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From Context to Process: A Narrative Literature Review of Analytical Models in Linguistic Landscape Research

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Abstract

As linguistic landscape (LL) research has developed, analytical perspectives have expanded beyond descriptions of visible linguistic forms and content to encompass context, space, social meaning, language policy, sign production, and audience reception. LLs not only reflect language use and linguistic vitality in particular social spaces but also reveal how language policies are implemented, negotiated, or departed from in practice. This narrative literature review compares representative analytical models in LL research, focusing on their analytical emphases, major dimensions, contributions, and limitations. The review identifies a shift from content-oriented analysis towards multidimensional and process-oriented approaches. The SPEAKING Model situates visible language within communicative contexts by examining participants, purposes, norms, and genres, whereas the Social Indexicality Model explains how linguistic forms index social identities, cultural values, and group affiliations. Policy-and process-oriented models connect visible displays with wider policy and social processes. The Three-Dimensional Analytical Model examines relationships among policy, displayed practice, and audience experience, while MIPS integrates policy, sign production, visible practice, and reception. These approaches help explain how linguistic patterns emerge, are interpreted, and may align with or diverge from policy requirements. Overall, no single model is universally optimal; models should be selected or combined according to research aims, objects of study, and data types.

Keywords: Linguistic Landscape, Speaking Model, Social Indexicality Model, Three-Dimensional Analytical Model, MIPS Model

Introduction

The concept of the linguistic landscape (hereafter, LL) was brought to prominence by Landry and Bourhis (1997), who defined it as “the visibility and salience of languages on public and commercial signs in a given territory or region” (p. 23). This definition established publicly

displayed language as a source of sociolinguistic evidence. Early LL research often examined the languages present in particular locations, their distribution and relative visibility, and their informational and symbolic functions. Such research demonstrated that public signage could reflect the status and vitality of language groups while communicating social and ideological meanings. These concerns also raised questions about how visible linguistic patterns relate to the social conditions and decisions underlying their formation.

Globalisation, migration, tourism, and commercialisation have made these questions increasingly relevant. Public and commercial spaces bring local, national, and global languages into contact, making issues of identity, power, cultural representation, and language policy materially visible. Alongside these social developments, the scope of LL research has expanded beyond fixed written signage to encompass multimodality, materiality, mobility, and the interaction of linguistic and non-linguistic resources (Shohamy, 2015). Kallen (2023) and Gorter and Cenoz (2024) document the field's growing interdisciplinary engagement with sociolinguistics, applied linguistics, semiotics, and related areas. This expansion has encouraged researchers to examine linguistic displays in relation to their material forms, spatial settings, and changing social contexts.

The expansion of the research object has been accompanied by a broadening of analytical questions. Beyond identifying which languages appear and how frequently they occur, researchers have investigated how linguistic displays acquire meaning, express identity, reflect power relations, and relate to language policy. Attention has also extended to the actors involved in producing and interpreting these displays, including sign makers' choices and the social conditions shaping them (Ben-Rafael et al., 2006; Huebner, 2009). Understanding LLs therefore requires attention both to the historical, social, political, and spatial contexts in which signs are situated and to the activities through which they are produced and interpreted. Different theoretical approaches and analytical models address these concerns in different ways: some foreground communicative context or spatial organisation, while others focus on language choice, social structure, policy, or audience interpretation. Their diversity offers valuable analytical resources, but also makes model selection consequential, since each approach enables particular questions to be asked and particular relationships to be examined.

A systematic comparison of these models can clarify their analytical focus, explanatory scope, and relationships with one another. The present review adopts a context-to-process perspective to organise this comparison. Here, context refers to the social, political, historical, and spatial conditions within which linguistic displays are situated, while process concerns the relationships among language policy, sign production, visible displays, and audience perception and response. This perspective provides a conceptual lens rather than a chronological classification: contextual and process-oriented concerns may coexist within the same model. It directs attention to how models account for the relationship between the conditions surrounding linguistic displays and the activities through which those displays are created, regulated, encountered, and interpreted.

