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Green universities as linguistic landscapes: Mapping sustainability discourse and environmental identity in Saudi Higher Education

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ABSTRACT

This article examines the green university as a linguistic landscape: a place where sustainability is not only engineered through buildings, waste systems, transport plans, laboratories, and curricula, but also narrated through public language. In Saudi higher education, sustainability discourse has acquired new visibility through Vision 2030, the Saudi Green Initiative, university internationalization, and the growing expectation that campuses contribute to the Sustainable Development Goals. Yet the everyday semiotic life of these institutions - the signs, posters, digital screens, recycling labels, corridor messages, garden plaques, bilingual wayfinding systems, campaign slogans, and student-made notices through which sustainability becomes visible - remains underexamined in linguistics. The article proposes a framework for mapping sustainability discourse and environmental identity in Saudi university campuses by bringing together linguistic landscape studies, ecolinguistics, critical discourse analysis, multimodal semiotics, and environmental identity theory. Rather than claiming fabricated field results, it offers a research design and analytic model that can be applied to Saudi campuses across institutional types and regions. The central argument is that green universities should be studied as semiotic ecologies in which Arabic and English, official and student voices, global and local environmental frames, and material placement all participate in the construction of environmental responsibility. The proposed framework asks not only what languages appear on campus signs, but what kinds of environmental subjects they invite students and staff to become: compliant users, responsible citizens, global scholars, innovators, volunteers, or stewards of place. The article concludes by outlining theoretical contributions for linguistic landscape research and practical implications for sustainability communication in Saudi higher education.

KEYWORDS: metaphor, framing theory, Saudi Arabia, sustainability discourse, food security, water security, Arabic discourse, critical metaphor analysis, discourse analysis

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1. Introduction

A university campus is often described through the language of buildings, rankings, programs, laboratories, and graduate employability. Less often is it described through the small public texts that make everyday academic life readable: the sign that tells a student where to dispose of a plastic bottle, the bilingual warning near a water fountain, the digital screen announcing a tree-planting campaign, the poster asking staff to reduce paper use, the plaque naming a solar-energy laboratory, the banner that links campus volunteering to national development, or the student-designed notice that turns a corridor into an environmental appeal. These signs are easy to overlook because they are ordinary. Yet their ordinariness is precisely what gives them sociolinguistic force. They do not simply decorate a university; they help define what kind of place the university claims to be and what kind of person it asks its community to become.

This article starts from that simple observation and develops it into a linguistics-oriented research agenda. It argues that green universities should be examined as linguistic landscapes and, more specifically, as sustainability-oriented semiotic ecologies. The phrase "green university" is commonly used to refer to institutions that reduce energy consumption, improve waste management, protect biodiversity, teach sustainability, conduct climate-related research, and engage the public. Such institutional work matters. However, a university does not become green only by installing technologies or issuing policies. It also becomes green by communicating, naming, displaying, persuading, reminding, instructing, and inviting. In other words, environmental responsibility becomes socially available through language and other signs placed in space.

The Saudi context makes this topic particularly productive. Saudi higher education is expanding and reorganizing within a national development environment shaped by Vision 2030, human-capital development, internationalization, and sustainability initiatives. The Council of Universities' Affairs presents higher education as linked to Vision 2030 pillars such as quality education, human capital, innovation, governance, empowerment, and future readiness. Its 2024 overview also reports 93 higher education institutions across public, private, and non-profit categories (Council of Universities' Affairs, 2024). At the same time, the Saudi Green Initiative has made environmental discourse more visible nationally, with targets such as reaching net zero emissions by 2060 and greening Saudi Arabia through large-scale tree planting and land rehabilitation (Saudi Green Initiative, 2021, 2024). Internationally, UNESCO's Education for Sustainable Development framework emphasizes the role of education in developing the knowledge, values, skills, and behaviors needed to address environmental and social challenges (UNESCO, 2020, 2026). Universities therefore sit at the meeting point of national policy, global sustainability discourse, local ecology, and daily student life.

