

TOWARD AN INTEGRATED ECOLOGICAL LISTENING FRAMEWORK FOR SUSTAINABLE COMMUNICATION IN ISLAMIC ENGLISH LANGUAGE EDUCATION

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ABSTRACT

Effective listening is essential for meaningful communication in English as a Foreign Language (EFL) education. However, traditional listening pedagogies often prioritize comprehension testing and task completion over collaborative meaning-making, ethical participation, and sustainable communication. Despite recent innovations in ecological language learning, digital pedagogy, and artificial intelligence that have revolutionized language education, scholarship remains fragmented. There is limited integration of ecological learning, sociocultural mediation, Education for Sustainable Development (ESD), and the Islamic educational philosophy of *ta'dib*, highlighting a critical gap and an opportunity for a more holistic approach. This study develops an integrated conceptual framework that explains how ecological listening cultivates sustainable communication in Islamic English-language education. Employing a PRISMA-guided systematic literature review, the study systematically synthesized peer-reviewed literature on listening pedagogy, Ecological Language Learning, Sociocultural Theory, digital language education, ESD, and *ta'dib*. Moreover, the thematic synthesis identified five interrelated dimensions of ecological listening: ecological affordances, sociocultural mediation, digital ecological affordances, sustainable communication, and ethical participation grounded in *adab*. The findings demonstrate that ecological listening develops through the dynamic interaction of contextual affordances, dialogue, collaboration, learner agency, digital participation, reflection, and ethical engagement; notably, this process is not through receptive language processing alone. Based on these findings, the study proposes the Integrated Ecological Listening Framework (IELF), which reconceptualizes listening as an ecological, socially mediated, ethically grounded, and sustainability-oriented educational process. Consequently, the framework advances ecological language learning theory by integrating contemporary educational theories with Islamic educational philosophy. Additionally, it provides a solid theoretical foundation for designing digitally enriched English language education that, in turn, cultivates communicative competence, *adab*, responsible participation, and sustainable learning communities.

Keywords: Ecological Listening, English Language Education, Islamic Education, Sustainable Communication, Systematic Literature Review, *Ta'dib*

INTRODUCTION

The rapid digital transformation of education, the widespread adoption of artificial intelligence (AI), and the increasing emphasis on sustainable development have profoundly transformed the objectives of modern language education. English language instruction, in particular, is no longer solely focused on developing learners' linguistic skills but now also aims to foster comprehensive communicative competence. This involves enabling learners to actively participate in culturally diverse, technologically mediated, and collaborative learning environments, which are integral to today's interconnected world. In line with the principles of Education for Sustainable Development (ESD), communication is increasingly viewed as a multifaceted lifelong skill that encompasses dialogue, critical reflection, responsible participation, and collaborative problem-solving. These aspects are seen as essential components of learning rather than just the simple transmission of linguistic knowledge (UNESCO, 2020, 2023). Within this expanded educational framework, listening holds a central role because it allows learners to interpret a variety of perspectives, negotiate meaning, and engage in reciprocal communication. Therefore, listening should be understood not merely as a receptive language skill but as a socially situated process. Through active listening, learners can construct deeper understanding, foster empathy, and participate more meaningfully in educational communities and real-world contexts, thus supporting their overall development as competent and responsible global citizens.

Despite these changing educational expectations, listening pedagogy has not evolved at the same pace as contemporary language education. In many English as a Foreign Language (EFL) classrooms, listening instruction remains dominated by comprehension testing, information retrieval, and task completion, treating listening primarily as an individual cognitive activity rather than a collaborative process of meaning-making. This transmission-oriented perspective contrasts with contemporary scholarship emphasizing ecological learning, sociocultural interaction, learner agency, multimodal communication, and digitally mediated learning environments (van Lier, 2000, 2004; Vygotsky, 1978; Lantolf & Thorne, 2006). Recent empirical studies further demonstrate that artificial intelligence, conversational agents, adaptive feedback systems, podcasts, multimodal media, and speech-recognition technologies can enhance listening by expanding opportunities for authentic interaction, collaborative participation, and learner autonomy (Chaves-Yuste & de la Peña, 2023; Guan et al., 2024; Jiang, 2022; Jantakoon et al., 2025; Liu & Li, 2025; Xiao et al., 2023; Zhou et al., 2025; Huang & Liu, 2025; Kartal & Yeşilyurt, 2024; Mohammed & Khalid, 2025; Zhang & Liu, 2025). These developments suggest that listening should be reconceptualized as an ecological process in which meaning emerges through interactions among learners, teachers, digital resources, and authentic communicative contexts.

