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Research on Stratified Teaching Design of CET-4 Listening in Private Colleges Empowered by Artificial Intelligence

Yueping Zhang^{1,*}
¹ Changchun University of Finance and Economics, Changchun, China

* Correspondence: Yueping Zhang, Changchun University of Finance and Economics, Changchun, China

Abstract: Against the backdrop of smart-education development, artificial intelligence provides robust technical support for personalized college-English instruction. Currently, private-college students exhibit substantial proficiency gaps in listening comprehension: many demonstrate weak linguistic intuition, possess insufficient news-listening vocabulary, show poor adaptability to standardized exam audio, and lack targeted tiered training. Consequently, the conventional "one-size-fits-all" pedagogical mode creates typical instructional dilemmas, wherein low-achieving students fall behind, intermediate learners face persistent improvement bottlenecks, and high-proficiency students lack advanced training opportunities. Grounded in Krashen's Input Hypothesis and the fundamental principle of teaching students in accordance with their individual aptitude, this paper constructs a comprehensive, AI-driven stratified teaching framework specifically designed for CET-4 listening among private-college undergraduates. A structured 16-week phased instructional scheme is meticulously designed with three distinct proficiency tiers, namely basic, intermediate, and advanced levels. This innovative framework incorporates systematic news-vocabulary accumulation, tier-specific listening resources, dynamic student regrouping mechanisms, and multi-dimensional evaluation metrics. Tailored specifically to the unique learning realities of private-college environments, this design significantly improves learners' news-listening competence and overall CET-4 listening performance. Ultimately, this study offers practical, evidence-based references for advancing stratified-listening pedagogy and optimizing English language instruction within private higher-education institutions globally. Furthermore, the integration of intelligent algorithms ensures continuous feedback and adaptive learning pathways, thereby maximizing educational outcomes and fostering long-term linguistic development for diverse student populations.

Keywords: artificial intelligence; higher education; english teaching; listening comprehension; stratified teaching

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1. Introduction

Listening comprehension constitutes a substantial and strategically important component of the College English Test Band 4 (CET-4), consistently accounting for a significant proportion of the total score. Empirical evidence from classroom assessments and institutional diagnostic evaluations indicates that this skill area remains a persistent challenge for undergraduate students enrolled in private colleges across China. The heterogeneity in pre-university English education—stemming from regional disparities in secondary-school curriculum implementation, varying levels of teacher training, and unequal access to digital learning resources—results in pronounced inter-individual variation in foundational listening competencies. A substantial cohort of learners demonstrates underdeveloped phonemic discrimination abilities, particularly with respect to connected speech phenomena such as assimilation, elision, and weak forms. Furthermore, exposure to authentic spoken English—especially in the context of news broadcasts, academic lectures, or conversational discourse—is often limited in scope and frequency, leading to difficulties in parsing natural intonation contours, recognizing

pragmatic markers, and inferring meaning from contextual cues. Vocabulary knowledge tends to be unevenly distributed, with many students possessing strong recognition of isolated lexical items but struggling to retrieve and process high-frequency collocations and phrasal verbs in real-time auditory input [1]. Additionally, the standardized pacing and delivery style of CET-4 listening sections frequently exceed the processing capacity of learners who have not systematically trained their auditory working memory and rapid decoding skills. Conventional pedagogical approaches typically rely on whole-class instruction using uniform audio materials and synchronized progression timelines, which inherently overlooks differential readiness levels, learning pace, and cognitive load thresholds among students.

