

Original Research

Received 24 March 2026

Revised 27 April 2026

Accepted 18 May 2026

Natural Resources for Human Health 2026, Vol. 6 (2s): 602–630

KEYWORDS:

oral communication competence, non-philological university students, technology-enhanced learning, communicative language teaching, higher education, integrated teaching model.

The Role of Modern Teaching Methods in Developing the Speaking Skills of Non-Philology Students

Nazarov Suyunbek Mashrab Ugli¹, Baxadirova Shoxina Nadir kizi², Ashurbayeva Rukiya Kaxxarovna³, Rajabova Rakhimakhon Maksudovna⁴, Rasulova Matluba Xamzayevna⁵, Narziyeva Inobat Zoirovna⁶, Baymuradov Nemat Sadirdenovich⁷

¹Inter-Nation English school

E-mail: suyunbek.nazar@gmail.com, <https://orcid.org/0009-0001-3992-8039>

²O'zbekiston Davlat Jahon Tillari universitetida mustaqil izlanuvchi

shaxinabaxadirova@gmail.com, <https://orcid.org/0009-0003-0378-4541>

³DSc at the Department of Pedagogy, Bukhara State University, Candidate of pedagogical sciences, associate professor, department of Uzbek language and Literature, Russian and English languages, Bukhara state medical institute

E-mail: ashurbayeva.rukiya@bsmi.uz, <https://orcid.org/0009-0002-5342-5275>

⁴Independent researcher of Urgench State Pedagogical institute, Uzbekistan.

rakhima2712@gmail.com, <https://orcid.org/0009-0000-5723-819X>

⁵PhD, Associate professor, Department of Russian Language and Literature, Kokand State University, Kokand, Republic of Uzbekistan

matlubarasulova161@gmail.com, <https://orcid.org/0009-0008-2019-243X>

⁶Senior Teacher of the Department of Foreign Language Teaching Methodology Bukhara State Pedagogical Institute.

narziyevainobat@buxdpi.uz, <https://orcid.org/0000-0002-81-48-7062>, e-mail: inobat862@gmail.com

⁷Samarkand State Medical University, Doctor of Medical Sciences, Dotsent, Department of pediatric surgery No1, Samarkand State Medical University

Email ID - boymuradovnemat@gmail.com, ORCID ID - 0009-0006-4640-6550

ABSTRACT: The growing demand for graduates with strong oral communication competence has intensified the need to rethink language instruction for non-philological university students. Despite the widespread adoption of innovative pedagogical approaches, many higher education institutions continue to rely on teacher-centered practices that provide limited opportunities for authentic interaction, collaborative learning, and technology-supported speaking development. This gap highlights the necessity of an integrated instructional framework that aligns communicative language teaching with contemporary educational technologies.

This study aims to examine the effectiveness of an Integrated Technology-Enhanced Communicative Teaching Model (ITECTM) in developing the oral communication competence of non-philological university students and to identify the pedagogical factors that contribute most significantly to speaking performance.

A mixed-methods research design was employed involving undergraduate students from non-language disciplines. The instructional intervention combined task-based learning,

collaborative activities, AI-assisted formative feedback, digital learning platforms, reflective peer assessment, and authentic professional communication tasks. Quantitative data were analyzed using descriptive and inferential statistical techniques, while qualitative data from interviews and reflective journals were subjected to thematic analysis.

The findings demonstrate that students who participated in the integrated instructional model achieved statistically significant improvements in oral fluency, interactional competence, pronunciation, vocabulary use, communicative confidence, and self-regulated learning compared with those receiving conventional instruction. The results further indicate that the synergy between educational technology, active learning strategies, and continuous formative feedback substantially enhances speaking competence and learner engagement.

The study introduces a novel pedagogical framework that integrates technology-enhanced communicative instruction into a unified model for non-philological higher education. The proposed framework provides both theoretical and practical contributions by offering an evidence-based approach to improving oral communication competence and supporting the digital transformation of language education in higher education.