Against this background, the present narrative literature review critically examines selected analytical models used in LL research, alongside theoretical approaches that specify principles or dimensions for LL analysis. It compares their analytical components, explanatory scope,

treatment of context, and coverage of different stages of the LL process, using these criteria to assess their contributions, applications, and limitations. Through this comparison, the review seeks to clarify how different models explain what is displayed, how and why it is produced, and how it is interpreted by social actors. Its aim is to provide a structured account of the relationships among these approaches and support theoretically informed model selection in future LL research. The following section situates the review in relation to previous reviews and theoretical syntheses and clarifies its specific contribution.

Literature Review

Previous studies have reviewed and discussed the analytical frameworks, theoretical models, and analytical dimensions of LL research. Shang and Zhao (2014a) provided an overview of the field's major perspectives, theories, and methods, examining the interaction between language and space in public settings and how this interaction reflects and shapes the power and status of different ethnolinguistic groups. In a related study, Shang and Zhao (2014b) examined the epistemological foundations and analytical dimensions of LL research, covering linguistic power, policy implementation, linguistic forms, the spread of English, and historical change. They also discussed Ben-Rafael's principles of LL construction, Spolsky's theory of language choice, and Trumper-Hecht's three-dimensional analytical model, outlining theoretical approaches that extend beyond descriptions of signs to interpretations of their social significance.

Addressing the emphasis on quantification over interpretation in LL research in China, Zhou (2019) proposed an analytical model comprising two levels and six dimensions. The informational level encompasses language choice, code distribution, and interlingual transfer, while the symbolic level addresses linguistic power, identity, and language ideology. The model seeks to connect observable linguistic features with underlying social meanings. Ismail and Kurniadi (2024) critically examined existing analytical frameworks and methods, identifying limitations such as an emphasis on static signage and urban spaces, alongside insufficient attention to non-visual language practices, socioeconomic factors, and power relations. Their review highlighted the need to broaden the scope of analysis to better account for the dynamic nature and social contexts of LLs.

Collectively, these studies provide an important foundation for the present review through theoretical synthesis, the elaboration of analytical dimensions, model development, and methodological reflection. However, their primary aim was not to compare analytical models systematically against a common set of criteria. There remains scope for further comparison and synthesis concerning the models' analytical components, explanatory scope, treatment of context, and attention to different stages of the LL process. The present review takes analytical models themselves as its objects of comparison. Using a common set of criteria, it examines their key components, contributions, and limitations and adopts a context-to-process perspective to explore how LL analysis builds on contextual and spatial interpretations to address the relationships among language policy, sign production, audience perception, and response.

Review Methodology

Review Design

This study adopted a narrative literature review design. Narrative literature reviews critically

and interpretively synthesise published research, enabling researchers to organise heterogeneous bodies of literature, trace conceptual developments, and identify recurring patterns, scholarly debates, and research gaps (Green et al., 2006; Ferrari, 2015; Snyder, 2019). Unlike reviews designed to aggregate empirical effect sizes or answer narrowly defined intervention questions, narrative literature reviews are particularly suitable for examining the historical development and conceptual diversity of a research field. Analytical models in LL research draw on different theoretical traditions and vary considerably in their underlying assumptions, units of analysis, analytical dimensions, research applications, and explanatory scope. A narrative review makes it possible to integrate foundational theoretical scholarship, methodological discussions, and empirical applications, while examining how the analytical focus of LL research has developed from contextual description towards the analysis of spatial relations, language policy, sign production, and audience interpretation. A narrative literature review design was therefore considered appropriate for the present study.

Literature Search and Selection

Google Scholar was used as the principal academic search platform. This choice was made because LL scholarship extends across multiple disciplines, including sociolinguistics, semiotics, language policy, geography, communication, and cultural studies, and relevant publications appear not only in academic journals but also in scholarly monographs and book chapters. The search was conducted in August 2026 and primarily covered literature published between 1997 and July 2026. The year 1997 was selected as the starting point because Landry and Bourhis (1997) provided the foundational definition that brought the concept of the linguistic landscape to prominence.