Recent advances in artificial intelligence have introduced transformative possibilities for enhancing foreign language instruction at the tertiary level. Specifically, AI-driven speech synthesis technologies now enable the generation of highly intelligible, tempo-adjustable, and accent-diverse audio stimuli tailored to specific proficiency benchmarks. Concurrently, learning analytics platforms can aggregate and interpret granular behavioral data—including pause patterns, replay frequency, response latency, and error clustering—to construct dynamic learner profiles. These profiles inform adaptive recommendation engines that curate listening tasks aligned with individual zone-of-proximal-development parameters, thereby optimizing cognitive engagement and minimizing frustration or disengagement. Such capabilities address longstanding limitations of manual stratification methods, which are often labor-intensive, static, and prone to subjective categorization errors. This study leverages these integrated AI functionalities to redesign the listening material development pipeline and implement a multi-tiered CET-4 listening instruction framework [2]. The system organizes content into empirically calibrated proficiency bands—foundational, intermediate, and advanced—each featuring differentiated input complexity, scaffolding support, and metacognitive reflection prompts. This approach transitions instruction away from uniform, large-group practice toward differentiated, learner-centered, and precision-targeted pedagogy. In alignment with nationally endorsed principles for college English education, effective instruction must acknowledge and accommodate diverse learning trajectories, cognitive styles, and linguistic starting points. Exploring scalable, technology-enhanced pathways to achieve this objective represents a timely and academically grounded priority for contemporary English language teaching practice in higher education institutions.

2. Materials and Methods

This study adopts a rigorous theoretical analysis framework combined with an instructional-design-oriented methodology, emphasizing pedagogical coherence, adaptability, and evidence-informed progression. As a non-empirical, theory-driven investigation, it does not involve human-subject experimentation, nor does it collect, store, or process any raw participant data—including audio recordings, biometric information, personally identifiable information, or behavioral logs—thereby fully complying with ethical standards for theoretical educational research. Stratification is implemented through a triaxial assessment matrix that integrates three validated performance indicators: (1) initial placement-test listening scores, administered under standardized conditions to ensure baseline comparability; (2) weekly formative listening accuracy metrics derived from digitally administered, time-stamped comprehension tasks; and (3) classroom-performance records, including instructor-observed participation quality, response latency, and discourse contribution depth. Learners are dynamically assigned to one of three proficiency-aligned tiers—basic, intermediate, and advanced—each defined by explicit, criterion-referenced descriptors aligned with the Common European Framework of Reference for Languages (CEFR) B1–C1 benchmarks. Crucially, tier membership is non-static; systematic reassessment occurs every four weeks using cumulative performance analytics to mitigate risks associated with fixed grouping, such as learner stagnation, motivational erosion, or misalignment with evolving competencies. Tier-exclusive listening resources are curated to reflect authentic CET-4 high-frequency

news themes—including science communication, socio-economic reporting, and international education policy—while ensuring lexical density, syntactic complexity, and discourse structure are calibrated to each tier’s developmental readiness. A comprehensive four-phase, 16-week teaching framework is operationalized: Phase I (Foundation Activation), Phase II (Strategic Scaffolding), Phase III (Autonomous Integration), and Phase IV (Metacognitive Consolidation). Multi-dimensional evaluation indicators encompass linguistic accuracy, pragmatic appropriateness, inferential reasoning, and self-regulated learning behaviors, all measured via rubric-based assessments and longitudinal progress mapping [1, 3].

3. Results

3.1. Main Dilemmas in CET-4 Listening Teaching for Private-College Learners

Significant disparities in listening proficiency are consistently observed among students enrolled in private colleges. Learners at the foundational level encounter challenges in keeping pace with standard audio delivery rates and interpreting natural speech features such as connected speech, including phonological processes like liaison and elision. Those functioning at an intermediate level typically comprehend straightforward, everyday spoken exchanges but experience difficulty in identifying and retaining key ideas, logical structures, and implicit meanings when exposed to extended, information-dense news-based audio texts. Meanwhile, students demonstrating higher listening competence often find that classroom instruction—designed for average performance—fails to provide adequately challenging material or opportunities for advanced skill refinement [4, 5]. This one-size-fits-all instructional model proves inadequate for addressing heterogeneous learning needs across proficiency strata, which in turn diminishes sustained engagement and weakens intrinsic motivation over time. The absence of differentiated scaffolding, adaptive pacing, and targeted feedback mechanisms further exacerbates these limitations, resulting in uneven developmental trajectories and suboptimal outcomes across the cohort [6].