Although research on ecological language learning, digital pedagogy, and AI-supported language education has expanded considerably, the literature remains theoretically fragmented in several respects. First, listening continues to be conceptualized predominantly as a receptive cognitive skill, with limited attention to its role as a socially situated process of dialogue, collaboration, and meaning-making. Second, studies on artificial intelligence, multimodal learning, and digital technologies are typically conducted as isolated investigations of specific instructional tools rather than as interconnected ecological affordances that collectively shape communicative development. Third, while Education for Sustainable Development emphasizes communication as a foundation for responsible participation and collaborative learning (UNESCO, 2020, 2023), these principles have rarely been integrated with ecological language learning and Islamic educational philosophy into a coherent pedagogical framework. Consequently, limited theoretical guidance exists on how listening can simultaneously cultivate

communicative competence, ethical participation, and sustainable communication in Islamic English language education.

To address these theoretical limitations, this study undertakes a comprehensive PRISMA-guided systematic literature review to synthesize and analyze current scholarship spanning multiple disciplines, including listening pedagogy, Ecological Language Learning, Sociocultural Theory, digital language education, Education for Sustainable Development, and the Islamic educational philosophy of *ta'dib*. Instead of examining technological innovations in isolation, this study aims to uncover the core educational principles and foundational paradigms that underpin the development of ecological listening skills. This development occurs through various interconnected factors such as contextual affordances, sociocultural mediation, learner agency, digital participation, and ethical engagement. By systematically synthesizing insights from these diverse yet interrelated fields, the review culminates in the introduction of the Integrated Ecological Listening Framework (IELF), which offers a holistic model for understanding and enhancing ecological listening practices in contemporary language education. This framework provides a comprehensive conceptual model that explains how sustainable communication skills can be fostered through attentive listening in the context of digitally enriched Islamic English-language education, emphasizing the importance of an integrated approach to nurturing effective and ethical communication.

The Integrated Ecological Listening Framework (IELF) combines four complementary educational traditions to explain ecological listening as a holistic educational process. Ecological Language Learning conceptualizes learning as emerging through interactions between learners and their social, material, and digital environments (van Lier, 2000, 2004). Sociocultural Theory explains that language development occurs through dialogue, mediation, scaffolding, and collaborative participation within meaningful social activities (Vygotsky, 1978; Lantolf & Thorne, 2006). Education for Sustainable Development positions communication as a lifelong competency that supports responsible participation, critical reflection, and collaborative problem-solving (UNESCO, 2020, 2023). These contemporary educational perspectives are further integrated with Al-Attas' concept of *ta'dib* (Al-Attas, 1979, 1991), which views education as the cultivation of *adab* through the integration of knowledge, ethics, and responsible action. By integrating these educational traditions, this study advances ecological language learning and contributes to Islamic education scholarship by proposing a theoretically grounded framework that positions listening as an ecological, ethical, and sustainability-oriented pedagogical practice capable of cultivating communicative competence, *adab*, and sustainable learning communities.

METHOD

This study employed a PRISMA-guided systematic literature review, which is a rigorous and transparent method for identifying, selecting, and analyzing relevant research, to develop the Integrated Ecological Listening Framework (IELF) aimed at promoting sustainable communication within Islamic English language education. Since the primary goal was to generate a comprehensive conceptual framework rather than to assess the effectiveness of specific interventions, the review combined the transparency and structured process of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines with a theory-building synthesis approach, drawing on recent methodological developments (Page et al., 2021; Snyder, 2019). A thorough and systematic search was carried out in the Scopus and Web of Science databases, which are among the most comprehensive repositories of scholarly literature. To ensure the inclusion of seminal and foundational works, Google Scholar was also utilized, along with backward citation tracking to identify influential earlier studies. The search terms employed were diverse and carefully selected to cover key

concepts such as *ecological listening*, *ecological language learning*, *English language education*, *digital language learning*, *artificial intelligence*, *Education for Sustainable Development*, *Islamic education*, *ta'dib*, and *sustainable communication*. The literature review primarily focused on peer-reviewed publications published between 2020 and 2025, ensuring recentness and relevance, while also retaining crucial foundational theoretical works that underpin the conceptual structure of the proposed framework. The entire literature selection process adhered to the four PRISMA stages, identification, screening, eligibility, and inclusion, and these stages are detailed in Figure 1, providing a clear visual representation of the systematic process.