The core searches combined the exact phrase “linguistic landscape” with each of the terms “analytical model,” “analytical framework,” and “methodology.” Supplementary searches combined “linguistic landscape” with terms corresponding to the principal analytical dimensions of the review, including “communicative context,” “space,” “language policy,” “sign-making,” “sign production,” “audience,” “perception,” “attitude,” and “reception.” After relevant models and their principal scholars had been identified through the initial searches, targeted searches were conducted using the names of individual models and authors. The electronic searches were further supplemented by backward reference searching and forward citation tracking of foundational publications and major studies applying the identified models.

Publications were included when they met the following criteria: (1) they were peer-reviewed journal articles, scholarly monographs, or academic book chapters; (2) they proposed, adapted, developed, or empirically applied an analytical model or theoretical framework relevant to LL research; (3) they described their analytical concepts, dimensions, or procedures with sufficient clarity to permit comparison across models; and (4) they directly addressed one or more core analytical dimensions, including communicative and social context, textual organisation, space, language policy, sign production, or audience reception. To distinguish major analytical models from theories mentioned only incidentally, particular attention was given to frameworks that made a distinctive analytical contribution and had subsequently been empirically applied, adapted, compared, or subjected to sustained methodological discussion in later LL research.

Major Analytical Models in LL Research

Drawing on Bailer-Jones (2009) and Nilsen (2015), this review defines an analytical model as a deliberately simplified and structured representation of a phenomenon that specifies key components, dimensions, or relationships for the systematic examination and interpretation of empirical data. Accordingly, the review focuses on four explicitly formulated models that have been proposed or adapted for LL analysis: the SPEAKING Model, the Three-Dimensional Analytical Model, the Multilingual Inequality in Public Spaces Model, and the social indexicality Model.

Huebner's Adaptation of the SPEAKING Model

Drawing on Hymes's (1972) ethnography of communication, Huebner (2009) adapted the SPEAKING Model as a framework for LL analysis. The acronym represents eight components: Setting and Scene, Participants, Ends, Act Sequence, Key, Instrumentalities, Norms, and Genre. Applied to LL research, these components direct attention to the location and social context of a sign, its producers and intended audiences, its purposes, the organisation and tone of its message, the linguistic and material resources employed, the norms governing its production and interpretation, and its sign type.

Empirical studies demonstrate the flexibility of the model, although most have employed only selected components. Tamtomo and Goebel (2023), for example, combined setting, act sequence, and genre to examine the relationships among the emplacement, multimodal organisation, and types of signs in Indonesian urban contexts. Their study demonstrated that local and global semiotic resources coexist through interaction rather than simple substitution. In a study of Japanese Brazilian communities in Japan, Nambu (2024) used genre as an organising analytical category and connected different sign types with changing expressions of immigrant identity. Similarly, Zhang (2024) distinguished between commercial and informational signs to examine how the LL of an ancient Chinese town constructed multiple local, commercial, cultural, and global identities.

Other studies have attempted a more comprehensive operationalisation of the eight components. Zhong and Wei (2023) applied all eight components of SPEAKING to the LL of Langtou Village in China to investigate the temporal layering of signs and the reconstruction of local culture. More recently, Wang (2025) examined 1,039 signs across different districts of Xishuangbanna and supplemented the sign data with interviews with ten local residents. Rather than treating the SPEAKING components as independent descriptive categories, the study examined how setting interacted with participants, ends, and norms. Systematic differences were identified across administrative, commercial, tourist, and residential districts, while the visibility of Dai and other languages was found to be influenced by both district functions and changes in language-policy support. Compared with checklist-based applications, this relational use represents a further development of the model.

Taken together, the literature reveals two principal uses of SPEAKING in LL research. In selective applications, individual components—particularly setting, genre, and participants—serve as sensitising analytical categories for interpreting signs. In comprehensive applications, all eight components provide a more systematic coding structure. The latter offers broader analytical coverage, but it may still produce a series of parallel descriptions unless the relationships among the components are explicitly investigated.