The key problem, however, is that sustainability in universities is often studied as policy, curriculum, operations, or perception, while its public language remains underexplored. In Saudi Arabia, relevant research has examined education for sustainable development in policy and media texts (Essa & Harvey, 2022), sustainability in online media discourse (Almaghlouth, 2022), sustainability integration into university curricula (Bataeineh & Aga, 2022), and faculty perspectives on campus sustainability (Alshammari, 2025). These studies are valuable, but they leave a sociolinguistic question largely open: how is sustainability made visible and meaningful in the everyday textual spaces of Saudi campuses? This article addresses that question conceptually and methodologically.

The article is deliberately framed as a conceptual and methodological contribution rather than as an empirical report with invented data. It does not claim to have counted signs or interviewed students. Instead, it offers a robust framework for a future multi-site study of Saudi higher education. This choice is not a weakness; it is an ethical necessity. Because linguistic landscape studies depend on site-specific evidence, the absence of fieldwork should not be hidden behind fabricated frequencies or imagined findings. The contribution here is to define the object of study, build the theoretical bridge between linguistic landscapes and sustainability discourse, propose research questions, and provide a practical coding model that researchers can apply in actual campuses

The article develops three claims. First, sustainability signs on campuses are not merely informational; they are performative. They direct behavior, assign responsibility, frame environmental problems, and create a sense of institutional identity. Second, in Saudi universities, sustainability discourse is likely to be mediated through Arabic-English bilingualism, global academic language, national development narratives, and local ecological concerns such as water scarcity, heat, desertification, energy use, and urban greening. Third, mapping these signs can help universities understand whether their environmental communication is actionable, inclusive, locally grounded, and aligned with material practice, or whether it risks becoming a thin layer of green symbolism.

2. Saudi Higher Education and the Visibility of Sustainability

Saudi universities operate in a landscape where education, national transformation, and environmental responsibility increasingly intersect. Vision 2030 positions education as a driver of social enrichment, a knowledge-based economy, and institutional innovation. The Council of Universities' Affairs describes its role as developing and supervising higher education policy, enhancing governance, supporting institutional independence, and monitoring alignment with Vision 2030 targets (Council of Universities' Affairs, 2024). Such policy language is not only administrative; it provides a macro-discourse that can travel into universities through banners, strategic-plan posters, achievement boards, campus websites, launch events, and bilingual public messages.

Sustainability also enters Saudi higher education through international frameworks. The United Nations Saudi Arabia paper on the role of Saudi universities in advancing the SDGs argues that universities can contribute to the national realization of the SDGs and Vision 2030, and it explicitly notes the value of universities in providing qualitative data and contextual knowledge for SDG monitoring (United Nations Saudi Arabia, 2022). This is important for linguistic landscape research because campus signs are a form of qualitative data. They show how institutions translate large policy commitments into situated messages: where they choose to speak, what they choose to name, which audiences they imagine, and which actions they make visible.

National sustainability discourse is also increasingly prominent through the Saudi Green Initiative. Official SGI materials frame environmental action through emissions reduction, greening, land rehabilitation, and protection of land and sea. The initiative's public communication states that Saudi Arabia aims to reach net zero emissions by 2060 through the circular carbon economy approach, and the greening target includes growing 10 billion trees and rehabilitating more than 74 million hectares of land (Saudi Green Initiative, 2021, 2024). These national frames may influence university communication in two ways. They can become explicit intertextual references on campus, for example through Vision 2030 logos, tree-planting campaigns, or sustainability days. They can also work implicitly by making some environmental terms - green, sustainable, carbon, future, quality of life, volunteerism, innovation - more available and legitimate in university discourse.

However, the movement from national policy discourse to campus practice is not automatic. Research in Saudi higher education suggests both momentum and unevenness. Bataeineh and Aga (2022) examined sustainability integration in curricula in relation to Saudi Vision 2030. Essa and Harvey (2022) analyzed education for sustainable development in Saudi media and policy documents. Alshammari (2025), in a case study of three Saudi universities, found strong sustainability awareness among faculty but limited faculty participation in sustainability activities and policy-making, with institutional performance rated below expectations across several domains. Such findings indicate that the existence of sustainability language does not guarantee deep institutional participation. For a linguistic landscape study, this creates a critical question: do campus signs invite genuine participation, or do they mainly display institutional aspiration?