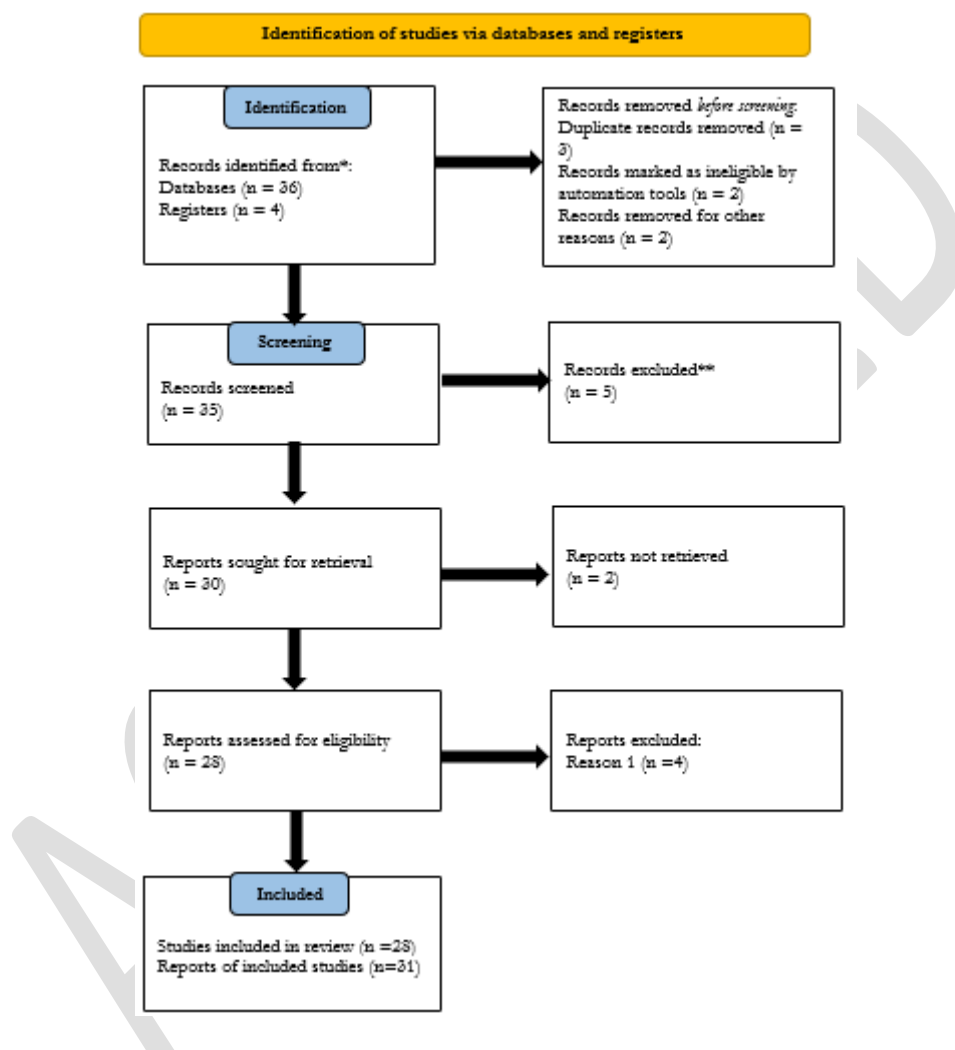


Figure 1. PRISMA 2020 Flow Diagram of the Literature Selection Process

Following the screening process, as portrayed in Figure 1, studies were included if they (1) were published in peer-reviewed journals indexed in Scopus or Web of Science, (2) addressed listening pedagogy, ecological language learning, sociocultural learning, digital language education, Education for Sustainable Development, or Islamic educational philosophy, and (3) provided conceptual, theoretical, or empirical evidence relevant to sustainable communication. Conversely, editorials, conference abstracts, book reviews, duplicate records, and studies lacking direct relevance were excluded to maintain the focus of the review. Data were extracted for bibliographic information, research design, theoretical perspective, educational context, and principal findings. Subsequently, the extracted evidence was analyzed through thematic

synthesis (Braun & Clarke, 2006, 2021; Thomas & Harden, 2008), which aimed to identify recurring concepts and pedagogical themes. This was followed by constant comparative analysis (Charmaz, 2014), designed to examine conceptual convergence across the reviewed literature. The entire analytical process, from literature selection to framework development, is summarized in Figure 2, providing a clear overview of the systematic approach undertaken.

