

Eco-Linguistic Landscape of Surabaya City Square:

An Ecolinguistic and Linguistic Landscape Perspective

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ABSTRAK

This study investigates language use in the public spaces of Surabaya City Square from the perspectives of Ecolinguistics and Linguistic Landscape (LL). Specifically, it examines the forms, functions, and patterns of language displayed throughout the Surabaya City Square complex. The study employs the theoretical frameworks of Ecolinguistics and Linguistic Landscape to explain how language reflects ecological, historical, and sociocultural relationships within public spaces. Data were collected through observation and note-taking techniques, while data analysis employed the referential and distributional methods. The findings reveal that linguistic signs in Surabaya City Square are predominantly top-down signs issued by governmental authorities and are presented mainly in bilingual forms, particularly Indonesian and English. The linguistic landscape consists of lexical items functioning as place names, directional signs, public information, warnings, prohibitions, and historical descriptions. From an ecolinguistic perspective, the study identifies two categories of ecolexicons. Historical building names and heritage site descriptions represent retentive ecolexicons, reflecting the preservation of cultural and historical identity. In contrast, directional signs, public notices, warnings, and visitor instructions constitute innovative ecolexicons, representing linguistic adaptation to contemporary communicative needs in public spaces. These findings demonstrate that the linguistic landscape of Surabaya City Square serves not only informational purposes but also functions as a medium for preserving cultural heritage, strengthening the status of the Indonesian language, and accommodating multilingual communication within an urban tourism environment.

Keywords: ecolinguistics; linguistic landscape; ecolexicon; retentive ecolexicon; innovative ecolexicon

Introduction

Surabaya, the capital city of East Java Province, is one of Indonesia's largest metropolitan areas and an important center of economic, cultural, and historical activities. In addition to its urban development, the city offers numerous public facilities that serve both local communities and visitors. Among these, several public spaces have been transformed into tourist attractions that receive substantial numbers of domestic and international visitors. One of the city's newest attractions is Surabaya City Square (Alun-Alun Surabaya), which is located within the historic Balai Pemuda complex. As a multifunctional public space, Surabaya City Square combines recreational, educational, cultural, and heritage functions, making it an ideal site for investigating language use in public environments.

Language displayed in public spaces constitutes an essential component of public service and urban communication. Written expressions such as place descriptions, informational boards, public announcements, warnings, prohibitions, and directional signs should communicate information clearly while reflecting governmental responsibility in providing accessible public services. In Indonesia, the use of Bahasa Indonesia in public spaces is also closely associated with national language policy and language planning initiatives aimed at strengthening the status and prestige of the national language. Consequently, examining language use in public spaces is important not only from a communicative perspective but also from sociolinguistic, cultural, and policy-oriented perspectives.

The study of language displayed in public environments is commonly referred to as Linguistic Landscape (LL), an interdisciplinary field that integrates perspectives from linguistics, sociolinguistics, anthropology, sociology, psychology, and cultural geography. The concept was first introduced by Landry and Bourhis (1997), who defined linguistic landscape as the visibility of languages on public road signs, advertising billboards, street names, place names, commercial signs, and government buildings within a particular geographical area. Since then, the scope of Linguistic Landscape research has expanded considerably. Shohamy and Gorter (2009) argue that linguistic landscapes encompass all visible linguistic resources, words, and images displayed in public spaces, reflecting the interaction between language,

society, and space. Similarly, Dagenais et al. (2009) introduced the notion of environmental print, conceptualising urban environments as texts in which written language forms an integral part of everyday social life.

Although Linguistic Landscape research has primarily focused on language visibility and multilingual representation, an ecolinguistic perspective provides an additional dimension by examining the relationship between language and its ecological environment. Ecolinguistics views language as part of a dynamic ecosystem in which linguistic forms evolve through interactions with cultural practices, historical development, institutional policies, and social communication. Integrating Linguistic Landscape and Ecolinguistics therefore enables a more comprehensive understanding of how public signs simultaneously function as communicative resources, cultural artefacts, and ecological representations of language use.

Surabaya City Square presents an interesting context for investigating these issues because it contains various forms of linguistic signs representing Bahasa Indonesia alongside English and Dutch. These signs appear as place descriptions, historical narratives, public announcements, directional signs, prohibitions, and visitor guidance. Their presence reflects the implementation of Indonesia's language policy while simultaneously preserving the historical identity of heritage buildings within the Balai Pemuda complex. As a public space managed by the Surabaya City Government, the site demonstrates how language policy is realised through visual communication in an urban heritage environment.

Despite the growing body of research on linguistic landscapes, most previous studies have primarily focused on multilingual visibility, language policy, and identity construction in commercial districts, educational institutions, or metropolitan settings. Comparatively little attention has been paid to urban heritage public spaces where historical preservation, ecolinguistic processes, and multilingual public communication intersect. Moreover, few studies have integrated Linguistic Landscape and Ecolinguistics to explain how public signs simultaneously preserve historical identity while adapting to contemporary communicative needs. Addressing this gap, the present study proposes an Eco-Linguistic Landscape Framework that conceptualises public signage as a dynamic ecological system operating within urban heritage environments.

Accordingly, this study investigates the linguistic landscape of Surabaya City Square from the integrated perspectives of Linguistic Landscape and Ecolinguistics. Specifically, the study aims to:

1. identify and describe the forms and types of linguistic signs displayed in Surabaya City Square from a Linguistic Landscape perspective;
2. examine the communicative functions performed by linguistic signs within the public space; and
3. analyse the sociocultural factors underlying the coexistence of Bahasa Indonesia and other languages in promoting the status of the national language.