1. INTRODUCTION

Oral communication competence has emerged as one of the most indispensable competencies for university graduates in the twenty-first century. In an increasingly globalized, digitally connected, and knowledge-driven society, the ability to communicate ideas clearly, participate in collaborative problem-solving, negotiate meaning, and interact effectively across multicultural environments has become a prerequisite for academic success and professional competitiveness. Contemporary employers consistently rank communication skills among the most desirable graduate attributes because effective oral interaction directly influences teamwork, leadership, decision-making, innovation, and career advancement (OECD, 2023; UNESCO, 2023; Godwin-Jones, 2022). Consequently, higher education institutions are no longer expected merely to transmit disciplinary knowledge but also to cultivate graduates capable of communicating confidently in complex professional and intercultural contexts.

The significance of oral communication is particularly evident among students enrolled in non-philological disciplines, including engineering, medicine, economics, information technology, agriculture, law, and business. Unlike language majors, these students primarily study English as a tool for professional communication rather than as an academic specialization. Their future careers require participation in international conferences, interdisciplinary collaboration, workplace negotiations, project presentations, client communication, and research dissemination. Nevertheless, many non-philological students demonstrate a noticeable discrepancy between receptive language knowledge and productive speaking performance. Although they may possess satisfactory grammatical knowledge and reading ability, they often experience difficulties expressing ideas fluently, responding spontaneously, maintaining interaction, or adapting their language to professional contexts (Loewen & Sato, 2021; Derakhshan, 2022). This mismatch indicates that traditional approaches to foreign language instruction have not sufficiently addressed the communicative demands of contemporary higher education.

The digital transformation of education has fundamentally reshaped the landscape of language teaching and learning. Advances in artificial intelligence, cloud-based learning platforms, virtual learning environments, learning analytics, automatic speech recognition, immersive technologies, and adaptive educational systems have expanded opportunities for developing speaking competence beyond conventional classroom boundaries. Rather than serving merely as instructional tools, digital technologies now function as interactive learning environments that facilitate authentic communication, personalized feedback, collaborative knowledge construction, and continuous formative assessment (Bond et al., 2024; Zawacki-Richter & Qayyum, 2021). Consequently, speaking instruction has gradually shifted from teacher-dominated knowledge transmission toward learner-centered, technology-enhanced, and communication-oriented pedagogical models.

Within this evolving educational paradigm, numerous innovative instructional approaches have been introduced to strengthen learners' communicative competence. Communicative Language Teaching (CLT) emphasizes meaningful interaction as both

the means and the objective of language learning. Task-Based Language Teaching (TBLT) encourages learners to accomplish authentic communicative tasks that mirror real-world language use. Project-Based Learning (PBL), collaborative learning, flipped classrooms, gamification, blended learning, and technology-enhanced instruction further promote learner autonomy, engagement, critical thinking, and authentic communication (Ellis et al., 2022; Thomas & Reinders, 2023; Lai & Li, 2023). Collectively, these approaches represent a substantial departure from grammar-centered instruction by prioritizing communicative effectiveness over isolated linguistic accuracy.

Recent advances in artificial intelligence have further accelerated innovation in language education. AI-powered conversational systems, intelligent tutoring platforms, automated speech evaluation, and generative language models provide learners with immediate feedback, individualized learning pathways, and unlimited opportunities for oral practice. Unlike traditional classroom interaction, AI-supported environments allow students to engage in repeated speaking activities without fear of negative evaluation while receiving personalized recommendations for pronunciation, fluency, lexical choice, and discourse organization (Kasneci et al., 2023; Crompton & Burke, 2023). Emerging evidence suggests that AI-enhanced instruction contributes to increased speaking confidence, learner engagement, willingness to communicate, and communicative competence when integrated within sound pedagogical frameworks rather than employed as isolated technological innovations (Luckin & Cukurova, 2024).