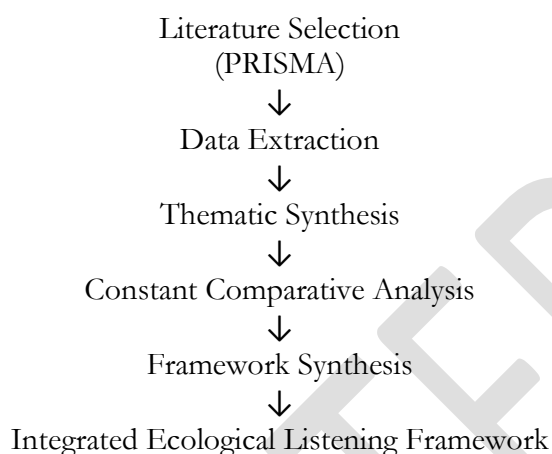


Figure 2. Analytical Process for Developing the Integrated Ecological Listening Framework (IELF)

As can be seen from Figure 2, the final stage employed framework synthesis to integrate the analytical themes into the Integrated Ecological Listening Framework (IELF). Specifically, this synthesis combined four complementary educational traditions: Ecological Language Learning, which explains learning through interactions with environmental affordances (van Lier, 2000, 2004; Min et al, 2025); Sociocultural Theory, which emphasizes mediation, dialogue, collaboration, and learner agency (Vygotsky, 1978; Lantolf & Thorne, 2006); Education for Sustainable Development (ESD), which frames communication as a competency for responsible participation and critical reflection (UNESCO, 2020, 2023); and the Islamic educational philosophy of *ta'dib*, which emphasizes the cultivation of *adab* through the integration of knowledge, ethics, and responsible action (Al-Attas, 1979, 1991). Therefore, synthesizing these diverse perspectives resulted in the development of the IELF. This framework conceptualizes ecological listening as a socially mediated, ethically grounded, and sustainability-oriented pedagogical process that supports sustainable communication in digitally enriched Islamic English language education.

RESULTS AND DISCUSSION

The PRISMA-guided systematic review identified five interrelated analytical themes that explain how ecological listening contributes to sustainable communication in Islamic English language education. Rather than merely summarizing individual studies, the review synthesized conceptual, theoretical, and empirical evidence through various methods such as thematic synthesis, constant comparative analysis, and framework synthesis. Consequently, this process generated five interconnected themes: ecological listening, sociocultural mediation, digital ecological affordances, sustainable communication, and the Islamic educational perspective. These themes, in turn, informed the development of the Integrated Ecological Listening Framework (IELF), which constitutes the principal theoretical contribution of this study. Furthermore, the analytical progression from thematic synthesis to framework development is clearly illustrated in Figure 3, demonstrating the logical flow of the research process.



Figure 3. Analytical Themes Emerging from the PRISMA-Guided Systematic Review

Figure 3 illustrates the analytical pathway through which the synthesized themes were integrated into the Integrated Ecological Listening Framework (IELF). Specifically, ecological listening provides the conceptual foundation, while sociocultural mediation explains its developmental mechanisms. Additionally, digital ecological affordances demonstrate how technology enriches authentic participation and interaction. These dimensions collectively support sustainable communication; moreover, the integration of *ta'dib* extends this perspective by emphasizing *adab*, ethical participation, and responsible communication within Islamic education. The subsequent sections discuss each analytical theme in detail and explain how their integration advances ecological language learning, ultimately providing a new theoretical foundation for sustainable communication in Islamic English language education.

Reconceptualizing Listening as an Ecological Process

The thematic synthesis revealed a fundamental shift in how listening is conceptualized within contemporary English language education. Rather than viewing listening as a passive receptive skill focused on decoding spoken language or completing comprehension tasks, the reviewed literature consistently portrays it as an ecological process in which meaning emerges through interactions among learners, interlocutors, learning environments, and multiple communicative resources. Evidence from listening pedagogy, ecological language learning, multimodal communication, and digital language education demonstrates that comprehension develops through learners' active engagement with contextual, social, technological, and cultural affordances rather than through isolated cognitive processing (Chaves-Yuste & de la Peña, 2023; Rababah et al., 2023; Wang & Dai, 2025; Zhao & Lee, 2022; Nguyen, 2024). Accordingly,

listening should be understood as a dynamic process that supports interpretation, participation, and collaborative meaning-making.