The model's main contribution is therefore to conceptualise signs as socially situated communicative events rather than isolated linguistic objects. It extends analysis beyond the frequency of different languages by asking where, why, by whom, and for whom a sign is produced. However, SPEAKING was originally developed for spoken communication, and components such as act sequence, key, and instrumentalities require reinterpretation when applied to static and multimodal signs. Existing applications have also focused primarily on contextualising visible signs, with less attention to the interconnected processes involving language policy, sign production, visible displays, and audience responses. Huebner's contribution is therefore best understood as the adaptation of a general communicative model that established an important contextual foundation for LL analysis.

Trumper-Hecht's Three-Dimensional Analytical Model

Drawing on Lefebvre's (1991) theory of the production of space, Trumper-Hecht (2010) analysed the LL through three interrelated dimensions: physical, political, and experiential. The physical dimension concerns the observable languages on signs and their distribution, visibility, and presentation. The political dimension encompasses language policies, regulations, ideologies, and institutional decisions intended to shape the LL. The experiential dimension concerns how residents and other "walkers" perceive, interpret, and evaluate their linguistic environment.

The model's analytical value lies not only in describing the three dimensions separately but also in comparing them. In the original study of Upper Nazareth, Trumper-Hecht found that the physical visibility of Arabic, official requirements concerning its display, and residents' perceptions of its presence did not necessarily correspond. The model can therefore reveal discrepancies among what language policy prescribes, what signs visibly display, and what audiences perceive. It also facilitates methodological triangulation through photographic documentation, policy analysis, questionnaires, and interviews.

Subsequent applications have further demonstrated that identifying discrepancies across dimensions is the model's principal empirical strength. In their study of Guangzhou, Han and Wu (2020) compared language policy, the photographed LL, and residents' perceptions. They identified dissensus both within and across the three dimensions: the official policy regime prioritised standard Chinese, whereas bottom-up signage and residents' linguistic demands reflected greater multilingual diversity. Their findings suggest that policy–practice non-alignment should not simply be interpreted as a failure of policy implementation but may result from conflicts among institutional, commercial, and community interests. Woo and Riget (2022) applied the model to Kuala Lumpur International Airport. They examined 368 top-down signs, conducted a detailed analysis of non-identical multilingual signs, and collected questionnaire data from airport users. Malay occupied the dominant official position, while English served as the principal language of international communication. However, some respondents considered the representation of other Malaysian languages, particularly Tamil, to be inadequate. This finding indicates that formal compliance with national language policy does not necessarily satisfy users' expectations of linguistic inclusion in an international transport space.

The model has also been extended beyond conventional fixed signage. Yu, Petrus Atin, and Shak (2025) applied it to multilingual language use on local food packaging in China. The study

combined an analysis of 944 packaging samples with questionnaire responses from 114 consumers. Approximately 22 per cent of the packages displayed foreign-language text more prominently than Chinese, while a similar proportion contained foreign-language content without corresponding Chinese translations. However, consumers' interpretations of these practices were inconsistent, and opposition to the prominent use of foreign languages was relatively limited.

These applications show that the Three-dimensional analytical model can be used to interpret both fixed signs in public spaces and mobile signs originating in privately controlled commercial domains. Studies offering greater analytical depth generally employ different types of data for each dimension rather than inferring language policy or public perceptions solely from photographs of signs. However, the model does not treat sign-making as a distinct analytical process. Consequently, even when discrepancies between policy and visible practice are identified, the decision-making processes through which sign producers interpret, negotiate, or circumvent policy may remain insufficiently explained. Although the model connects policy, signs, and audience experience, it does not specify a complete sequential or cyclical relationship among them. It is therefore best understood as a multidimensional and relational model rather than a fully process-oriented one.

Gorter's Multilingual Inequality in Public Spaces Model

Gorter (2021) proposed the Multilingual Inequality in Public Spaces (hereafter, MIPS) Model to examine the processes through which LLs are regulated, produced, encountered, and acted upon. The model comprises five interconnected components: language policy processes, sign-making processes, unequal languages on signage, perception through seeing and reading, and reflections, reactions, and language practices.

The first two components concern the processes preceding the emergence of visible signage. Language policies influence which languages may appear and how they should be presented, while sign makers interpret and negotiate these requirements under commercial, institutional, linguistic, and aesthetic conditions. The third component concerns the resulting unequal representation of languages on signs. The final two components distinguish between noticing or reading signs and subsequently interpreting, evaluating, or responding to them.