This distinction matters because universities are not neutral containers of sustainability messages. They are lived environments. A student does not encounter sustainability as an abstract target; she encounters it at the cafeteria bin, on a bus-stop sign, beside a laboratory safety notice, through a student club poster, in a dormitory water-saving reminder, or during a walk across a shaded courtyard. A faculty member encounters it in paperless-administration notices, research-center branding, grant-call posters, and energy-saving messages in offices. A visitor encounters it at the gate, through wayfinding signs, and in the public language of institutional pride. The campus is therefore a layered communicative field in which sustainability is not only taught but spatially staged

For Saudi universities, this staging is likely to be bilingual and multimodal. Arabic indexes national language, public authority, cultural belonging, and local accessibility. English indexes internationalization, scientific expertise, global ranking, academic mobility, and the presence of non-Arabic-speaking students and staff. In a sustainability message, the choice between Arabic, English, or bilingual text is rarely accidental. A monolingual Arabic sign may localize responsibility; a monolingual English sign may address international audiences or technical domains; a bilingual sign may present environmental responsibility as both national and global. The arrangement of the two languages - Arabic first, English first, equal size, unequal size, separate panels, or mixed phrases - can also signal hierarchy, audience design, and institutional identity.

A linguistic landscape approach can therefore help Saudi higher education study sustainability as a visible, spatial, multilingual, and identity-forming discourse. It can move analysis beyond policy documents and into the places where policy is translated into daily forms of attention. It can also reveal mismatches. A campus may present a polished green identity at entrances while leaving cafeterias, parking areas, and dormitories with little practical environmental guidance. Another campus may have strong recycling labels but weak bilingual accessibility. A third may use global sustainability vocabulary while ignoring local ecological issues that students recognize. These are not trivial matters of signage. They concern the relationship between language, place, behavior, and institutional credibility.

3. Literature Review: From Linguistic Landscape to Sustainable Campus Space

Linguistic landscape research began with attention to the visibility of languages in public space. Landry and Bourhis (1997) defined the linguistic landscape through public road signs, advertising billboards, street names, place names, shop signs, and government signs, linking visible language to ethnolinguistic vitality. Since then, the field has expanded far beyond language counting. Researchers now treat signs as material, ideological, spatial, multimodal, mobile, and socially contested (Backhaus, 2007; Blommaert, 2013; Gorter, 2013; Shohamy & Gorter, 2009). A sign is not only a carrier of written words; it is an event in space. Its placement, material durability, authorship, visual style, language hierarchy, audience, and relation to surrounding practices all matter

Early linguistic landscape studies often distinguished between top-down and bottom-up signs. Top-down signs are produced by state or institutional authorities; bottom-up signs are produced by private actors, communities, businesses, or individuals. This distinction remains useful for campuses, but it requires refinement. University landscapes are full of hybrid signs. A student environmental club poster may carry an official university logo; a recycling campaign may be initiated by facilities management but designed by students; a research-center sign may combine institutional branding, government funding, and international scientific language. Authorship is therefore not a single variable but a field of participation.

The campus is a particularly rich setting for linguistic landscape research because it is simultaneously public, semi-public, institutional, educational, and affective. It is not a city street, but it is not a private interior either. It is a regulated environment where people learn, work, socialize, pray, eat, commute, live, and build identities. Research on educational linguistic landscapes and schoolscapes has shown that signs in learning spaces can reflect language policy, shape inclusion, provide learning resources, and construct institutional identities (Gorter, 2018; Malinowski, 2015). University-campus studies similarly show that campus signs can reveal the relationship between official language policy and everyday multilingual practice (Motschenbacher, 2024), while work on linguistic landscape pedagogy treats public signs as resources for learning, critical awareness, and social engagement (Malinowski et al., 2020).

Sustainability adds a further dimension. Ecolinguistics asks how language contributes to ecological understanding, environmental values, and patterns of human action. Halliday's influential call for applied linguistics to confront environmental problems helped open the field to the question of how grammar and discourse reproduce ways of living (Halliday, 2001). Later ecolinguistic work has examined not only environmental texts but the ecological consequences of everyday discourses, including narratives of growth, consumption, progress, nature, and human responsibility (Alexander & Stibbe, 2014; Stibbe, 2015). This is highly relevant to campus signage. A sign saying "Save water" is not only a directive. It compresses an environmental story: water is scarce, individual action matters, the institution expects cooperation, and responsible membership includes restraint.