Across the reviewed studies, ecological listening was consistently characterized by four interconnected features. First, it is contextual, as meaning is constructed within authentic communicative situations rather than isolated linguistic input. Second, it is relational, developing through interaction with teachers, peers, and digital environments. Third, it is dynamic, involving continuous negotiation of meaning through feedback and reciprocal communication. Finally, it is multimodal, requiring learners to integrate auditory, visual, textual, and contextual information to construct understanding (Liu & Li, 2025; Wang & Dai, 2025; Yıldız, 2025; Yaseen & Alnaakeb, 2023). Digital learning environments, including podcasts, conversational agents, speech-recognition technologies, and interactive multimedia, further reinforce these characteristics by expanding opportunities for authentic participation and collaborative meaning-making (Chaves-Yuste & de la Peña, 2023; Xiao et al., 2023; Zhou et al., 2025).

These findings support Ecological Language Learning, which conceptualizes learning as emerging through learners' interactions with the affordances available in their social, material, and technological environments (van Lier, 2000, 2004). From this perspective, listening is not an isolated cognitive process but an ecological activity in which learners actively interpret and respond to communicative opportunities. Contemporary digital environments enrich these affordances by providing authentic input, multimodal resources, immediate feedback, and collaborative interaction, thereby extending listening beyond comprehension toward meaningful participation (Jiang, 2022; Wang & Han, 2024). This reconceptualization also provides the conceptual basis for sustainable communication in Islamic English-language education, in which listening supports dialogue, mutual understanding, responsible participation, and holistic learner development. In this regard, listening is an ecological, socially situated process of meaning-making through interactions among learners, interlocutors, digital tools, and real learning settings. This underpins the development of the Integrated Ecological Listening Framework (IELF).

Sociocultural Mediation of Ecological Listening

The thematic synthesis indicates that ecological listening develops through socially mediated participation rather than individual language processing. Across the reviewed studies, listening consistently emerged as a collaborative activity in which learners construct meaning through dialogue, interaction, feedback, and shared problem-solving with teachers, peers, and digital learning environments. Rather than passively receiving linguistic input, learners negotiate understanding by interpreting contextual cues, responding to others, requesting clarification, and co-constructing meaning during communicative exchanges. Studies on collaborative learning and AI-supported language education further demonstrate that sustained interaction enhances listening by promoting authentic participation, reflection, and iterative communicative practice (Ding & Yusof, 2025; Guan et al., 2024; Qiao & Zhao, 2023; Xiao et al., 2023). These findings indicate that ecological listening is fundamentally a social process in which comprehension develops through meaningful participation rather than through passive exposure to spoken language.

The synthesis identified five interconnected sociocultural mechanisms underpinning ecological listening: dialogue, mediation, scaffolding, learner agency, and collaboration. Specifically, dialogue supports reciprocal meaning-making, while mediation provides linguistic and contextual assistance from teachers, peers, or digital resources. Furthermore, scaffolding gradually develops communicative competence through guided participation. Learner agency, on the other hand, enables students to regulate their learning by selecting strategies, revisiting

resources, and reflecting on performance. In addition, collaboration facilitates shared knowledge construction. Digital technologies, including conversational agents, adaptive feedback systems, and interactive multimedia, play a supportive role by reinforcing these processes. They expand opportunities for authentic dialogue and immediate feedback without diminishing the educational role of teachers (Lu et al., 2025; Wei, 2023; Xiao et al., 2023; Zhou et al., 2025). Therefore, technology functions primarily as a mediating resource that, rather than replacing, enriches human interaction.

These findings are consistent with Sociocultural Theory, which explains language development as a socially mediated process shaped by dialogue, collaboration, and participation in meaningful cultural practices (Vygotsky, 1978). Lantolf and Thorne (2006) further argue that learning develops through mediated action, where cultural tools, including digital technologies, support learners' engagement in increasingly complex communicative activities. Studies show AI-supported learning works best when it enhances interaction, reflection, and learner agency, not as standalone instruction (Guan et al., 2024; Jiang, 2022; Zhou et al., 2025). In Islamic English education, this sociocultural view highlights ethical communication through participation and respect. Ecological listening develops via socially mediated participation with dialogue, scaffolding, collaboration, and technology as mediating artifacts, supporting human interaction and the IELF framework.

Digital Ecological Affordances Supporting Listening

The thematic synthesis demonstrates that digital technologies enhance ecological listening not by replacing conventional instruction but by expanding the ecological affordances available for meaningful communication. Across the reviewed studies, artificial intelligence (AI), large language models (LLMs), conversational chatbots, podcasts, speech-recognition systems, adaptive learning platforms, and multimodal learning environments consistently support authentic interaction, learner agency, and collaborative meaning-making. Despite their different technological characteristics, these tools perform similar educational functions by facilitating dialogue, providing authentic linguistic input, delivering immediate feedback, and enriching contextual interpretation through multiple communicative modes (Chaves-Yuste & de la Peña, 2023; Guan et al., 2024; Liu & Li, 2025; Xiao et al., 2023; Zhou et al., 2025). Rather than functioning as isolated instructional innovations, they collectively create digitally enriched learning environments that support sustained communicative participation.