Unlike models that treat these dimensions separately, MIPS conceptualises them as an interconnected cycle. Audience responses may influence subsequent language policies and sign production, thereby creating a feedback loop. From the perspective of this review, MIPS can be interpreted as involving two levels of mediation. First, language policy is mediated through sign-making before being transformed into visible practice. Second, visible signs are mediated through audience perception and interpretation before generating attitudes or actions. The model is therefore also well suited to interpreting cases of non-alignment between the LL and language policy.

Existing applications demonstrate both the analytical scope of MIPS and the difficulty of examining all five components simultaneously. Gorter (2022) used MIPS to investigate names in the Frisian LL. The study considered policy developments, the production and linguistic characteristics of names, public perceptions and attitudes, and possible behavioural

consequences. It showed that names do not merely identify places but also contribute to the institutional recognition and everyday reproduction of Frisian identity.

Wekjira and Bátyi (2024) applied the first three components of MIPS to the LL of Ambo Town, Ethiopia. Through interviews with sign makers, they found that top-down signs were more closely aligned with official working-language arrangements, whereas bottom-up signs reflected local preferences, commercial motivations, and the symbolic value of English. Minority languages remained underrepresented. The study demonstrated that language policy is filtered through institutional and commercial decision-making before becoming visible in public space. However, because audience perceptions and reactions were not investigated, the complete MIPS cycle was not examined.

Mundiz and Tarusan (2024) conducted a broader application in Bislig City in the Philippines. They analysed 54 top-down and 45 bottom-up signs and conducted street interviews with local residents. Their study connected language policy, linguistic visibility, intelligibility, social connection, public impressions, and possible changes in language practices. It therefore incorporated evidence relating to the policy, visible-display, audience-perception, and reaction components of the model. Nevertheless, sign-making was not examined as systematically as the other components, further illustrating the difficulty of collecting equally substantial evidence for every stage of MIPS.

These applications suggest that MIPS can function either as a comprehensive research design or as a modular model from which researchers select components appropriate to their research questions. Selective application improves the model's practical feasibility but weakens its central proposition that the components form an interconnected process. Conversely, examining the entire cycle requires the integration of policy documents, sign corpora, interviews with sign makers, and audience data. Ideally, longitudinal evidence is also needed to demonstrate how public responses influence subsequent sign production or policy development.

The main contribution of MIPS lies in integrating language policy, production, visible texts, audience perceptions, and social responses within a process-oriented model. Compared with the three-dimensional model, MIPS explicitly positions sign-making as a mediating stage and further distinguishes initial perception from subsequent interpretation and action. However, its existing applications remain uneven: some studies examine only the first three components, while others infer feedback effects without longitudinal evidence. MIPS therefore provides the most comprehensive process-oriented account among the models reviewed here, but it is also the most methodologically demanding.

Kallen's Social Indexicality Model

Kallen's (2023) Social Indexicality Model explains how language choices in the LL point towards particular communities, identities, places, and social values. It challenges the assumption that the visibility of a language necessarily represents the physical presence or numerical strength of its speakers in a locality. Instead, a language may index cultural authenticity, tourism, globalisation, modernity, ethnic identity, or an imagined transnational community.

The model integrates three concepts: markedness, affordances, and social indexicality. Markedness concerns whether a language choice is expected or socially distinctive in a particular context. Affordances refer to the communicative and symbolic possibilities offered by a particular language, including intelligibility, authority, solidarity, authenticity, and prestige. Social indexicality explains how language choices establish local or remote reference. Local reference points towards communities and identities directly associated with the immediate environment, whereas remote reference connects a sign with places, cultures, organisations, or communities beyond its physical location.