Critical discourse analysis also helps explain why sustainability language should not be treated as innocent. Discourse is tied to social power, institutional legitimacy, and the production of common sense (Fairclough, 1992). Sustainability discourse can inspire action, but it can also become promotional language. The risk of greenwashing - communicating environmental virtue without corresponding environmental substance - is well documented in organizational studies (Delmas & Burbano, 2011). Universities are not immune. A campus may display sustainability slogans while offering limited recycling infrastructure, weak energy transparency, or little student participation. Linguistic landscape research can make such tensions visible by comparing symbolic messages with their material surroundings.

Multimodal discourse analysis is also necessary. Sustainability signs rarely communicate through language alone. They use color, icons, arrows, logos, photographs of trees, recycling symbols, national emblems, QR codes, maps, screens, and architectural surfaces. Kress and van Leeuwen (2006) show that visual grammar organizes salience, framing, information value, and viewer positioning. Scollon and Scollon's (2003) geosemiotics similarly emphasizes the placement of discourse in the material world. In a Saudi university, a bilingual sign on a polished wall at the administration building does different work from a handwritten student notice near a cafeteria waste station. Both may contain environmental language, but their authority, audience, and relation to action differ.

The final theoretical strand is environmental identity. Clayton (2003) conceptualizes environmental identity as the way nature and the nonhuman environment become part of the self. Stets and Biga (2003) bring identity theory into environmental sociology by examining how people see themselves in relation to environmentally responsible behavior. For this article, environmental identity is not treated as a private psychological trait alone. It is also a socially and spatially mediated position. Students learn who they are environmentally through curricula, peers, family, media, policy, religious and civic values, and physical surroundings. Campus signs contribute modestly but persistently to that process. A repeated message that says "Our campus, our responsibility" does not merely request behavior; it positions the reader as a co-owner of place.

The gap, then, is clear. Linguistic landscape studies have examined multilingualism, identity, language policy, tourism, consumption, education, and urban change. Ecolinguistics has examined environmental discourse in media, policy, corporations, textbooks, and public campaigns. Saudi sustainability research has examined policy, media, curricula, and institutional practice. Yet the green university as a linguistic landscape remains underdeveloped, particularly in Saudi higher education. This article responds by proposing a framework that makes campus sustainability language visible as an object of sociolinguistic inquiry.

4. Conceptual Framework: The Campus as a Semiotic Sustainability Ecology

The framework proposed here treats the university campus as a semiotic sustainability ecology. The term ecology is used in a relational sense: it points to the connections among signs, spaces, practices, institutional voices, student interpretations, national policy discourse, and local environmental conditions. A green campus is not simply a collection of environmental technologies; it is a place where environmental meanings circulate and where people are repeatedly invited to notice, value, and perform sustainability.

The first layer of the framework is linguistic. Researchers should ask which languages appear, how they are ordered, and what kinds of speech acts they perform. Sustainability signs may command, request, advise, warn, celebrate, recruit, define, or report. Their modal force matters. "Turn off the lights" differs from "Please help us reduce energy use," which differs again from "Together we build a sustainable future." The first constructs compliance, the second cooperation, and the third aspiration. A campus dominated by commands may frame sustainability as discipline; a campus dominated by slogans may produce identity without action. A balanced landscape combines clear guidance at points of behavior with wider narratives of shared purpose.

The second layer is discursive. Signs draw on broader stories about nature, responsibility, citizenship, science, faith, innovation, quality of life, and national development. In Saudi universities, possible interdiscursive links include Vision 2030, the Saudi Green Initiative, the SDGs, research excellence, community service, and locally meaningful ideas of stewardship. The researcher should not assume which frame is present; the task is to examine how frames are made visible and whether they are connected to concrete practices.