By addressing these objectives, the study contributes to current discussions on multilingual public communication, language policy, heritage preservation, and ecolinguistics. Furthermore, it provides empirical evidence of how linguistic landscapes function as dynamic ecological systems that mediate relationships between language, culture, history, and urban public life.

Method

Research Design

This study employed a qualitative descriptive approach to investigate the linguistic landscape of Surabaya City Square from the integrated perspectives of Linguistic Landscape and Ecolinguistics. The study aimed to identify the forms, functions, and ecological characteristics of linguistic signs displayed in public spaces. A qualitative approach was considered appropriate because the research focused on interpreting linguistic phenomena within their social, cultural, and historical contexts rather than quantifying language use.

Research Site

The research was conducted at Surabaya City Square (Alun-Alun Surabaya), located within the historic Balai Pemuda Complex, Surabaya, East Java, Indonesia. The site was selected because it serves as one of the city's most prominent public spaces, integrating recreational, cultural, educational, and heritage functions. As a heritage tourism destination, the area provides a rich linguistic landscape comprising informational signs, historical descriptions, place names, directional signs, public notices, prohibitions, and bilingual information boards.

Data Sources

The data consisted of all linguistic signs displayed within the Surabaya City Square complex. The unit of analysis included written linguistic expressions appearing in public spaces, such as:

- place names;
- building names;

- informational signs;
- public announcements;
- directional signs;
- warning and prohibition signs;
- historical descriptions; and
- other written linguistic symbols associated with public communication.

Although several signs incorporated visual or symbolic elements, the primary focus of analysis was the linguistic content presented on each sign.

Data Collection

Data were collected using the observation method (*metode simak*) and the note-taking technique (*teknik catat*) proposed by Sudaryanto (2017). Field observations were conducted systematically throughout the Surabaya City Square complex. Every linguistic sign encountered during the observation was photographed, documented, and recorded according to its location and communicative context.

The data collection procedure involved the following stages:

1. determining the research site at Surabaya City Square as the observation area;
2. observing all linguistic signs displayed in public spaces;
3. documenting and recording each linguistic sign together with its contextual information; and
4. compiling the collected data into a corpus for subsequent analysis.

Data Analysis

The collected data were analysed using the referential method (*metode padan*) and the distributional method (*metode agih*) as proposed by Sudaryanto (2017). The referential method was employed to interpret the relationship between linguistic expressions and the external realities to which they refer. This method enabled the researchers to analyse how linguistic signs represent public communication, historical heritage, and language policy within the urban environment.

The distributional method was applied to examine the internal linguistic structure of the collected texts, including lexical choices, phrase structures, clause constructions, and sentence patterns. The analysis focused on identifying linguistic forms and language types appearing in the public space.

The analytical procedure consisted of the following stages:

1. classifying linguistic signs according to their linguistic forms (word, phrase, clause, or sentence);
2. categorising the signs based on language type (monolingual, bilingual, or multilingual);
3. identifying the communicative functions performed by each linguistic sign;
4. analysing the ecological characteristics of the linguistic expressions by distinguishing between retentive ecolexicons and innovative ecolexicons;
5. interpreting the sociocultural factors influencing language choice in the linguistic landscape; and
6. drawing conclusions based on the integrated perspectives of Linguistic Landscape and Ecolinguistics.

Data Coding

Each linguistic sign was assigned a coding label to facilitate systematic analysis.

An example of the coding system is as follows:

(3/P/M)

where:

- 3 indicates the observation location;
- P represents the type or form of the linguistic sign (e.g., directional sign); and
- M denotes the language category (monolingual).

This coding system ensured consistency during data classification and facilitated the analysis of linguistic forms, communicative functions, and ecological characteristics.

Results and Discussion

4.1. Linguistic Forms in the Public Space of Surabaya City Square

The analysis identified three principal linguistic forms within the linguistic landscape of Surabaya City Square: single words, phrases, and clauses or complete sentences. These linguistic forms are systematically distributed according to the communicative functions of public signs and the characteristics of the spaces in which they are displayed. Rather than occurring randomly, the variation in linguistic forms reflects different informational needs and communicative purposes within the heritage environment.

4.1.1 Single-Word Signs

Single-word signs constitute the simplest linguistic form found in the study area. These signs are predominantly used for directional and navigational purposes, enabling visitors to identify facilities and move

efficiently throughout the public space. Representative examples include *Parkir* (Parking), *Masuk* (Entrance), *Keluar* (Exit), and *Toilet*.

The concise lexical structure of these signs facilitates rapid recognition and immediate comprehension. Their primary communicative function is to minimise cognitive processing while providing clear spatial orientation. Such lexical economy is particularly appropriate in high-mobility public environments, where visitors require immediate access to essential information.

From a linguistic landscape perspective, these signs illustrate the informational function of public language (Landry & Bourhis, 1997). Their effectiveness derives not from linguistic complexity but from clarity, visibility, and accessibility. Consequently, the predominance of single-word signs in navigational contexts demonstrates how linguistic form is adapted to practical communicative demands.

4.1.2 Phrase-Level Signs

Phrase-level signs represent the second major linguistic form identified in Surabaya City Square. Unlike single-word signs, these expressions primarily function to identify places, institutions, and public facilities. Examples include *Rumah Bahasa* (Language House), *Gedung Merah Putih* (Red-and-White Building), *Perpustakaan Surabaya* (Surabaya Public Library), and *Balai Pemuda* (Youth Hall).