When proposing the model, Kallen (2023) demonstrated its application through comparative case studies. His "village model" compared the predominantly Protestant town of Kilkeel with the predominantly Catholic town of Warrenpoint in Northern Ireland. The comparison demonstrated that apparently similar language choices may acquire different indexical meanings through their relationships with local religious, political, and historical identities. Kallen's analysis of Greek-language displays in Astoria, New York, and Greektown, Chicago, further showed that a language can simultaneously point towards a locally present ethnic community and a geographically remote or imagined Greek cultural world. These cases demonstrate that the meaning of a language cannot be inferred solely from its visibility or the demographic profile of its speakers. The study by Azwan et al. (2024) can be regarded as a more recent independent application. It investigated representations of religious pluralism in the public spaces of three "Tolerance Villages" in Bandung, Indonesia. Combining observation, documentation, and interviews, the researchers drew on Kallen's concepts of local and remote reference, markedness, and affordances. Indonesian functioned as an inclusive national language, while transliterations and other linguistic resources indexed openness towards local, national, and international religious communities. The study demonstrates the potential of the Social Indexicality Model to explain how linguistic displays symbolically construct interfaith inclusion rather than merely representing the languages actually used by local residents.

Nevertheless, the application literature remains limited. Many recent LL studies discuss indexicality, authenticity, identity, or the symbolic use of foreign languages without explicitly operationalising Kallen's Social Indexicality Model. Compared with MIPS, the model also gives less systematic attention to language policy and sign-production processes. Because it is a relatively recent model with few independent applications, it is best regarded at this stage as an emerging interpretive model rather than a comprehensive account of the entire LL process.

Comparative Synthesis: From Context to Process

The four models differ in their analytical points of entry, explanatory objectives, and methodological requirements. SPEAKING begins with the sign as a socially situated communicative event; the three-dimensional model examines relationships among policy, visible practice, and audience experience; MIPS traces the interconnected processes through which LLs are regulated, produced, perceived, and acted upon; and the Social Indexicality Model interprets the identities, communities, places, and social values indexed by language choice. Their principal differences are summarised in Table 1.

Table 1
Major Analytical Models in LL Research

Model or framework	Primary analytical focus	Main components	Principal contribution	Main limitation
Huebner's adaptation of SPEAKING	Communicative context	Setting, participants, purposes, organisation, tone, medium, norms, and genre	Treats signs as socially situated communicative events	May function as a contextual checklist and gives limited attention to relationships among policy, production, display, and reception
Three-Dimensional Analytical Model	Relationships among policy, visible practice, and audience experience	Physical, political, and experiential dimensions	Reveals discrepancies among prescribed, displayed, and perceived LLs	Does not treat sign production as a separate analytical process
MIPS Model	Complete cycle of LL production and reception	Policy, sign making, signage, perception, and reactions or practices	Integrates regulation, production, visible outcomes, audience interpretation, and possible feedback within a process-oriented account	Comprehensive but methodologically demanding; complete applications and empirical demonstrations of feedback require multiple data sources and preferably longitudinal evidence
Social Indexicality Model	Social meanings of language choice	Markedness, affordances, and local or remote indexicality	Explains how languages index communities, identities, places, authenticity, prestige, and other social values beyond the physical presence of their speakers	Indexical interpretations require contextual, producer, or audience evidence, while independent applications of the complete model remain limited

The comparison reveals a broad, though non-linear, movement in LL analysis from contextual interpretation towards multidimensional and process-oriented explanation. Huebner's

adaptation of the SPEAKING model established that signs should be interpreted in relation to their settings, producers, audiences, purposes, communicative norms, and genres. Its primary concern is therefore the communicative context in which a sign acquires meaning. The three-dimensional model broadens the unit of analysis by shifting attention from the context of individual signs to the relationships among language policy, material displays, and audience experience. Its principal strength lies in making the alignment and discrepancies among prescribed, displayed, and perceived LLs analytically visible.

MIPS extends this relational perspective into an interconnected process. Rather than simply analysing language policy, signage, and audience perceptions in parallel, the model treats sign-making and audience interpretation as mediating stages. Language policy does not pass directly into visible practice because sign makers interpret and negotiate policy requirements. Similarly, visible signs do not automatically generate particular attitudes or actions because audiences must first notice, read, and interpret them. MIPS therefore offers a more explicit explanation of how policy–practice non-alignment emerges and how audience responses may subsequently influence language practices, sign production, or policy development.