The third layer is spatial-material. A recycling label above sorted bins has a different function from a sustainability banner at a main gate. A water-saving notice near a sink, a native-plant label in a garden, and a renewable-energy plaque outside a laboratory each connects environmental language to a different routine. Placement, durability, maintenance, height, visibility, and proximity to action are therefore part of meaning. A neglected or badly placed sign can weaken even a well-written message.

The fourth layer is multimodal. Sustainability signs rarely use words alone. They combine Arabic and English, colors, icons, arrows, logos, photographs, QR codes, digital motion, and architectural surfaces.

Green color, recycling symbols, national logos, and student photographs all carry semiotic weight. Following multimodal approaches to discourse, the analysis should ask how visual design creates salience, authority, emotion, and usability.

The fifth layer is identity. Every sign imagines a reader. Some signs address the reader as a rule follower, others as a responsible citizen, a campus member, a volunteer, a consumer, a researcher, or an innovator. These repeated invitations can contribute to environmental identity, understood not only as a private belief but as a socially available way of belonging to place. The final layer is alignment. A campus linguistic landscape should be read against visible practice. A message about recycling is more credible when bins exist, are sorted, and are maintained. A slogan about sustainability is more persuasive when the campus offers recognizable opportunities to participate. In this sense, language does not replace environmental action, but it can make action visible, intelligible, and shared.

5. Research Questions and Proposed Study Design

A future empirical study could be organized around five research questions. First, what languages, modes, and discourse types are used to communicate sustainability in Saudi university linguistic landscapes? Second, what environmental themes are visible, such as water, energy, waste, climate, biodiversity, transport, paper use, greening, volunteering, and research? Third, what identities are constructed for students, staff, and visitors? Fourth, how do official, student, and hybrid signs differ in language choice, modality, and placement? Fifth, how do members of the campus community interpret, ignore, contest, or act upon these signs?

The study should be multi-site because Saudi higher education is diverse. A balanced design might include a large public comprehensive university, a research-intensive science and technology university, a private or non-profit university, and a regional university. The aim would not be to rank campuses, but to compare semiotic patterns across institutional missions and locations. Regional comparison matters because a coastal campus, a desert-edge campus, a metropolitan campus, and a smaller-city campus may make different ecological concerns salient.

Data collection would begin with a systematic photographic survey. Researchers would define campus zones before entering the field: gates, main roads, administration buildings, libraries, teaching buildings, laboratories, cafeterias, gardens, parking areas, bus stops, waste stations, water points, sports facilities, dormitories where accessible, and digital-screen locations. Every sustainability-related sign would be photographed with notes on location, date, sign type, visible author, language(s), material, and surrounding infrastructure. Ethical procedures are essential: researchers should secure permission, avoid photographing identifiable individuals without consent, and respect sensitive campus spaces.

The definition of a sustainability-related sign should be broad but controlled. It should include signs that mention sustainability, environment, green practices, energy, water, waste, recycling, climate, biodiversity, conservation, carbon, renewable energy, environmental volunteering, sustainable transport, and national or global initiatives. It should also include indirect environmental regulation, such as paperless-service notices, anti-littering messages, and campus maps marking walkable or green areas. Purely decorative signs should be excluded unless they carry environmental meaning.

Short contextual notes are as important as photographs. A recycling sign means something different if it is attached to a functioning sorted station rather than placed beside an ordinary bin. A water-saving message should be read in relation to taps, irrigation, laboratories, or dormitory facilities. Digital screens, QR-linked campaigns, and website banners displayed in physical spaces should also be included as part of the physical-digital campus landscape. Finally, walking interviews with students, staff, or facilities workers would show which signs are noticed, trusted, misunderstood, or ignored. Without audience interpretation, researchers risk treating all signs as more influential than they actually are.