Despite these developments, substantial challenges remain in the implementation of modern teaching methods within non-philological higher education. In many educational settings, speaking instruction continues to be constrained by teacher-centered pedagogies, examination-oriented curricula, limited classroom interaction, insufficient instructional time, and inadequate integration of digital technologies into communicative practice. Consequently, students frequently experience foreign language speaking anxiety, low communicative confidence, passive classroom participation, and limited opportunities to develop spontaneous oral interaction (MacIntyre et al., 2022; Dewaele et al., 2023). These challenges are particularly pronounced among non-philological students because language instruction is often regarded as a supplementary subject rather than an integral component of professional preparation.

A growing body of international research has demonstrated the effectiveness of individual instructional innovations in improving speaking performance. Studies have reported positive outcomes associated with Communicative Language Teaching, Task-Based Language Teaching, gamification, blended learning, mobile-assisted language learning, flipped instruction, collaborative learning, and AI-supported educational technologies (Godwin-Jones, 2022; Ellis et al., 2022; Bond et al., 2024; Lai & Li, 2023). Nevertheless, the existing literature remains fragmented in several important respects.

First, most empirical investigations examine a single pedagogical intervention rather than exploring the combined influence of multiple evidence-based instructional approaches. As a result, little is known about how different pedagogical strategies interact to promote sustainable oral communication competence.

Second, previous studies have predominantly focused on English-major students, secondary education, or general English language learners. Comparatively fewer studies investigate non-philological university students whose communicative needs are strongly influenced by professional and disciplinary contexts (Loewen & Sato, 2021; Derakhshan, 2022).

Third, although recent research increasingly highlights the educational potential of artificial intelligence, many studies evaluate AI as an independent technological innovation rather than as a pedagogically integrated component of communicative language instruction. Consequently, insufficient attention has been devoted to understanding how AI-supported formative feedback can complement collaborative learning, authentic communicative tasks, learner autonomy, and reflective assessment within a unified instructional framework (Kasneci et al., 2023; Crompton & Burke, 2023).

Fourth, relatively few studies simultaneously examine cognitive, social, technological, and affective dimensions of oral communication development. Speaking competence is a multidimensional construct encompassing linguistic knowledge, interactional competence, communicative confidence, self-regulated learning, willingness to communicate, and professional discourse competence. However, existing research frequently investigates these variables independently, limiting the development of comprehensive pedagogical models suitable for digitally transformed higher education.

Accordingly, this study addresses these limitations by proposing an **Integrated Technology-Enhanced Communicative Teaching Model (ITECTM)** specifically designed for non-philological university students. The proposed model integrates

Communicative Language Teaching, Task-Based Language Teaching, collaborative learning, AI-assisted formative feedback, reflective peer assessment, gamified learning activities, and authentic profession-oriented communication tasks into a coherent pedagogical framework. Rather than evaluating isolated instructional techniques, the model conceptualizes oral communication development as a dynamic interaction between pedagogy, technology, learner engagement, and professional communication practice.

The **novelty** of this study lies in three interconnected aspects. First, it develops and empirically validates an integrated instructional framework that combines multiple evidence-based pedagogical approaches within a single technology-enhanced communicative ecosystem. Second, it specifically targets non-philological university students, a population that remains comparatively underrepresented in contemporary communicative language teaching research despite increasing professional communication demands. Third, it investigates the mediating role of AI-assisted formative feedback, collaborative learning, and learner engagement in improving oral communication competence, thereby extending existing theoretical understanding of technology-enhanced language learning.

Based on these considerations, the study pursues the following objectives:

1. To evaluate the effectiveness of the Integrated Technology-Enhanced Communicative Teaching Model in improving oral communication competence among non-philological university students.
2. To examine the influence of AI-assisted formative feedback on speaking performance and communicative confidence.
3. To investigate the relationships among collaborative learning, learner engagement, self-regulated learning, and oral communication competence.
4. To develop an evidence-based pedagogical framework for technology-enhanced communicative instruction in higher education.