The Social Indexicality Model provides a complementary interpretive dimension rather than representing another stage within the same process. Whereas the other three models are primarily concerned with communicative context, relationships among dimensions, or the production and reception of LLs, Kallen's model focuses on the social meanings of particular language choices. It explains why the visibility of a language cannot be treated as direct evidence of the local presence or numerical strength of its speakers. Through markedness, affordances, and local or remote reference, the model accounts for how languages may index local identities, imagined communities, cultural authenticity, globalisation, prestige, tourism, or transnational affiliation.

The application literature also indicates increasing methodological demands across the models. SPEAKING can be applied selectively to particular contextual components, although such applications may remain descriptive if relationships among the components are not examined. The three-dimensional model generally requires photographic data, policy documents, and audience data to compare its three dimensions. MIPS requires a broader combination of evidence, including policy documents, sign corpora, sign-maker interviews, and audience-perception data; longitudinal evidence is also needed when feedback processes are investigated. The Social Indexicality Model can be applied to sign data, but reliable interpretations of markedness and indexical meaning require detailed sociohistorical contextualisation or empirical evidence from sign producers and audiences.

Implications for Model Selection

Although the present review is organised chronologically, the development of analytical models in LL research should not be understood as a simple sequence in which later models replace earlier ones. Each model addresses a different analytical question. SPEAKING is appropriate when the primary aim is to reconstruct the communicative context of signs. The three-dimensional model is particularly useful when a study compares language policy, observable linguistic practices, and audience perceptions. MIPS is more suitable when the research seeks to explain how LLs are regulated, produced, displayed, encountered, interpreted, and potentially acted upon. The Social Indexicality Model is valuable when the

principal question concerns the identities, communities, places, or symbolic values indexed by particular language choices.

Model selection should therefore be guided by the research question, unit of analysis, available data, and intended explanatory scope rather than by the assumption that any single model is universally superior. Collectively, the four models demonstrate that the LL is not merely a collection of visible linguistic products. It encompasses socially situated communicative events, relationships between language policy and lived experience, processes of regulation and production, practices of perception and response, and language choices that index wider communities, identities, and social values.

Conclusion and Limitations

This study reviewed four analytical models in LL research in chronological order and compared their principal foci, components, explanatory scope, limitations, and empirical applications. The comparison reveals a broad but non-linear movement from contextual interpretation towards multidimensional and process-oriented explanation. SPEAKING contextualises signs as communicative events; the three-dimensional model compares policy, visible practice, and audience experience; MIPS connects regulation, sign production, display, perception, and response; and the Social Indexicality Model explains the social meanings indexed by language choice.

Each model addresses a distinct level of analysis and has its own strengths and limitations. No model is therefore universally superior. Its suitability depends on the research objective, unit of analysis, intended explanatory scope, and feasibility of collecting the required data. Researchers should also clarify whether they apply a model comprehensively or select only particular components, since partial applications may not support all of its explanatory claims.

Existing applications show that relationships among model components, sign-making processes, audience interpretation, and feedback effects remain insufficiently examined. Future research should therefore employ appropriate multiple data sources and extend these models to a wider range of mobile, digital, and commercial LLs. Overall, the four models demonstrate that the LL is not merely a collection of visible signs but the outcome of interconnected processes of contextualisation, regulation, production, perception, interpretation, and social meaning-making.

Although this review provides useful references and recommendations for the selection of analytical models in linguistic landscape research, several limitations should be acknowledged. First, the literature search relied primarily on Google Scholar. Although it provides broad coverage across disciplines, the limited use of other academic databases may have resulted in the omission of relevant studies and analytical models. Therefore, the models and applications reviewed in this study may not fully represent the entire range of analytical models used in linguistic landscape research. Second, the identification, classification, and evaluation of the analytical models were largely based on researcher-led interpretation of the selected literature. As such, some degree of subjectivity may have influenced the synthesis, particularly in assessing the analytical focus, contributions, and limitations of individual models. Future reviews could employ multiple databases and involve multiple researchers or

independent coding procedures to enhance the comprehensiveness and reliability of the analysis.

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