Table 1. Proposed coding dimensions for mapping sustainability in Saudi university linguistic landscapes

Dimension	Variables to code	Interpretive purpose
Language and hierarchy	Arabic, English, bilingual order, font size, transliteration, code-mixing	Shows audience design, language policy, localization, and internationalization
Authorship	Administration, facilities, research center, student club, external partner, hybrid source	Identifies who has authority to define sustainability on campus
Discourse function	Command, request, warning, information, recruitment, celebration, reporting, branding	Reveals whether sustainability is framed as compliance, participation, identity, or achievement
Environmental theme	Water, energy, waste, climate, biodiversity, transport, paper, greening, research, volunteering	Maps which ecological concerns are visible or absent
Identity position	Responsible user, citizen, steward, innovator, volunteer, researcher, visitor, consumer	Shows what kind of environmental subject the sign invites readers to become
Spatial placement	Gate, classroom, lab, cafeteria, garden, dormitory, parking, mosque area, digital screen	Connects discourse with practice and daily routines
Materiality	Permanent sign, temporary poster, digital message, sticker, plaque, handwritten notice	Indicates durability, investment, immediacy, and maintenance
Actionability	Clear action, vague aspiration, measurable target, QR link, contact point, no action	Assesses whether the message enables behavior or mainly performs symbolism

6. Analytic Pathways: What a Sustainability Linguistic Landscape Can Reveal

A sustainability linguistic landscape analysis should not stop at counting languages or listing slogans. It should ask how public signs organize environmental attention. One pathway is bilingual positioning. Arabic-English signs may present sustainability as locally anchored and globally accessible, while English-dominant signs may associate sustainability with science, internationalization, or research prestige. The arrangement of the two languages - order, size, typography, and translation quality - can reveal imagined audiences and institutional priorities.

A second pathway is modal force. “Do not litter,” “Please recycle,” “Join the green team,” and “Together toward a sustainable future” do different pragmatic work. They prohibit, request, recruit, and inspire. A campus relying mostly on imperatives may frame sustainability as compliance. A campus relying mainly on slogans may offer identity without clear behavior. Stronger landscapes tend to combine practical directives at points of action with broader narratives that make those actions meaningful.

A third pathway is theme distribution. Recycling, tree planting, energy saving, and paper reduction are easy to display because they lend themselves to short messages and icons. Other themes - carbon accounting, biodiversity, food systems, procurement, or environmental justice - may remain hidden in reports. In Saudi Arabia, a linguistic landscape study should be alert to local concerns such as water scarcity, heat, desert ecology, dust, land rehabilitation, urban greening, and energy use in cooling. The absence of these themes can be as revealing as their presence.

A fourth pathway is spatial credibility. A water-saving sign belongs near water-use points; a recycling sign belongs at sorted bins; a sustainable-transport sign belongs near bus stops, parking areas, and pedestrian paths. Ceremonial banners at entrances may build institutional identity, but they do not replace signs that support everyday action. Spatial analysis therefore helps distinguish sustainability as atmosphere from sustainability as practice.

A fifth pathway is authorship and participation. If most sustainability signs come from central administration, the campus may communicate authority but also top-down control. If student clubs, research groups, facilities teams, and community partners are visible, responsibility becomes distributed. Student-authored environmental signs are especially important because they show whether students are merely addressed by sustainability discourse or are allowed to co-author it.

A sixth pathway is identity construction. A sign can position readers as careful users of resources, consumers of green products, Saudi citizens contributing to national transformation, ethical stewards of place,

volunteers, researchers, or innovators. These identities are not mutually exclusive. A rich green university landscape makes several forms of environmental belonging available and connects them to visible opportunities for action.

7. Illustrative Micro-Analyses without Fabricated Field Data

Because this article does not report collected campus data, no invented field examples are presented as findings. However, constructed micro-examples can clarify the method. A bilingual sticker above a light switch saying "Turn off the lights when you leave" would be analyzed for language order, politeness, imperative force, placement, and material condition. Its identity position is the responsible user. A large entrance banner saying "Together toward a sustainable future" with national-development imagery would work differently: it is symbolic and affiliative rather than directly actionable, constructing the reader as a citizen-participant.

A student poster inviting peers to a campus clean-up would show the importance of authorship. If it appears in a prominent space and includes a QR code or student-club contact, it makes environmental action socially accessible. A research-center plaque on renewable energy would construct sustainability as innovation and expertise. A recycling station labelled only in English would raise questions about accessibility, translation, and design. These examples illustrate a central point: a sign's meaning is produced by wording, language choice, image, location, authority, usability, and relationship to available action. The same phrase may be powerful in one place and empty in another.

