Shohamy, E. (2019). Linguistic landscape after a decade: An overview of themes, debates and future directions. In M. Pütz, & N. Mundt (Eds.), *Expanding the linguistic landscape: Linguistic diversity, multimodality and the use of space as a semiotic resource* (pp. 25-37). Multilingual Matters.
- Suaykratok, P. (2018). *Inclusion of the minority language on public signs: Multilingualism in the deep South of Thailand* [Unpublished master's thesis]. National Institute of Development Administration.

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