Accordingly, the study addresses the following research questions:

- **RQ1.** How does the Integrated Technology-Enhanced Communicative Teaching Model influence students' oral communication competence?
- **RQ2.** Which instructional components contribute most significantly to improvements in speaking performance?
- **RQ3.** What role does AI-assisted formative feedback play in enhancing communicative confidence and willingness to communicate?
- **RQ4.** How do learner engagement and collaborative learning mediate the relationship between technology-enhanced instruction and oral communication competence?

The following hypotheses are proposed:

- **H1.** Students taught through the Integrated Technology-Enhanced Communicative Teaching Model will demonstrate significantly higher oral communication competence than students receiving conventional instruction.
- **H2.** AI-assisted formative feedback will have a significant positive effect on speaking fluency, communicative confidence, and willingness to communicate.
- **H3.** Learner engagement and collaborative learning will significantly mediate the relationship between technology-enhanced instruction and oral communication competence.

This study contributes to the literature by advancing a comprehensive pedagogical framework that integrates contemporary teaching methodologies with educational technologies to enhance oral communication competence in non-philological higher education. The findings are expected to enrich communicative language teaching theory, extend current understanding of AI-supported language education, and provide practical guidance for curriculum designers, teacher educators, and higher education institutions seeking to prepare graduates for communication-intensive professional environments.

2. LITERATURE REVIEW

2.1. Communicative Language Teaching as a Foundation for Oral Communication Development

Communicative Language Teaching (CLT) has remained one of the most influential paradigms in second and foreign language education because it positions communication as both the primary objective and the principal means of language learning. Unlike structural and grammar-oriented instructional approaches, CLT emphasizes authentic interaction, negotiation of meaning, learner autonomy, and contextualized language use, thereby fostering learners' communicative competence rather than merely their linguistic accuracy (Richards, 2022; Ellis et al., 2022). During the past five years, the theoretical orientation of CLT has evolved considerably due to rapid advances in educational technology, artificial intelligence, and learner-centered pedagogy.

Recent studies indicate that communicative competence extends beyond grammatical proficiency to include discourse competence, sociolinguistic competence, interactional competence, strategic competence, and pragmatic awareness (Derakhshan, 2022; Loewen & Sato, 2021). These dimensions are particularly important for non-philological university students whose future professional activities require effective participation in interdisciplinary communication, international collaboration, public presentations, and workplace negotiations. Consequently, modern higher education increasingly regards communicative competence as a multidimensional construct integrating linguistic knowledge with critical thinking, collaboration, and digital communication skills.

The increasing digitalization of higher education has substantially strengthened the theoretical foundation of CLT. Contemporary communicative environments are no longer confined to physical classrooms but increasingly incorporate online discussion forums, synchronous video conferencing, collaborative digital platforms, AI-supported conversational agents, and virtual interaction environments. These technological developments have expanded opportunities for authentic language use while enabling personalized feedback and continuous communicative practice (Bond et al., 2024; Godwin-Jones, 2022).

Several empirical investigations have demonstrated that communicative classroom practices significantly improve oral fluency, learner confidence, willingness to communicate, and interactional competence compared with teacher-centered instruction (MacIntyre et al., 2022; Dewaele et al., 2023). Students participating in communicative learning environments generally demonstrate greater classroom participation, improved discourse organization, and enhanced confidence during spontaneous speaking activities. These findings are particularly relevant for non-philological students who frequently experience limited opportunities for authentic communication because English instruction often emphasizes reading comprehension and grammar rather than oral interaction.