8. Discussion: From Green Branding to Environmental Belonging

The proposed framework shifts attention from green branding to environmental belonging. Branding asks how the university presents itself; belonging asks how members of the university are invited to inhabit the campus responsibly. A linguistics-oriented study should therefore examine not only institutional slogans but also the everyday signs through which students and staff are positioned as participants in environmental practice.

Environmental belonging is the sense that caring for place is part of membership in that place. On a campus, it can be constructed through pronouns, naming, repetition, local references, and opportunities for action. The pronoun "our" is powerful but risky. "Our campus" can create solidarity only when students and staff feel some agency. If environmental decisions are centralized and participation is limited, collective language may sound decorative. A linguistic landscape study can test this by examining whether collective pronouns are matched by student campaigns, suggestion channels, volunteer programs, visible data, or feedback about outcomes.

The Saudi context also raises a scale problem. Global sustainability vocabulary connects universities to SDGs, international rankings, and academic mobility. Yet generic global language can sound detached from local environmental experience. Saudi campuses have opportunities to communicate sustainability through local realities: conserving water in arid environments, designing shade and walkability in extreme heat, choosing native plants, reducing energy use in cooling, and connecting research to desert and coastal ecosystems. A strong landscape would translate global sustainability into locally recognizable practices.

The framework contributes to ecolinguistics by placing environmental discourse in lived space. Ecolinguistic research often focuses on media, policy, corporate reports, and textbooks. Campus linguistic landscapes show ecological discourse where people move, eat, study, work, and make small decisions. The ecological force of language is not only in grand narratives; it is also in repeated micro-directives and spatial reminders that make certain actions normal.

For linguistic landscape studies, sustainability offers a necessary expansion. The question is not only which languages are visible, but what ecological relations become visible, desirable, normal, or absent. A campus that names innovation but never labels native plants tells one environmental story. A campus that displays water-saving data, explains green buildings, supports student-made environmental posters, and gives clear recycling guidance tells another. The analytical challenge is to link such signs to identity, practice, and power.

The practical point is equally clear. Universities can conduct sustainability linguistic landscape audits

as low-cost tools for improving communication. These audits can identify vague slogans, missing translations, weak placement, inaccessible labels, absent local themes, and signs that do not match infrastructure. They can also become teaching projects in applied linguistics, translation, communication, environmental studies, and design. Students would learn to read their campus critically and then redesign parts of it responsibly.

A distinctive contribution of this approach is that it makes language part of campus sustainability evidence. Universities usually measure sustainability through energy use, waste indicators, rankings, strategic plans, or course offerings. These measures are necessary, but they do not show how sustainability is encountered by the people who inhabit the campus. A linguistic landscape audit can reveal whether environmental commitments are visible in the places where choices are made, whether the language is accessible to different campus groups, and whether institutional messages invite genuine participation. It can also reveal tensions between a polished green identity and neglected everyday communication. For linguistics, this means the campus becomes a site where discourse, space, policy, and environmental practice meet. For universities, it means that better signs are not merely cosmetic; they are part of the communicative conditions that help people understand, remember, and enact sustainability.

9. Implications for Research, Teaching, and Campus Policy

The first implication is methodological. Researchers studying Saudi green universities should build mixed linguistic landscape corpora that include photographs, spatial notes, translations, maps, coding sheets, and participant interpretations. Such corpora would allow both quantitative mapping and qualitative discourse analysis while preserving the contextual detail that makes signs meaningful.

The second implication is pedagogical. Linguistic landscape research can be used in classrooms. Students in applied linguistics, translation, communication, education, design, and environmental studies can document sustainability discourse on their own campus, analyze language choice and multimodality, and propose improved bilingual signs. This turns sustainability from an abstract policy topic into a visible object of inquiry.

The third implication concerns student agency. Green university communication should not be only top-down. Student-authored environmental messages can give sustainability a peer voice and make environmental identity more socially grounded. Universities might create curated spaces for student campaigns, competitions for bilingual sustainability signage, or annual campus linguistic landscape audits conducted by student research teams.

The fourth implication is operational. Facilities departments, communication offices, sustainability units, and language specialists should collaborate. A recycling system needs clear labels; a water-saving campaign needs suitable placement; a bus service needs visible guidance; a green building needs public explanation. Environmental signage should be treated as part of campus operations, not merely as decoration.