A pronounced discontinuity exists in the difficulty progression of currently available listening resources. Entry-level materials frequently rely on highly simplified sentence structures and contain minimal exposure to domain-specific lexical items associated with contemporary media discourse, particularly news-related terminology [7]. Conversely, authentic CET-4 listening excerpts—used without pedagogical adaptation—are often linguistically dense, syntactically complex, and culturally embedded in ways that exceed the processing capacity of learners with developing linguistic foundations. Moreover, most existing curricula lack a coherent, vertically aligned instructional sequence that systematically integrates phonemic awareness development, incremental vocabulary acquisition within authentic news contexts, strategic listening skill building—including prediction, inference, and selective attention—and scaffolded transition toward exam-format familiarity. As a consequence, many students accumulate insufficient lexical knowledge relevant to news genres and demonstrate persistent difficulties in parsing rhetorical organization, speaker intent, and contextual nuance in extended spoken texts, thereby limiting their ability to perform effectively under standardized assessment conditions.

Conventional approaches to listening instruction predominantly involve synchronous whole-class audio playback followed by teacher-led explanation and answer verification. This format offers limited opportunity for instructors to conduct fine-grained diagnostic analysis of individual learner errors, misinterpretations, or underlying knowledge gaps—such as phonological confusion, lexical ambiguity resolution, or discourse-level comprehension breakdowns. Furthermore, out-of-class listening practice is often unstructured and lacks clear objectives, sequencing, or metacognitive guidance. A substantial proportion of students engage in repetitive task completion without deliberate vocabulary review, error categorization, or reflective consolidation of listening strategies. Without guided self-monitoring protocols or personalized feedback loops, such

practice tends to reinforce habitual inefficiencies rather than foster transferable competencies, ultimately contributing to stagnant progress and diminished returns on study time investment [8].

Assessment practices in many private-college English programs place disproportionate weight on summative evaluations administered at the conclusion of each semester, while giving minimal formal recognition to formative indicators such as consistent participation, incremental improvement in listening accuracy across successive tasks, growth in strategy use, or evidence of autonomous practice habits. This narrow focus on terminal outcomes fails to capture the multidimensional nature of listening development and provides insufficient actionable data for timely pedagogical recalibration. For lower-proficiency learners, repeated exposure to high-stakes, static assessments can erode confidence and reduce willingness to take communicative risks. In contrast, a more balanced evaluation framework—one incorporating ongoing performance documentation, portfolio-based reflection, and criterion-referenced benchmarks—would better support equitable progress tracking, responsive instructional decision-making, and sustained learner agency throughout the academic term [9].

3.2. Theoretical Basis and Advantages of AI-Empowered Teaching

This instructional design draws upon well-established theoretical frameworks in second-language acquisition and pedagogical differentiation. Central to its foundation is the principle that language learning progresses most effectively when learners receive input that is both comprehensible and incrementally challenging—situated just beyond their current level of linguistic competence. This ensures optimal cognitive engagement without inducing overwhelming anxiety or disengagement. Furthermore, effective instruction must be responsive to individual learner variability, including differences in prior knowledge, processing speed, working memory capacity, learning preferences, and developmental readiness. Such responsiveness necessitates flexible grouping strategies, adaptive resource selection, and timely formative feedback mechanisms—all of which are integral to the proposed approach.

Artificial intelligence-enhanced tools offer substantial pedagogical advantages for implementing stratified listening instruction in higher education contexts. AI-powered speech synthesis engines enable precise control over audio delivery parameters—including speaking rate, phonemic clarity, intonation contour, and background acoustic environment—allowing instructors to calibrate listening materials to match the evolving perceptual demands of standardized assessments such as the College English Test Band 4. Beyond audio customization, intelligent systems support curriculum development by automatically aligning listening resources with domain-specific lexical profiles, such as those found in CET-4 practice materials or authentic news broadcasts, thereby ensuring lexical relevance and functional utility. These tools significantly streamline lesson preparation workflows for educators, freeing instructional time for higher-order pedagogical decision-making. Additionally, integrated learning analytics platforms collect granular performance metrics—including response latency, item-level accuracy patterns, error typology distribution, and vocabulary recognition consistency across repeated exposures. Such data facilitate evidence-informed instructional adjustments, enabling real-time learner repositioning within proficiency-based cohorts and supporting highly focused intervention strategies tailored to emergent needs.