These nominal phrases provide greater semantic specificity while remaining concise and easily recognisable. Their primary purpose is to establish institutional identity and facilitate place recognition rather than provide detailed explanations. As a result, phrase-level signs contribute not only to visitors' spatial orientation but also to the symbolic representation of governmental and cultural institutions within the urban landscape.

From the perspective of Linguistic Landscape studies, these place names function simultaneously as informational and symbolic resources. Beyond identifying physical locations, they communicate cultural values, institutional legitimacy, and civic identity. The naming of public facilities therefore contributes to constructing the linguistic identity of Surabaya as both a governmental and cultural centre.

4.1.3 Clausal and Sentential Signs

The most linguistically complex signs found in the study consist of clauses and complete sentences. These signs are concentrated primarily within the underground heritage exhibition, where visitors encounter historical narratives, interpretive descriptions, behavioural regulations, and public advisories.

Unlike lexical or phrasal signs, sentential signs provide detailed contextual information regarding historical buildings, cultural artefacts, and heritage conservation. Several texts explain the historical development of the former *De Simbang Societeit* building, describe colonial social life, and interpret museum collections preserved within the Balai Pemuda complex. Other sentential signs regulate visitor behaviour through prohibitions, warnings, and requests concerning cleanliness, smoking restrictions, and appropriate conduct.

The greater syntactic complexity of these signs reflects their educational and interpretive functions. Rather than merely directing visitors, these texts encourage historical understanding, cultural reflection, and responsible public behaviour. In this respect, language performs an educational role by mediating interactions between visitors and the cultural heritage represented within the site.

Furthermore, many historical descriptions are presented bilingually in Indonesian and English, indicating an effort to balance heritage preservation with international accessibility. This bilingual presentation extends the communicative reach of historical information while maintaining the prominence of Bahasa Indonesia as the primary language of public communication.

The distribution of linguistic forms across Surabaya City Square demonstrates a clear relationship between linguistic complexity and communicative purpose. Simpler linguistic forms are associated with rapid information processing, whereas more elaborate linguistic structures support historical interpretation and cultural education.

This functional differentiation supports the argument that linguistic landscapes are organised according to communicative needs rather than merely reflecting language visibility (Shohamy & Gorter, 2009). Language displayed in public spaces therefore operates as a strategic communicative resource shaped by the interaction between institutional objectives, visitor needs, and spatial functions.

From an ecolinguistic perspective, the three linguistic forms also illustrate different ecological roles within the public environment. Single-word and phrase-level signs primarily facilitate immediate social interaction with physical space, whereas sentential signs preserve collective memory by documenting historical narratives and cultural knowledge. Consequently, the linguistic landscape of Surabaya City Square functions not only as an informational system but also as an ecological mechanism through which language contributes to the preservation and transmission of cultural heritage.

These findings suggest that linguistic complexity in public signage is determined less by grammatical considerations than by communicative ecology. Public language evolves in response to the informational, educational, and sociocultural demands of the environment in which it is displayed. This ecological perspective extends conventional Linguistic Landscape research by demonstrating that linguistic forms

should be interpreted not merely as visible texts but as adaptive communicative resources embedded within broader historical and cultural ecosystems.

Table 1. Distribution of Linguistic Forms in Surabaya City Square

Linguistic Form	Primary Function	Representative Examples	Ecological Role
Word	Navigation	<i>Parkir, Masuk, Keluar, Toilet</i>	Immediate spatial orientation
Phrase	Place identification	<i>Balai Pemuda, Rumah Bahasa, Perpustakaan Surabaya</i>	Institutional and cultural identity
Clause/Sentence	Information, heritage interpretation, regulation	Historical descriptions, warnings, prohibitions	Heritage preservation and public education

4.2. Language Types in the Linguistic Landscape of Surabaya City Square

The analysis revealed that the linguistic landscape of Surabaya City Square is characterised by two principal language configurations: monolingual and bilingual signs. These configurations reflect the interaction between national language policy, heritage conservation, and the communicative demands of a public tourism destination. Rather than representing random language choices, the distribution of languages demonstrates deliberate institutional planning concerning how information should be communicated to diverse groups of visitors.

4.2.1 Monolingual Signs

Monolingual signage constitutes a substantial proportion of the linguistic landscape, with Bahasa Indonesia serving as the dominant language throughout most areas of Surabaya City Square. Indonesian is primarily used for naming public facilities, governmental institutions, and visitor services, including signs such as *Parkir, Masuk, Keluar, Rumah Bahasa, Balai Pemuda, Perpustakaan Surabaya*, and *Masjid As-Sakinah*.

The predominance of Indonesian reflects its institutional role as the national language and the primary medium of public communication. Most monolingual signs are installed in outdoor areas where the majority of visitors are Indonesian speakers. Their use supports efficient communication while simultaneously reinforcing the visibility and authority of the national language within public space.

Interestingly, several monolingual signs also appear exclusively in English, including *Basement, Exhibition Hall, Public Library, Mosque, Café, and Food Court*. These expressions generally refer to internationally recognisable facilities whose English terminology has become widely accepted in tourism and public service contexts. Their presence should not be interpreted as language shift but rather as a communicative strategy aimed at improving accessibility for foreign visitors.

The coexistence of Indonesian and English monolingual signs illustrates a pragmatic approach to multilingual communication. Indonesian remains the principal language of institutional identity, whereas English functions selectively where international comprehensibility is considered advantageous.