Table 1. Digital Ecological Affordances Supporting Ecological Listening

Technology	Ecological Affordance	Educational Function
AI chatbots	Dialogic interaction	Collaborative communication and negotiation of meaning
Podcasts	Authentic linguistic input	Contextual meaning-making and exposure to real-world discourse
Speech-recognition systems	Immediate formative feedback	Reflection, self-monitoring, and communicative refinement
Adaptive learning platforms	Personalized learning pathways	Learner agency and self-regulated learning
Multimodal learning environments	Multiple contextual cues	Collaborative interpretation and multimodal meaning construction

Source: Authors' synthesis based on the reviewed literature.

As shown in Table 1, the reviewed technologies share common ecological affordances despite their different technical architectures. Specifically, AI chatbots facilitate dialogic interaction and collaborative meaning negotiation (Ding & Yusof, 2025; Xun et al, 2025; Xiao et al., 2023), while podcasts provide authentic input that strengthens contextual understanding and listening fluency (Chaves-Yuste & de la Peña, 2023; Oraif & Alrashed, 2025). Furthermore, speech-recognition systems promote reflection through immediate formative feedback (Liu & Li, 2025; Xiao, 2025). In addition, adaptive platforms foster learner agency by personalizing instruction (Wei, 2023; Zhou et al., 2025), and multimodal environments, which integrate auditory, visual, and textual information, serve to enrich contextual interpretation (Wang & Dai, 2025). Collectively, these technologies expand opportunities for authentic participation rather than simply improving technical listening performance.

Subsequently, these findings galvanize the Ecological Language Learning perspective, which views learning as emerging through learners' interactions with environmental affordances (van Lier, 2000, 2004). Consistent with contemporary digital pedagogy, technology is most effective when it enables learners to participate actively in authentic communicative practices rather than merely delivering instructional content (Jiang, 2022; Wang & Han, 2024). Within the Integrated Ecological Listening Framework (IELF), digital technologies therefore function as ecological mediators that strengthen dialogue, learner agency, and collaborative communication while preserving the central role of teachers and peers. Accordingly, the third conceptual proposition emerging from the synthesis is that digital technologies strengthen ecological listening by expanding authentic participation, learner agency, collaborative communication, and contextual meaning-making through ecological affordances embedded within digitally enriched learning environments. This proposition establishes the technological dimension of the IELF and provides the basis for understanding sustainable communication as the overarching educational outcome.

Sustainable Communication as the Educational Outcome

The primary educational goal of ecological listening, as indicated by the thematic synthesis, is to develop sustainable communication. This goal goes beyond mere listening comprehension or linguistic accuracy and emphasizes learners' ability to engage meaningfully across a variety of communicative contexts. Across the reviewed studies, effective listening was consistently associated with dialogue, collaboration, reflection, and the ability to transfer communicative practices across social and educational settings (Chaves-Yuste & de la Peña, 2023; Guan et al., 2024; Wei, 2023; Zhou et al., 2025). Rather than representing a discrete language skill, listening emerged as a foundational competency that enables learners to engage constructively in authentic, collaborative, and digitally mediated communication.

Furthermore, the synthesis revealed five related dimensions of sustainable communication: dialogue, participation, collaboration, reflection, and communicative transfer. Specifically, dialogue and participation allow learners to negotiate mutual understanding, fostering an environment of open exchange. Meanwhile, collaboration plays a crucial role in fostering collective knowledge building and valuing diverse perspectives. Reflection, on the other hand, encourages learners to evaluate and refine their communicative practices, promoting continuous improvement. Additionally, communicative transfer enables learners to apply these competencies across different contexts, ensuring versatility. Collectively, these dimensions position sustainable communication as an enduring educational capability rather than merely a short-term instructional outcome.