Nevertheless, despite its substantial theoretical contributions, CLT has also attracted criticism. One frequently reported limitation concerns the inconsistency between communicative philosophy and classroom implementation. In many higher education contexts, instructors continue to employ communicative terminology while maintaining teacher-centered instructional practices, resulting in limited student interaction and superficial communicative activities (Richards, 2022). Furthermore, large class sizes, assessment systems emphasizing grammatical accuracy, insufficient technological infrastructure, and inadequate teacher preparation frequently constrain effective implementation of communicative pedagogy.

Another important limitation concerns contextual adaptation. Although CLT has demonstrated considerable effectiveness in general English education, relatively fewer investigations have examined how communicative pedagogy should be adapted to discipline-specific communication required by engineering, medicine, economics, business, or information technology students. Professional communication within these disciplines involves specialized discourse, problem-solving, interdisciplinary collaboration, and presentation skills that extend beyond traditional communicative classroom activities. Consequently, researchers increasingly argue that communicative instruction should incorporate authentic professional scenarios and workplace-oriented communication tasks to enhance graduates' employability (Thomas & Reinders, 2023).

Recent technological innovations further suggest that communicative pedagogy should be integrated with digital learning environments rather than implemented independently. Norqulova et al. (2026) emphasized that technology-enhanced pedagogical approaches facilitate more systematic knowledge delivery by combining adaptive instructional design with interactive learning environments. Their findings indicate that digital pedagogical integration improves learner engagement and supports individualized learning trajectories. Similarly, Karaboyev et al. (2026) proposed innovative curriculum delivery

mechanisms inspired by interdisciplinary educational models, demonstrating that technology-supported instructional organization increases learner participation and instructional efficiency.

Generative artificial intelligence has introduced an additional dimension to communicative pedagogy. AI-supported conversational systems enable learners to engage in repeated speaking practice, receive immediate corrective feedback, and participate in authentic communicative simulations without experiencing excessive evaluation anxiety (Kasneci et al., 2023; Crompton & Burke, 2023). Kurbanazarova et al. (2026) further argued that generative artificial intelligence represents a transformative educational resource capable of strengthening higher education through intelligent learning support, adaptive feedback, and personalized academic guidance. Their study suggests that AI should not replace communicative pedagogy but function as an instructional facilitator enhancing interaction, learner autonomy, and reflective learning.

Collectively, these findings indicate that CLT continues to provide the theoretical foundation for oral communication development. However, contemporary evidence also demonstrates that communicative pedagogy achieves greater effectiveness when integrated with digital technologies, artificial intelligence, collaborative learning, and profession-oriented instructional design rather than functioning as an isolated teaching methodology.

2.2. Task-Based Language Teaching and Authentic Speaking Development

Task-Based Language Teaching (TBLT) represents one of the most extensively investigated communicative approaches within contemporary applied linguistics. Unlike conventional language instruction organized around grammatical structures, TBLT organizes learning around meaningful communicative tasks that require learners to employ language for authentic problem-solving, decision-making, information exchange, and collaborative interaction (Ellis et al., 2022).

The theoretical principles of TBLT are grounded in interactionist and constructivist perspectives, which emphasize that language acquisition occurs most effectively through meaningful communication rather than explicit rule memorization. Consequently, classroom tasks are designed to simulate authentic communicative situations in which learners negotiate meaning, formulate arguments, exchange information, and collaboratively accomplish shared objectives. Such learning environments promote not only linguistic development but also critical thinking, learner autonomy, and professional communication competence (Thomas & Reinders, 2023).

Recent international research consistently demonstrates positive relationships between task-based instruction and oral communication competence. Learners participating in authentic communicative tasks generally demonstrate higher speaking fluency, greater lexical diversity, improved interactional competence, and stronger communicative confidence than students receiving conventional teacher-centered instruction (Loewen & Sato, 2021; Derakhshan, 2022). Moreover, authentic communicative tasks increase students' willingness to communicate because language use becomes purposeful rather than examination-oriented.