4.2.2 Bilingual Signs

The most distinctive feature of the linguistic landscape is the extensive use of Indonesian-English bilingual signage. Public information boards, historical descriptions, warnings, and behavioural regulations are frequently presented in both languages. Representative examples include *Informasi Kegiatan – Activity Information, Peringatan Jaga Jarak – Keep Distance, Dilarang Membuang Sampah Sembarangan – Do Not Litter*, and bilingual historical descriptions displayed within the underground heritage exhibition.

Unlike commercial bilingualism, which is often motivated by branding or prestige, the bilingual signs observed in this study primarily serve communicative and educational purposes. Their function is to ensure that both domestic and international visitors can access historical information, understand public regulations, and navigate the heritage site effectively.

A notable characteristic of these bilingual signs is the consistent prominence of Bahasa Indonesia. Indonesian invariably appears before English and occupies the primary position in the textual hierarchy. English functions as a supporting language rather than an equal alternative, reflecting the implementation of Indonesia's national language policy while recognising the communicative needs of international tourism.

This hierarchical bilingual arrangement demonstrates that multilingualism in public spaces does not necessarily imply equal linguistic status. Instead, bilingual signage can simultaneously strengthen the symbolic authority of the national language while enhancing international accessibility.

The distribution of monolingual and bilingual signs reveals that language choice within Surabaya City Square is shaped by the intersection of language policy, heritage management, and tourism communication. Indonesian dominates because the site primarily serves domestic visitors and functions as an official public space administered by the local government. English, meanwhile, is incorporated selectively

to facilitate communication with international tourists and to enhance the interpretability of heritage information.

From the perspective of Linguistic Landscape theory, this finding illustrates the dual functions of public language proposed by Landry and Bourhis (1997). Linguistic signs simultaneously perform an informational function, providing practical guidance for visitors, and a symbolic function, representing institutional authority and national identity. The prominence of Indonesian across nearly all bilingual signs symbolically reinforces its status as the national language, while English broadens the communicative reach of the information.

The findings also support Shohamy's (2006) argument that linguistic landscapes should be understood as manifestations of language policy in practice. Rather than being neutral texts, public signs represent governmental decisions regarding which languages are displayed, prioritised, and made visible. In Surabaya City Square, bilingual signage therefore reflects institutional language planning that balances national identity with the demands of international tourism.

From an ecolinguistic perspective, bilingual signs function as adaptive mechanisms within a multilingual communicative ecosystem. They enable interaction between local cultural heritage and global audiences without diminishing the ecological position of Bahasa Indonesia. Instead of replacing the national language, English complements it by extending communicative accessibility. Consequently, bilingualism contributes to ecological resilience, allowing the linguistic landscape to respond to changing social conditions while maintaining cultural continuity.

Overall, the findings demonstrate that multilingual public signage should not be interpreted solely as evidence of linguistic diversity. Rather, it represents an ecological strategy through which governments negotiate language policy, heritage preservation, and global communication within urban public spaces.

Table 2. Types of Language Use in the Linguistic Landscape of Surabaya City Square

Language Type	Characteristics	Representative Examples	Primary Function
Monolingual (Indonesian)	Dominant language for public facilities and government institutions	<i>Parkir, Masuk, Balai Pemuda, Perpustakaan Surabaya</i>	National identity and public communication
Monolingual (English)	International terminology for selected facilities	<i>Basement, Exhibition Hall, Public Library, Café</i>	International accessibility
Bilingual (Indonesian-English)	Parallel presentation of information in two languages	<i>Activity Information, Keep Distance, Do Not Litter</i>	Heritage interpretation and multilingual communication

4.3. Communicative Functions of Linguistic Signs in Surabaya City Square

The analysis identified five major communicative functions performed by linguistic signs in Surabaya City Square: directional, descriptive, regulatory, advisory, and informational. These functions demonstrate that public signage extends beyond the simple transmission of information. Instead, linguistic signs actively organise visitors' interactions with physical space, regulate public behaviour, preserve historical knowledge, and communicate institutional values. Collectively, they form an integrated communicative system that supports both heritage conservation and public service.

4.3.1 Directional Function

Directional signs constitute one of the most visible categories within the linguistic landscape. These signs facilitate spatial navigation by guiding visitors to entrances, exits, parking areas, public facilities, and other destinations throughout the heritage complex. Most directional signs employ concise lexical expressions accompanied by internationally recognised pictorial symbols, enabling rapid comprehension regardless of visitors' linguistic backgrounds.

The effectiveness of these signs lies in their simplicity. Minimal linguistic content reduces cognitive effort while maximising communicative efficiency, allowing visitors to orient themselves quickly within the public environment.

From a linguistic landscape perspective, directional signs exemplify the informational function of public language (Landry & Bourhis, 1997). Simultaneously, they contribute to the spatial organisation of the heritage site by transforming written language into an instrument of environmental navigation.

4.3.2 Descriptive Function

Descriptive signs are predominantly located within the underground heritage exhibition, where they accompany historical artefacts, architectural features, and museum collections. These texts explain the historical significance of buildings, introduce colonial institutions such as *De Sim pang Societeit*, and describe the social life associated with Surabaya during the colonial period.

Unlike directional signs, descriptive texts invite visitors to engage cognitively with the historical environment. Rather than simply identifying objects, they construct narratives that connect physical artefacts

with broader historical and cultural contexts. In doing so, language becomes an interpretive resource through which visitors reconstruct collective memory.

Many descriptive panels are presented bilingually in Indonesian and English. This bilingual presentation broadens access to historical knowledge while ensuring that Bahasa Indonesia remains the primary language of interpretation.

Consequently, descriptive signs perform an educational function by transforming heritage objects into meaningful cultural experiences.