The fifth implication concerns credibility. If a university claims green leadership, this should be visible not only in ceremonial banners but also in the practical semiotics of waste, water, energy, mobility, biodiversity, and research communication. Credibility grows when signs are specific, maintained, actionable, bilingual where needed, and connected to measurable programs.

10. Limitations and Ethical Positioning

This article has one obvious limitation: it does not present empirical data. It therefore cannot make claims about the actual frequency, distribution, or dominant themes of sustainability signs in Saudi universities. This limitation is openly acknowledged because fabricating observations would undermine the very scholarly standards the article promotes. The value of the article lies in defining a researchable problem, building a theoretical framework, and offering a methodology that can guide future fieldwork.

A second limitation is that the Saudi higher education system is too diverse to be represented by one campus or one city. Future research must avoid treating Saudi Arabia as a homogeneous space. Universities differ by region, history, language policy, gender arrangements, discipline profile, international orientation, resources, and campus design. A careful study should therefore sample across institutional types and make its scope explicit.

A third limitation concerns the interpretation of signs. Researchers may read more into signs than users do. This is a common risk in semiotic analysis. Audience methods such as interviews, walking interviews, short surveys, or participatory mapping can reduce this risk. They can show which signs are noticed, misunderstood, ignored, trusted, or resisted.

A fourth ethical issue concerns access and photography. University campuses contain students, staff, security procedures, and sometimes gender-sensitive spaces. Researchers must obtain permission, avoid photographing faces or private information, and respect institutional regulations. If signs include student names, phone numbers, or social media handles, these should be anonymized unless consent is obtained. Ethical linguistic landscape research is not only about public text; it is also about the people who live with that text.

11. Conclusion

Green universities are usually evaluated through policies, technologies, curricula, operations, and rankings. This article has argued that they should also be studied as linguistic landscapes. On Saudi campuses, sustainability becomes visible through Arabic and English signs, institutional slogans, practical labels, digital screens, student posters, research-center names, national-development references, and everyday directives. These texts do not merely transmit information. They construct environmental responsibility, define institutional identity, and invite readers into particular forms of belonging.

The proposed framework brings linguistic landscape studies into conversation with ecolinguistics, critical discourse analysis, multimodal semiotics, and environmental identity theory. It asks researchers to examine language choice, authorship, spatial placement, materiality, discourse function, environmental theme, actionability, and identity positioning. It also insists on alignment between discourse and practice. A campus cannot become green through language alone, but language can make environmental practice visible, intelligible, participatory, and meaningful.

For Saudi higher education, the study of green linguistic landscapes can support both scholarship and practice. It can help researchers understand how national sustainability agendas are localized in academic spaces. It can help universities design better bilingual and multimodal environmental communication. It can help students become critical readers and co-authors of their campus environment. Most importantly, it can move sustainability discourse from polished aspiration toward lived environmental belonging.

The next step is empirical. Researchers should walk Saudi campuses with cameras, notebooks, ethical permissions, and open questions. They should document not only what universities say about sustainability, but where they say it, how they say it, who is allowed to say it, and what forms of environmental identity become possible as a result. In that ordinary public language, the green university can be seen not as a slogan, but as a lived and contested landscape.

For journal readers in linguistics, the value of this agenda is that it places environmental discourse inside a concrete semiotic environment rather than treating it as distant policy language. It also offers Saudi higher education as a rich site for studying the meeting of Arabic, English, national development discourse, global sustainability vocabulary, and everyday campus practice. The article therefore invites future researchers to produce grounded evidence without losing sight of the human scale of the campus: the student deciding where to throw a bottle, the staff member reading a water-saving reminder, the researcher passing a laboratory plaque, and the visitor forming an impression of what the university values.

Declarations

Conflict of interest: The author declares no conflict of interest.

Data availability: No empirical field data were generated or analyzed for this article. The manuscript proposes a framework for future empirical research.

Ethics statement: Because no human participants or campus photographs were used, formal ethics approval was not required for this conceptual article. Any future field study should obtain institutional permission and follow ethical procedures for campus photography and participant interviews.

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