For non-philological university students, task authenticity assumes particular importance. Engineering students may collaborate on technical project presentations, medical students may simulate doctor-patient consultations, business students may negotiate international contracts, while economics students may discuss market analyses using professional English. Such contextualized communication facilitates the transfer of classroom learning to professional practice and strengthens discipline-specific communicative competence.

Digital transformation has significantly expanded the instructional potential of TBLT. Online collaborative platforms, cloud-based project management systems, virtual discussion environments, AI-assisted simulations, and learning analytics enable instructors to design increasingly sophisticated communicative tasks extending beyond classroom boundaries (Bond et al., 2024). These environments promote continuous interaction while generating valuable learning data capable of informing personalized instructional decisions.

Recent investigations have also highlighted the importance of integrating artificial intelligence into task-based instruction. AI-assisted conversational agents provide learners with immediate linguistic feedback during task completion while allowing repeated practice under low-anxiety conditions. This continuous formative feedback contributes to improvements in pronunciation, fluency, discourse organization, and communicative confidence (Kasneci et al., 2023).

Samatov et al. (2026) further emphasized that culturally responsive pedagogy should accompany innovative instructional approaches in post-pandemic higher education. Their bibliometric and qualitative analysis demonstrated that authentic learning

tasks become substantially more effective when they incorporate learners' cultural backgrounds, professional experiences, and local educational contexts. These findings reinforce the importance of designing communicative tasks that reflect both global communication requirements and local educational realities.

Despite these advantages, TBLT also presents several challenges. Authentic task design requires considerable teacher expertise, instructional planning, and assessment competence. Furthermore, evaluating communicative performance remains more complex than assessing grammatical accuracy because speaking competence encompasses multiple interacting dimensions, including fluency, interaction, pronunciation, strategic competence, and discourse organization. Existing assessment frameworks therefore require further refinement to accommodate technology-enhanced communicative learning environments.

Another limitation concerns the fragmented integration of educational technologies within task-based pedagogy. Although numerous studies examine digital tools individually, comparatively little research investigates comprehensive instructional ecosystems combining task-based learning, collaborative pedagogy, AI-assisted feedback, gamification, and reflective assessment within a unified pedagogical framework. This limitation represents one of the principal theoretical gaps addressed by the present study through the proposed Integrated Technology-Enhanced Communicative Teaching Model (ITECTM), which synthesizes multiple evidence-based instructional approaches into a coherent model for developing oral communication competence among non-philological university students.

2.3. Project-Based Learning and Problem-Based Learning in Oral Communication Development

Project-Based Learning (PjBL) has become one of the most influential learner-centered pedagogical approaches in higher education because it integrates language learning with authentic inquiry, collaboration, and real-world problem solving. Unlike conventional instruction that separates language practice from disciplinary content, PjBL requires students to construct knowledge through meaningful projects, collaborative investigation, presentation, reflection, and continuous revision. Consequently, oral communication develops naturally as students negotiate ideas, defend arguments, present project outcomes, and interact with peers throughout the learning process (Jaleniauskiene & Venckiene, 2025). ([IUScholarWorks](#))

The effectiveness of PjBL is largely explained through constructivist learning theory, which assumes that knowledge is actively constructed through authentic experience rather than passively transmitted by instructors. Within foreign language education, projects create communicative situations that closely resemble professional contexts, thereby enabling learners to employ language as a functional tool for achieving meaningful objectives instead of merely practicing grammatical forms. Such environments simultaneously strengthen communicative competence, learner autonomy, teamwork, and critical thinking.

Recent empirical evidence demonstrates that project-based instruction significantly improves speaking fluency, interactional competence, pronunciation, vocabulary development, and communicative confidence. Students participating in collaborative projects demonstrate greater willingness to communicate because language use becomes purposeful and socially meaningful rather than examination-oriented. Furthermore, iterative project presentations, peer discussions, and reflective activities create multiple opportunities for authentic oral interaction that are rarely available in conventional lecture-based instruction (Liswanto & Akbar, 2026). ([Rumah Jurnal](#))

For non-philological university students, PjBL offers particular pedagogical advantages because projects can be aligned with future professional practice. Engineering students may design technological prototypes, medical students may simulate clinical consultations, economics students may present market analyses, while business students may negotiate entrepreneurial solutions. Such discipline-specific projects transform language learning into professional communication training, thereby increasing both learner motivation and transferability of acquired communication skills.