4.3.3 Regulatory Function

Regulatory signs establish behavioural norms within the public space by prohibiting activities that may threaten environmental cleanliness, visitor safety, or heritage preservation. Typical examples include prohibitions against smoking, littering, spitting, and bringing food or beverages into restricted areas.

Although these signs appear as simple prohibitions, they represent institutional authority exercised through language. Rather than relying on physical enforcement, the management of the heritage site employs written language to shape acceptable public behaviour.

From an ecolinguistic perspective, regulatory signs contribute directly to maintaining the ecological sustainability of the heritage environment. Language therefore functions not merely as a medium of communication but also as a mechanism for environmental stewardship and cultural preservation.

4.3.4 Advisory Function

Unlike regulatory signs, advisory signs encourage desirable behaviour through polite requests rather than explicit prohibitions. Expressions requesting visitors to maintain cleanliness, orderliness, courtesy, and proper social conduct exemplify this communicative strategy.

The linguistic form of advisory signs reflects Indonesian cultural norms that favour indirectness and politeness in public communication. Instead of imposing behavioural control through commands, these signs promote voluntary cooperation by appealing to shared social responsibility.

This communicative style illustrates how public language embodies local sociocultural values while fostering harmonious interactions between visitors and public institutions.

4.3.5 Informational Function

Informational signs provide practical knowledge regarding public facilities, activities, services, and visitor guidance. They facilitate access to essential information required for effective use of the public space and improve visitors' overall experience.

Beyond delivering practical information, these signs also communicate institutional transparency and accountability by ensuring that public services are accessible and understandable to diverse groups of users.

Within the multilingual heritage environment, informational signs therefore support both functional communication and inclusive public participation.

The findings demonstrate that the communicative functions of linguistic signs are closely interconnected rather than operating independently. Directional signs assist movement, descriptive signs facilitate historical interpretation, regulatory signs promote environmental protection, advisory signs encourage socially appropriate behaviour, and informational signs enhance public accessibility. Together, these functions create a coherent communicative ecology that enables visitors to navigate, understand, and experience the heritage environment effectively.

This multidimensional functionality supports the argument advanced by Jaworski and Thurlow (2010) that linguistic landscapes should be understood as semiotic landscapes, in which written language interacts with physical space, institutional authority, visual symbols, and cultural meaning. Public signs therefore represent components of a broader communicative ecosystem rather than isolated linguistic texts.

From an ecolinguistic perspective, each communicative function contributes differently to the sustainability of the heritage environment. Directional and informational signs facilitate human interaction with space, descriptive signs preserve historical memory, regulatory signs protect environmental integrity, and advisory signs reinforce social values. Together, these functions maintain the ecological balance between people, language, and place.

The findings also demonstrate that linguistic signs operate simultaneously at functional, symbolic, and ecological levels. Functionally, they provide information and regulate behaviour. Symbolically, they represent governmental authority and cultural identity. Ecologically, they contribute to preserving both the physical environment and the historical narratives embedded within the heritage site.

This integrated perspective extends conventional Linguistic Landscape research by illustrating that public signage should not be interpreted solely as visible language but as an ecological communication system that supports heritage conservation, language policy implementation, and sustainable public engagement.

Table 3. Communicative Functions of Linguistic Signs in Surabaya City Square

Communicative Function	Purpose	Typical Examples	Ecological Contribution
Directional	Spatial navigation	Entrance, Exit, Parking, Toilet	Facilitates interaction with physical space
Descriptive	Heritage interpretation	Historical descriptions, museum narratives	Preserves collective memory
Regulatory	Behavioural control	No Smoking, Do Not Litter	Protects environmental sustainability
Advisory	Social guidance	Maintain cleanliness and courtesy	Reinforces community values
Informational	Public communication	Visitor information, activity boards	Enhances accessibility and visitor engagement

4.4. Ecolexicons in the Linguistic Landscape of Surabaya City Square

One of the most significant findings of this study is the identification of two complementary ecological categories of linguistic expressions within the linguistic landscape of Surabaya City Square, namely retentive ecolexicons and innovative ecolexicons. These categories illustrate how language displayed in public spaces simultaneously preserves historical continuity and responds to contemporary communicative needs. Rather than functioning merely as written information, linguistic signs become ecological resources that mediate relationships between heritage, society, and the urban environment.

The coexistence of these two categories demonstrates that public language is neither static nor purely functional. Instead, it continuously negotiates between preserving the past and adapting to present-day social contexts. This ecological perspective extends conventional Linguistic Landscape research by emphasising language as part of an evolving sociocultural ecosystem.

4.4.1 Retentive Ecolexicons

Retentive ecolexicons refer to linguistic expressions that preserve historical, cultural, and institutional continuity within the heritage environment. These ecolexicons remain visible despite urban transformation because they represent historically significant identities that are protected and maintained over time.

Examples identified in the study include De Simpang Societeit, Balai Pemuda, historical exhibition titles, colonial architectural descriptions, and museum narratives documenting the social history of Surabaya during the Dutch colonial period. These linguistic expressions function as cultural artefacts embedded within the heritage landscape.

Unlike ordinary place names, retentive ecolexicons perform several interconnected ecological functions. They preserve historical memory by maintaining authentic historical terminology, reinforce collective identity through references to the city's cultural heritage, and sustain continuity between past and present urban environments. Consequently, language itself becomes part of the heritage resource rather than merely describing it.

The preservation of these historical linguistic forms is also closely associated with Indonesia's cultural heritage regulations, which emphasise maintaining the authenticity of protected historical sites. As a result, the retention of historically significant names represents both legal preservation and ecological continuity within the urban landscape.