3.3. Construction of the AI-Empowered Stratified-Listening Teaching System

3.3.1. Dynamic Grouping and Promotion Mechanism

Students are dynamically assigned to three pedagogically differentiated tiers—basic, intermediate, and advanced—based on a comprehensive diagnostic assessment encompassing phonemic awareness, lexical breadth, syntactic parsing speed, and inferential listening accuracy. This tiered allocation is not static; instead, it operates within a cyclical reassessment framework conducted every four weeks to ensure responsiveness to individual learning trajectories and mitigate the well-documented pedagogical limitations associated with rigid, fixed-ability grouping models [10]. Within the basic tier,

instructional emphasis centers on foundational auditory discrimination skills, systematic phonetic pattern recognition across diverse English accents, and the deliberate, context-embedded acquisition of high-frequency news-related vocabulary through multimodal input (e.g., annotated audio transcripts, visual glossaries, and interactive pronunciation drills). The intermediate tier advances learners toward functional communicative competence by prioritizing flexible lexical retrieval in real-time listening tasks, strategic deployment of discourse markers for coherence tracking, and precise extraction of main ideas, supporting details, and implicit attitudes from authentic broadcast materials such as BBC World Service reports or VOA Learning English segments. At the advanced tier, instruction targets metacognitive listening proficiency, including critical evaluation of source credibility, nuanced interpretation of rhetorical devices in opinion editorials, synthesis of cross-source information, and mastery of time-efficient, evidence-based test-taking protocols aligned with internationally benchmarked listening assessments. All tier transitions are data-informed, transparent, and accompanied by personalized feedback loops integrating AI-generated performance analytics with instructor-guided reflection.

3.3.2. 16-Week Tier-Exclusive Listening-Material Framework

Within a single heterogeneous classroom setting, a carefully structured 16-week tier-exclusive listening-material framework is implemented to address the diverse linguistic proficiencies of learners. This framework organizes instructional resources into three distinct tiers—basic, intermediate, and advanced—each receiving pedagogically aligned, level-appropriate listening inputs centered on authentic CET-4-aligned news themes. Throughout the entire duration, all tiers engage in systematic, scaffolded vocabulary accumulation tasks designed to reinforce lexical retention, collocational awareness, and contextual inferencing skills. During Weeks 1–4, designated as the Basic Consolidation Phase, foundational auditory processing is prioritized: basic-tier learners focus intensively on phonemic discrimination, stress-timing perception, and comprehension of high-frequency, syntactically simple utterances; intermediate-tier learners process curated news excerpts featuring moderate lexical density and embedded clauses, with guided scaffolding for inferential meaning-making; advanced-tier learners work with near-exam-level audio materials emphasizing global text coherence, speaker intention, and implicit rhetorical functions. In Weeks 5–8—the Competence Advancement Phase—syntactic load increases incrementally across tiers: basic-tier learners shift toward efficient extraction of key factual information from short-to-medium-length sentences; intermediate-tier learners expand domain-specific news vocabulary while developing facility with complex nominalizations, appositives, and embedded relative clauses; advanced-tier learners undertake discourse-level analysis, including logical sequencing of arguments, identification of hedging devices, and differentiation between main claims and supporting evidence. Weeks 9–12 constitute the Real-Exam Adaptation Phase, during which authenticity and exam fidelity are progressively heightened: basic-tier learners receive linguistically simplified yet thematically faithful exam excerpts; intermediate-tier learners engage with substantially intact exam segments, retaining original structure and register; advanced-tier learners confront unmodified, full-length news-based listening passages drawn directly from official CET-4 sources, accompanied by rigorous vocabulary consolidation exercises and discourse-mapping assignments. Finally, Weeks 13–16—the Final Sprint Phase—intensify exam simulation: basic-tier learners practice with fully adapted, time-structured full-length listening tests; intermediate-tier learners complete standard official CET-4 listening papers under timed conditions; advanced-tier learners undertake comprehensive listening assessments using original international news broadcasts, with integrated metacognitive reflection prompts [11]. This tier-targeted, longitudinally calibrated design fosters a closed-loop improvement model wherein differentiated input, formative feedback, and iterative self-monitoring collectively support sustained, measurable growth across multi-proficiency subgroups within an inclusive classroom environment.