These findings align closely with Education for Sustainable Development (ESD), which conceptualizes communication as a competency for responsible participation, critical reflection,

inclusive dialogue, and collaborative problem-solving (UNESCO, 2020, 2023). From this perspective, ecological listening contributes to sustainable communication by creating opportunities for learners to interpret diverse perspectives, negotiate meaning, and participate actively in authentic communicative practices. Within the Integrated Ecological Listening Framework (IELF), sustainable communication therefore represents the educational outcome generated through the interaction of ecological learning, sociocultural mediation, and digital ecological affordances. Therefore, the fourth conceptual proposition emerging from the synthesis is that sustainable communication develops when ecological listening cultivates dialogue, participation, collaboration, reflection, communicative transfer, and responsible engagement, thereby preparing learners for lifelong learning and meaningful participation in diverse communicative communities. This proposition provides the conceptual bridge to the subsequent discussion of Islamic educational philosophy, where sustainable communication is further enriched through the ethical principles of *ta'dib* and *adab*.

Ecological Listening in Islamic English Language Education

The thematic synthesis indicates that ecological listening extends beyond communicative competence to support ethical participation in Islamic English-language education. While the reviewed literature consistently highlights dialogue, collaboration, learner agency, and sustainable communication, these competencies acquire deeper educational significance when interpreted through the Islamic philosophy of *ta'dib*. Rather than viewing listening solely as a linguistic or cognitive activity, *ta'dib* positions it as an educational practice through which learners cultivate *adab*, the ability to receive knowledge with humility, communicate respectfully, and participate responsibly in learning communities (Al-Attas, 1979, 1991). Consequently, ecological listening contributes not only to language development but also to the ethical formation of learners.

The synthesis of the findings further demonstrates that the core principles of ecological listening, dialogue, participation, collaboration, and reflection closely align with the educational aims of Islamic education. Dialogue promotes mutual respect, participation encourages responsible engagement, collaboration supports the construction of collective knowledge, and reflection strengthens ethical awareness in communication. These dimensions position listening as a holistic educational practice that integrates knowledge, values, and responsible action rather than a discrete language skill.

These findings are in a similar vein to Al-Attas' conception of *ta'dib*, which emphasizes the integration of intellectual, ethical, and spiritual development through education (Al-Attas, 1979, 1991). They also reveal an important convergence between *ta'dib* and Education for Sustainable Development (ESD), as both emphasize dialogue, responsible participation, collaboration, and ethical action as essential educational outcomes (UNESCO, 2020, 2023). Within the Integrated Ecological Listening Framework (IELF), *ta'dib* therefore functions as the ethical dimension that complements ecological learning, sociocultural mediation, digital ecological affordances, and sustainable communication. Accordingly, the fifth conceptual proposition emerging from the synthesis is that within Islamic English-language education, ecological listening functions as an ethical educational practice through which communicative competence and *adab* are cultivated simultaneously, enabling learners to participate responsibly, respectfully, and collaboratively in sustainable learning communities.

Integrated Ecological Listening Framework (IELF)

The thematic synthesis reveals that none of the theoretical perspectives, Ecological Language Learning, Sociocultural Theory, Education for Sustainable Development (ESD), or the Islamic educational philosophy of *ta'dib*, fully explain how listening fosters sustainable

communication in digitally enriched Islamic English language education. While each perspective offers valuable insights into aspects of listening, previous research has largely explored these frameworks individually. Responding to this theoretical fragmentation, the present study integrates the five analytical themes identified through the PRISMA-guided systematic review into the Integrated Ecological Listening Framework (IELF). As illustrated in Figure 4, the framework conceptualizes sustainable communication as the outcome of interactions among ecological learning, sociocultural mediation, digital ecological affordances, sustainability principles, and ethical participation.