From an ecolinguistic perspective, retentive ecolexicons demonstrate how language contributes to sustaining cultural ecosystems. Historical linguistic expressions survive because they continue to perform meaningful social and cultural functions, allowing successive generations to access collective memory through public language.

4.4.2 Innovative Ecolexicons

In contrast, innovative ecolexicons consist of linguistic expressions that emerge in response to contemporary communicative needs. These include directional signs, bilingual visitor information, public service announcements, behavioural regulations, advisory notices, and multilingual guidance designed to improve accessibility within the heritage site.

Unlike retentive ecolexicons, innovative ecolexicons are characterised by flexibility and communicative adaptation. Their primary objective is to facilitate interaction between visitors and the surrounding environment rather than preserve historical terminology.

The emergence of bilingual informational signs exemplifies this adaptive process. Indonesian remains the primary language, while English is incorporated to improve accessibility for international visitors. Similarly, contemporary public notices promoting cleanliness, environmental responsibility, and appropriate visitor behaviour represent linguistic innovations responding to modern heritage management practices.

These findings indicate that innovative ecolexicons evolve alongside changing patterns of tourism, urban governance, and multilingual communication. Rather than replacing historical linguistic resources, they complement them by addressing new communicative demands arising within the heritage environment.

4.4.3 Ecological Interaction Between Retention and Innovation

Although retentive and innovative ecolexicons perform different communicative roles, they operate as complementary components of a single ecological system.

Retentive ecolexicons preserve historical authenticity, whereas innovative ecolexicons ensure communicative relevance. Their interaction enables Surabaya City Square to function simultaneously as a heritage site and a contemporary public space.

This relationship demonstrates that linguistic change within public spaces should not be interpreted as a process of replacement. Instead, language develops through continuous negotiation between preservation and adaptation. Historical names remain visible because they embody cultural identity, while newly introduced linguistic expressions ensure that the heritage site remains accessible and meaningful for present-day visitors.

From an ecolinguistic perspective, this interaction reflects ecological resilience. The linguistic landscape adapts to changing social conditions without disrupting the historical continuity of the environment. Consequently, language becomes an adaptive mechanism through which heritage preservation and contemporary communication coexist.

The identification of retentive and innovative ecolexicons represents one of the principal theoretical contributions of this study. Previous Linguistic Landscape research has primarily examined language visibility, multilingualism, and symbolic representation (Landry & Bourhis, 1997; Shohamy & Gorter, 2009). The present findings demonstrate that public linguistic signs also participate in ecological processes of language maintenance and adaptation.

Retentive ecolexicons illustrate how historical linguistic resources remain ecologically sustainable through institutional preservation and collective cultural recognition. Their continued visibility reinforces cultural memory and historical identity, transforming public language into an integral component of heritage conservation.

Conversely, innovative ecolexicons illustrate the adaptive capacity of language within evolving urban environments. The emergence of bilingual public information, contemporary behavioural regulations, and visitor-oriented communication reflects how linguistic systems respond dynamically to changes in tourism, public administration, and multilingual interaction.

The interaction between these two ecological processes suggests that linguistic landscapes should be understood as living ecological systems rather than static collections of written texts. Public signs continuously negotiate between historical continuity and communicative innovation, thereby sustaining both cultural authenticity and functional accessibility.

This ecological interpretation extends existing Linguistic Landscape scholarship by proposing that the evolution of public language follows ecological principles comparable to those observed in natural ecosystems. Just as biological ecosystems maintain equilibrium through adaptation and conservation, linguistic landscapes preserve historical identity while simultaneously accommodating new communicative requirements.

Accordingly, the findings provide the empirical foundation for the Eco-Linguistic Landscape Framework (ELLF) proposed in the following section. The framework conceptualises linguistic landscapes as dynamic ecological systems in which historical heritage, linguistic representation, communicative functions, ecological processes, and sociocultural outcomes interact continuously to shape multilingual public communication.

Table 4. Characteristics of Retentive and Innovative Ecolexicons

Dimension	Retentive Ecolexicons	Innovative Ecolexicons
Primary purpose	Preserve historical identity	Facilitate contemporary communication
Linguistic examples	<i>De Sim pang Societeit, Balai Pemuda</i> , historical exhibition narratives	Directional signs, bilingual information boards, public notices, behavioural regulations
Orientation	Cultural continuity	Communicative adaptation
Dominant function	Heritage preservation	Visitor accessibility and public service
Ecological role	Sustains collective memory	Responds to evolving communicative needs
Temporal orientation	Past–Present continuity	Present–Future adaptation

4.5. Toward an Eco-Linguistic Landscape Framework (ELLF) for Urban Heritage Spaces

The findings of this study suggest that the linguistic landscape of Surabaya City Square cannot be adequately understood as merely a collection of visible linguistic signs. Instead, it represents a dynamic ecological system in which language, history, institutional policy, public communication, and cultural identity continuously interact. Building upon the empirical findings, this study proposes the Eco-Linguistic Landscape Framework (ELLF) as a conceptual model explaining how linguistic landscapes operate within urban heritage environments.

Unlike previous Linguistic Landscape studies that primarily emphasise language visibility, multilingual representation, or symbolic identity (Landry & Bourhis, 1997; Shohamy & Gorter, 2009), the proposed framework conceptualises public signage as an ecological process through which historical continuity and communicative adaptation are simultaneously maintained. Accordingly, linguistic landscapes should be understood not only as visible texts but also as adaptive communicative ecosystems. The proposed framework consists of five interrelated components.