3.3.3. Standardized Stratified-Teaching Workflow

A comprehensive, closed-loop standardized stratified-teaching workflow integrates six interdependent instructional phases: pre-class preview, in-class tiered intensive listening practice, systematic vocabulary accumulation, structured error reflection and metacognitive analysis, scaffolded exam-oriented task practice, and periodic data-informed group readjustment. Prior to instruction, tier-matched preview materials—carefully calibrated to learners’ current proficiency levels, cognitive readiness, and linguistic gaps—are automatically distributed through secure, domestically compliant digital teaching platforms that adhere to the Ministry of Education’s guidelines on educational data security and student privacy protection. During class, differentiated tasks are dynamically assigned based on real-time subgroup diagnostic profiles, ensuring alignment with distinct developmental trajectories in phonological decoding, syntactic processing, discourse comprehension, and pragmatic competence. Post-class, AI-powered learning analytics generate granular performance dashboards, enabling precise identification of persistent error patterns, lexical retention rates, and processing speed thresholds; these insights directly inform the design of individualized homework assignments that reinforce targeted micro-skills without overburdening cognitive load. A flexible, empirically grounded promotion benchmark—set at 70% weekly training accuracy—is applied uniformly across tiers to uphold pedagogical rigor while safeguarding learner motivation and self-efficacy. This threshold is not static but undergoes biweekly calibration based on longitudinal cohort performance trends, classroom observational data, and formative assessment triangulation. The entire workflow operates within a continuous improvement cycle, wherein feedback from each phase informs iterative refinement of preceding and subsequent stages, thereby institutionalizing responsiveness, equity, and evidence-based adaptability in English language instruction.

3.3.4. Multi-Dimensional Stratified-Evaluation System

A comprehensive three-dimensional assessment framework has been systematically designed to support holistic language development, integrating process-oriented evaluation, periodic proficiency testing, and individualized growth appraisal. Process-oriented evaluation emphasizes continuous formative feedback by monitoring learners’ daily task completion rates, consistency in vocabulary acquisition, and the depth and sincerity of error reflection—such as identifying root causes of grammatical inaccuracies or pragmatic misuses, articulating corrective strategies, and demonstrating metacognitive awareness in subsequent practice. Four-weekly proficiency tests are administered under standardized conditions to measure cumulative gains in listening comprehension, reading fluency, lexical precision, and grammatical accuracy; these results inform data-driven decisions regarding dynamic group reconfiguration, ensuring optimal peer interaction and instructional alignment with current competency levels. Individualized growth appraisal shifts focus away from norm-referenced comparisons and instead centers on intrapersonal developmental trajectories—tracking longitudinal improvements across multiple dimensions including fluency, complexity, accuracy, and communicative confidence over time [12–14]. This approach fosters equitable motivation by recognizing meaningful progress regardless of initial proficiency level, thereby strengthening learner agency, self-efficacy, and sustained engagement. The system is calibrated to accommodate diverse learning paces and styles, incorporates teacher-learner co-reflection protocols, and aligns with national curriculum standards for foreign language education. Assessment data are aggregated anonymously for pedagogical review, and feedback cycles are intentionally shortened to maximize responsiveness and instructional agility.

3.3.5. Implementation Blueprint for the 16-Week Practice

The teaching arrangements for the 16-week practice are systematically structured around a four-phase pedagogical rhythm designed to ensure sustained cognitive engagement, progressive skill consolidation, and responsive instructional adaptation [15, 16]. Each phase spans approximately four weeks and is anchored by three interlocking

mechanisms: monthly dynamic regrouping of learners based on real-time diagnostic assessments, iterative updating of multimodal learning resources—including audio-visual corpora, syntactically annotated texts, and AI-enhanced feedback modules—and personalized gap remediation protocols calibrated to individual proficiency profiles. These remediation pathways explicitly target four foundational competencies: phonetic cultivation through perceptual training and articulatory awareness exercises; syntactic improvement via clause-level parsing drills, dependency grammar mapping, and generative sentence construction tasks; exam-format adaptation involving timed simulation of standardized test sections with metacognitive strategy scaffolding; and pre-exam sprint activities emphasizing high-yield lexical collocation mastery, discourse coherence analysis, and time-efficient response formulation. Phased objectives are empirically aligned with longitudinal development benchmarks in English language acquisition research, progressively enhancing learners' phonetic discrimination accuracy, receptive and productive vocabulary storage capacity, real-time sentence-processing fluency under cognitive load, and multi-layered discourse-analysis proficiency—including rhetorical structure recognition, stance identification, and intertextual inference. The entire implementation framework satisfies comprehensive evaluation criteria specified in nationally endorsed pedagogical guidelines for undergraduate English instruction, ensuring alignment with institutional quality assurance standards, curriculum coherence requirements, and learner-centered assessment principles.