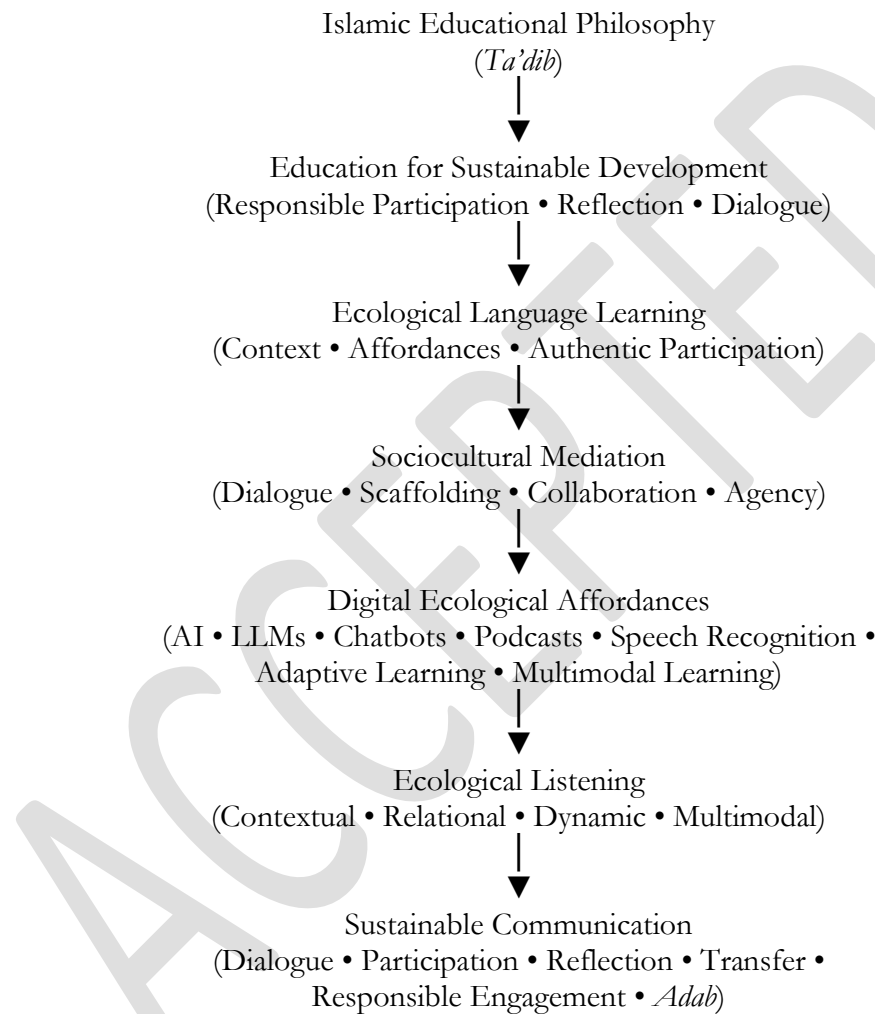


Figure 4. Integrated Ecological Listening Framework (IELF)

Figure 4 illustrates that *ta'dib* provides the ethical foundation of the framework, while ESD defines communication as a competency for responsible participation and lifelong learning. These principles shape Ecological Language Learning, where meaning emerges through interactions with authentic social, cultural, and digital affordances (van Lier, 2000, 2004). Sociocultural mediation explains how dialogue, scaffolding, collaboration, and learner agency transform these affordances into meaningful learning experiences (Vygotsky, 1978; Lantolf & Thorne, 2006), whereas digital ecological affordances expand opportunities for authentic participation through AI-supported, multimodal, and adaptive learning environments.

Together, these dimensions cultivate ecological listening, which serves as the immediate pedagogical mechanism for sustainable communication.

The Integrated Ecological Listening Framework (IELF) constitutes the principal theoretical contribution of this study. By integrating Ecological Language Learning, Sociocultural Theory, ESD, and *ta'dib*, the framework reconceptualizes listening as an ecological, socially mediated, ethically grounded, and sustainability-oriented educational process. Unlike previous studies that have examined these perspectives separately, IELF provides a coherent explanation of how ecological listening cultivates communicative competence, *adab*, responsible participation, and sustainable communication in digitally enriched Islamic English language education. The framework therefore offers a transferable theoretical foundation for future empirical research and pedagogical innovation in Islamic English language education.

CONCLUSION

This PRISMA-guided systematic review reconceptualizes listening as an ecological, socially mediated, and ethically grounded educational process that extends beyond receptive language comprehension to cultivate sustainable communication in English language education. Through the systematic synthesis of Ecological Language Learning, Sociocultural Theory, Education for Sustainable Development (ESD), and the Islamic educational philosophy of *ta'dib*, the study demonstrates that ecological listening develops through the dynamic interaction of contextual affordances, dialogue, collaboration, learner agency, digital participation, and ethical engagement. Rather than functioning as instructional substitutes, digital technologies expand ecological affordances that enrich authentic communication, collaborative meaning-making, and reflective learning. Building upon these findings, the study proposes the Integrated Ecological Listening Framework (IELF), which advances existing scholarship by providing a coherent theoretical explanation of how ecological, sociocultural, technological, sustainability-oriented, and Islamic educational perspectives collectively foster sustainable communication. The framework further contributes to Islamic education by positioning listening as an ethical educational practice through which communicative competence and *adab* are cultivated simultaneously, thereby aligning language learning with the holistic educational aims of Islamic education. As a theory-building systematic review, this study is limited to conceptual synthesis and therefore requires empirical validation across diverse educational settings. Future research should examine the applicability of IELF through classroom-based, mixed-methods, or design-based studies to evaluate its pedagogical effectiveness in fostering sustainable communication within digitally enriched Islamic English language education.

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