4.5.1 Historical Heritage

The ecological process begins with the historical heritage embedded within the urban environment. Heritage buildings, colonial architecture, historical place names, museum collections, and collective memory constitute the ecological foundation upon which linguistic signs are constructed.

In Surabaya City Square, the preservation of historical references such as *De Sim pang Societeit* and the Balai Pemuda complex demonstrates that language is inseparable from cultural heritage. These historical resources provide continuity between past and present and shape the identity of the public space.

4.5.2 Linguistic Representation

Historical resources are subsequently transformed into visible linguistic representations through public signs.

These representations include:

- place names;
- building names;
- historical descriptions;
- informational panels;
- directional signs;
- behavioural regulations; and
- bilingual public information.

Through these linguistic representations, historical knowledge becomes publicly accessible. Language therefore mediates interactions between cultural heritage and contemporary visitors.

4.5.3 Communicative Functions

Once displayed within the public environment, linguistic signs perform multiple communicative functions simultaneously.

The findings identified five major functions:

- directional;
- descriptive;
- informational;
- regulatory; and
- advisory.

These functions enable visitors to navigate the physical environment, understand historical narratives, comply with institutional regulations, and participate appropriately within the heritage site.

Rather than functioning independently, these communicative functions collectively create an integrated system of public communication that supports both heritage conservation and visitor experience.

4.5.4 Ecological Processes

The communicative functions give rise to two complementary ecological mechanisms identified in this study.

The first is *ecolexical retention*, through which historically significant linguistic expressions are maintained as part of the cultural identity of the heritage environment.

The second is *ecolexical innovation*, whereby new linguistic expressions emerge to accommodate changing communicative needs, multilingual tourism, and contemporary public services.

These two processes should not be interpreted as opposing forces.

Instead, they constitute complementary ecological mechanisms.

Retention preserves historical continuity.

Innovation ensures communicative sustainability.

Together, they maintain the adaptive equilibrium of the linguistic landscape.

4.5.5 Sociocultural Outcomes

The interaction between historical heritage, linguistic representation, communicative functions, and ecological processes ultimately generates broader sociocultural outcomes.

The findings indicate several major outcomes:

- strengthening the visibility of Bahasa Indonesia;
- preserving historical identity;
- facilitating multilingual accessibility;
- improving visitor engagement;
- promoting heritage education; and
- supporting sustainable cultural tourism.

Consequently, the linguistic landscape contributes not only to communication but also to the long-term sustainability of urban heritage environments.

The proposed Eco-Linguistic Landscape Framework (ELLF) expands existing theories of Linguistic Landscape by integrating ecological perspectives into the analysis of public language. Previous studies have generally interpreted linguistic landscapes through three principal dimensions:

- language visibility;
- multilingual representation; and
- symbolic identity.

The present findings demonstrate that these dimensions represent only part of the ecological processes occurring within public spaces. Language displayed in heritage environments continuously negotiates between preserving historical authenticity and responding to evolving communicative needs. This ecological interaction explains why historically significant expressions remain visible alongside newly introduced bilingual information, public regulations, and visitor guidance.

Accordingly, linguistic landscapes should be conceptualised as adaptive communicative ecosystems rather than static collections of written texts.

This perspective also extends ecolinguistic scholarship by illustrating that linguistic sustainability is achieved not through resisting change but through balancing preservation and innovation.

The coexistence of retentive and innovative ecolexicons therefore represents an ecological mechanism that enables heritage sites to remain historically authentic while continuing to function effectively as contemporary public spaces.

Ultimately, the Eco-Linguistic Landscape Framework provides a transferable conceptual model for analysing linguistic landscapes in museums, historical districts, heritage cities, archaeological sites, and other multilingual public environments where language simultaneously functions as communication, cultural heritage, and ecological resource.

Figure 2. Eco-Linguistic Landscape Framework (ELLF)