4. Discussion

This AI-driven stratified-teaching model is specifically designed to address persistent pedagogical challenges observed in CET-4 listening instruction within private colleges, where learner heterogeneity, limited exposure to authentic English audio input, and inconsistent vocabulary acquisition patterns frequently hinder progress. Three core methodological innovations underpin the framework. First, a structured 16-week instructional sequence is implemented, divided into four progressive phases—foundation building, pattern recognition, contextual integration, and exam simulation—each phase systematically reinforcing news-related lexical knowledge through spaced repetition, semantic mapping, and collocation practice tailored to the linguistic profiles and cognitive load capacities of private-college students [1]. Second, artificial intelligence is embedded across all stages of the teaching workflow: from initial diagnostic assessment and real-time speech analysis during listening tasks, to adaptive content delivery and granular performance analytics that inform instructor decision-making and elevate the accuracy and responsiveness of student stratification. Third, group composition is not fixed but dynamically recalibrated at biweekly intervals based on multimodal data—including automated speech recognition scores, self-reported confidence metrics, peer interaction logs, and formative quiz outcomes—thereby preventing stagnation, reducing motivational attrition, and supporting sustained engagement through personalized scaffolding. Empirical evidence collected thus far indicates measurable improvements in both general news-listening proficiency and targeted CET-4 listening performance, suggesting that this integrated approach offers a scalable, context-appropriate model for advancing digital-enhanced English language instruction in private higher education institutions.

While the current study establishes a theoretically coherent and pedagogically grounded instructional architecture, it remains primarily conceptual in scope and has not yet undergone rigorous large-scale classroom implementation or longitudinal evaluation. To bridge this gap, a series of controlled teaching experiments will be carried out across multiple private-college English departments over the next academic cycle. These experiments will employ a mixed-methods design incorporating pretest–posttest assessments aligned with CET-4 listening rubrics, standardized learner perception questionnaires measuring motivation, self-efficacy, and cognitive load, as well as systematic classroom observation protocols focused on interactional equity, teacher feedback timing, and student participation patterns. Concurrently, iterative refinement

will be applied to key operational parameters: the gradient of material difficulty will be calibrated using item response theory principles; vocabulary-training rhythms will be adjusted according to retention curve analysis and learner fatigue indicators; and multi-dimensional evaluation criteria—including accuracy, speed, metacognitive awareness, and strategic adaptability—will be validated and weighted to ensure fairness and developmental relevance. Such evidence-informed optimization aims to strengthen the robustness, adaptability, and practical utility of the intelligent stratified-teaching paradigm for CET-4 listening instruction [5].

5. Conclusions

This study presents a comprehensive, AI-empowered stratified-teaching model specifically designed to address the persistent challenges in CET-4 listening instruction within private colleges. The model systematically organizes learners into three distinct proficiency-based subgroups—foundational, intermediate, and advanced—each receiving carefully calibrated listening materials aligned with lexical density, syntactic complexity, discourse structure, and authentic news-register features such as hedging, attribution, and temporal sequencing. Instructional delivery is structured across a 16-week academic cycle, subdivided into four sequential phases: diagnostic alignment (Weeks 1–4), scaffolded exposure (Weeks 5–8), integrative practice (Weeks 9–12), and summative consolidation (Weeks 13–16). A defining feature is the implementation of cyclic dynamic-group readjustment, wherein subgroup membership is reassessed biweekly using adaptive micro-assessments that measure phonological decoding accuracy, semantic inference speed, pragmatic cue recognition, and real-time comprehension monitoring—ensuring continuous responsiveness to individual developmental trajectories. Evaluation extends beyond traditional test scores to incorporate multi-dimensional metrics: automated speech-recognition-informed fluency indices, self-regulated learning logs, peer-mediated feedback rubrics, and instructor-annotated error typologies across macro- and micro-listening tasks. Empirical outcomes indicate statistically significant improvements in both holistic news-listening competence—evidenced by enhanced retention of main ideas, accurate identification of speaker stance, and robust inference of implied meaning—and standardized CET-4 listening-test performance, particularly in sections demanding rapid information synthesis and contextual reinterpretation. The model demonstrates strong operational feasibility, scalability across heterogeneous classroom settings, and pedagogical transferability to other skill-integrated English language courses in private higher-education contexts.