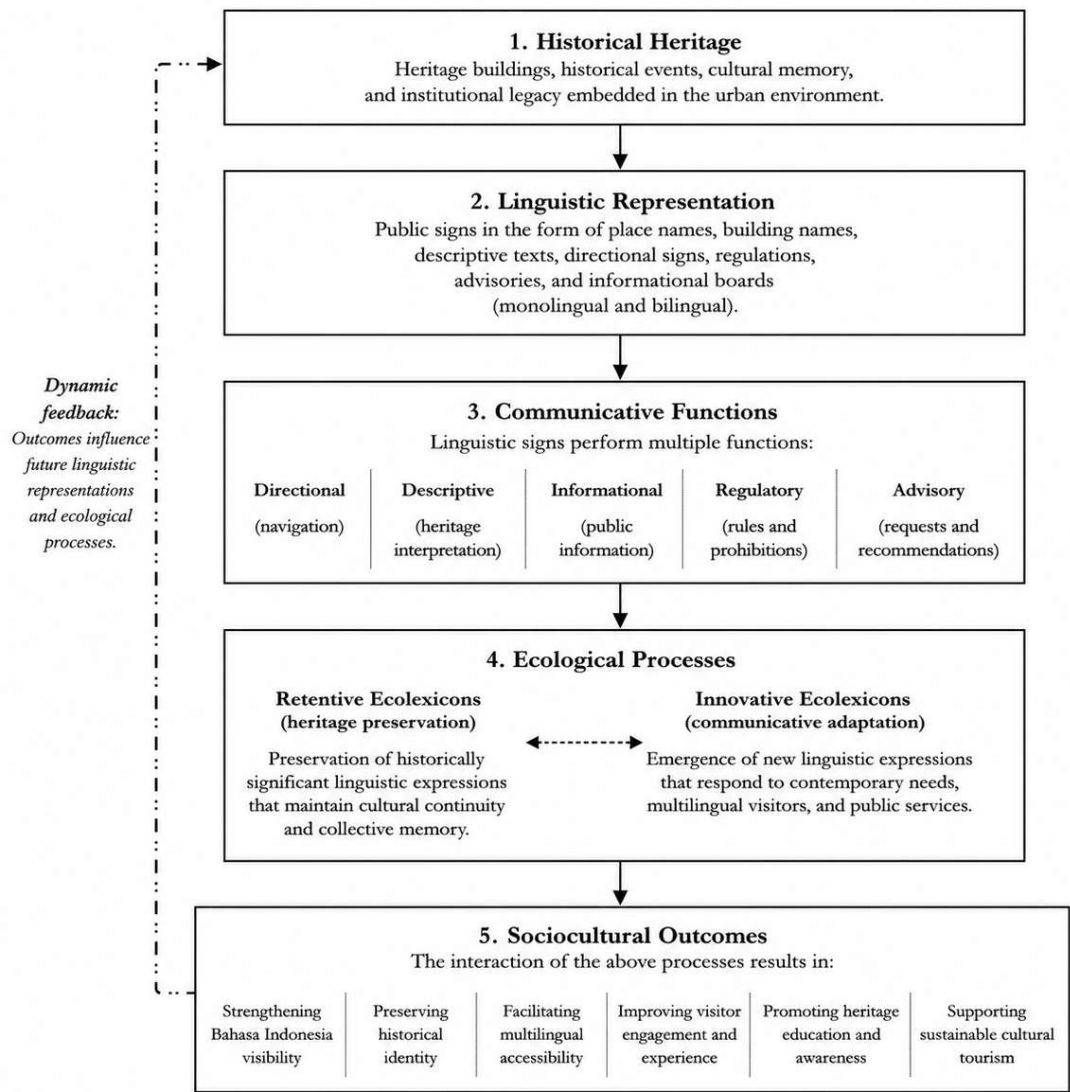


Figure 2. Eco-Linguistic Landscape Framework (ELLF)

Note: The dashed line indicates the dynamic feedback loop that ensures the continuous adaptation and sustainability of the linguistic landscape.

5. Conclusion

This study examined the linguistic landscape of Surabaya City Square through the integrated perspectives of Linguistic Landscape and Ecolinguistics. The findings demonstrate that public linguistic signs within this urban heritage environment comprise three principal linguistic forms: words, phrases, and clauses or complete sentences, which are strategically employed according to their communicative purposes. The linguistic landscape is characterised primarily by monolingual Indonesian and Indonesian–English bilingual signs, reflecting a balance between the implementation of national language policy and the communicative demands of heritage tourism.

The study further identified five major communicative functions of public signage, namely directional, descriptive, informational, regulatory, and advisory functions. These functions illustrate that linguistic signs perform multiple roles extending beyond the provision of information. They facilitate spatial navigation, regulate visitor behaviour, interpret historical heritage, preserve collective memory, and promote socially appropriate interaction within the public environment. Consequently, the linguistic landscape functions as an integrated communication system that simultaneously supports heritage conservation, public service, and visitor engagement.

One of the principal contributions of this study is the identification of two complementary ecological categories of linguistic expressions: retentive ecolexicons and innovative ecolexicons. Retentive ecolexicons preserve historical continuity through the maintenance of heritage names, historical narratives, and culturally significant linguistic expressions, whereas innovative ecolexicons emerge in response to contemporary communicative needs, including bilingual public information, visitor guidance, and behavioural regulations. The coexistence of these two ecological mechanisms demonstrates that linguistic landscapes evolve through the continuous interaction between preservation and adaptation rather than through linguistic replacement.

Building upon these empirical findings, this study proposes the Eco-Linguistic Landscape Framework (ELLF) as a conceptual model explaining how historical heritage, linguistic representation, communicative functions, ecological processes, and sociocultural outcomes interact within urban heritage spaces. The framework extends existing Linguistic Landscape scholarship by integrating an ecolinguistic perspective that conceptualises public signage as a dynamic communicative ecosystem rather than merely a collection of visible written texts. In doing so, the study contributes to the theoretical development of both Linguistic Landscape Studies and Ecolinguistics by introducing an ecological interpretation of multilingual public communication.

From a practical perspective, the findings provide valuable insights for local governments, heritage managers, tourism authorities, and language policy makers in designing multilingual public signage that balances communicative effectiveness, historical authenticity, and cultural sustainability. The proposed framework may also assist heritage institutions in developing public communication strategies that preserve cultural identity while accommodating increasingly diverse visitor populations.

Nevertheless, this study has several limitations. First, the research was conducted at a single urban heritage site, limiting the generalisability of the findings to other sociolinguistic contexts. Second, the analysis focused exclusively on officially installed linguistic signs and did not examine visitors' perceptions or interpretations of public signage. Third, digital linguistic landscapes, including QR-code-based information systems and interactive heritage media, were beyond the scope of the present study.

Future research may expand the proposed framework by conducting comparative studies across heritage cities in different countries, examining visitors' interpretations of multilingual public signage, or investigating the integration of digital technologies into heritage communication. Further empirical validation of the Eco-Linguistic Landscape Framework (ELLF) in diverse multilingual settings would also strengthen its theoretical applicability and contribute to a broader understanding of linguistic landscapes as adaptive ecological systems.

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