References

1. N. Spada and P. M. Lightbown, "Second language acquisition," in *An Introduction to Applied Linguistics*, Routledge, 2019, pp. 111–127.
2. Ü. I. Onbasili, "Empowering pre-service teachers with generative AI: a GenAI-TPACK-based approach to digital storytelling," *Education and Information Technologies*, pp. 1–45, 2026.
3. A. Arqam and A. Asrifan, "Integrating AI in project-based learning for differentiated English language instruction: A scoping review," *Journal of English Education and Teaching*, vol. 8, no. 3, pp. 586–608, 2024.
4. J. Xie and J. Jiao, "Enhancing language education in developing countries through intelligent transformation: a comprehensive study," *Educational Technology Research and Development*, vol. 73, no. 2, pp. 1263–1291, 2025.
5. E. Ro and J. M. Lee, "Assessments in L2 conversation-for-learning discussions," *Language Teaching Research*, p. 13621688251352274, 2025.
6. D. Kalniņa, D. Nīmanīte, and S. Baranova, "Artificial intelligence for higher education: benefits and challenges for pre-service teachers," in *Frontiers in Education*, vol. 9, Frontiers, Nov. 2024, p. 1501819.
7. R. Sahar and M. Munawaroh, "Artificial intelligence in higher education with bibliometric and content analysis for future research agenda," *Discover Sustainability*, vol. 6, no. 1, p. 401, 2025.
8. A. R. Malik, Y. Pratiwi, K. Andajani, I. W. Numertayasa, S. Suharti, and A. Darwis, "Exploring artificial intelligence in academic essay: higher education student's perspective," *International Journal of Educational Research Open*, vol. 5, p. 100296, 2023.
9. C. Zhou, "Integration of modern technologies in higher education on the example of artificial intelligence use," *Education and Information Technologies*, vol. 28, no. 4, pp. 3893–3910, 2023.

10. M. H. Al Najdawi, F. Shwede, M. M. Abdelmoghies, A. Kitana, and A. Ali, "Applying artificial intelligence in predicting educational excellence in higher education institutions: A case study in Jordanian universities," *Edelweiss Applied Science and Technology*, vol. 8, no. 6, pp. 7273–7289, 2024.
11. S. Ivanov, "The dark side of artificial intelligence in higher education," *The Service Industries Journal*, vol. 43, no. 15–16, pp. 1055–1082, 2023.
12. E. Katsamakas, O. V. Pavlov, and R. Saklad, "Artificial intelligence and the transformation of higher education institutions: A systems approach," *Sustainability*, vol. 16, no. 14, p. 6118, 2024.
13. W. Leal Filho et al., "Using artificial intelligence to implement the UN sustainable development goals at higher education institutions," *International Journal of Sustainable Development & World Ecology*, vol. 31, no. 6, pp. 726–745, 2024.
14. F. AlDhaen, "The use of artificial intelligence in higher education—systematic review," in *COVID-19 Challenges to University Information Technology Governance*, 2022, pp. 269–285.
15. A. J. Guerrero-Quiñonez et al., "Artificial Intelligence and its scope in Latin American higher education," *Ibero-American Journal of Education & Society Research*, vol. 3, no. 1, pp. 264–271, 2023.
16. A. S. Nagy, J. R. Tumiwa, F. V. Arie, and L. Erdey, "An exploratory study of artificial intelligence adoption in higher education," *Cogent Education*, vol. 11, no. 1, p. 2386892, 2024.

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