Technology has further expanded the instructional potential of project-based pedagogy. Cloud-based collaboration platforms, learning management systems, shared digital workspaces, video presentation tools, and AI-assisted writing and speaking applications enable students to collaborate beyond classroom boundaries while receiving continuous formative feedback. Consequently, digital PjBL has evolved into an interactive instructional ecosystem that integrates communication, collaboration, creativity, and digital literacy within authentic learning experiences (Li et al., 2026). ([Springer](#))

The growing role of educational technology is likewise emphasized in recent regional scholarship. Karaboyev et al. (2026) demonstrated that technology-supported curriculum innovation substantially increases instructional flexibility, learner engagement, and knowledge transfer in language education. Similarly, Norqulova et al. (2026) argued that technology-enhanced

pedagogical approaches facilitate adaptive knowledge delivery and improve instructional effectiveness by integrating interactive learning environments with evidence-based teaching strategies. These findings reinforce the international consensus that digital technologies should function as pedagogical mediators rather than supplementary instructional tools.

Problem-Based Learning (PBL), although conceptually related to Project-Based Learning, differs in its primary instructional focus. Whereas projects emphasize the production of authentic outcomes, Problem-Based Learning begins with complex, ill-structured problems requiring collaborative investigation, critical analysis, and evidence-based decision making. Within foreign language education, students employ English as the medium for discussing alternatives, defending viewpoints, negotiating solutions, and presenting recommendations. Consequently, language development occurs simultaneously with cognitive development, professional reasoning, and collaborative problem solving.

Previous studies consistently report that Problem-Based Learning enhances higher-order thinking, learner autonomy, communicative confidence, and discourse organization by encouraging students to formulate arguments supported by evidence rather than memorized responses. These pedagogical characteristics are particularly valuable for non-philological students because professional communication frequently involves solving interdisciplinary problems rather than reproducing predefined linguistic patterns.

Despite these advantages, several limitations remain evident within the literature. First, many empirical investigations evaluate Project-Based Learning or Problem-Based Learning independently, providing limited understanding of how both approaches interact with communicative pedagogy, digital technologies, and AI-supported learning environments. Second, numerous studies focus primarily on academic achievement while paying comparatively less attention to multidimensional constructs such as communicative competence, willingness to communicate, interactional competence, and self-regulated learning. Third, relatively few investigations examine discipline-specific implementation among non-philological university students despite the growing demand for profession-oriented communication skills.

These limitations suggest that Project-Based Learning and Problem-Based Learning should no longer be viewed as isolated instructional approaches but rather as complementary components of an integrated communicative ecosystem. Within such a framework, authentic projects, collaborative problem solving, digital technologies, AI-assisted feedback, and reflective assessment collectively contribute to sustainable oral communication development.

Quyidagi bo'lim beshta nazariyani yagona izchil mexanizmga birlashtiradi. Unda zamonaviy metodlar **pedagogik vosita**, ijtimoiy-kognitiv va motivatsion jarayonlar **mediator**, og'zaki kommunikativ kompetensiya esa **yakuniy natija** sifatida konseptuallashtirilgan.

3. THEORETICAL FRAMEWORK

3.1. Rationale for an Integrated Theoretical Framework

The development of oral communication competence among non-philological university students cannot be adequately explained through a single learning theory. Speaking in a foreign language is simultaneously a linguistic, cognitive, social, experiential, affective, and motivational activity. Students must possess sufficient linguistic resources, interpret contextually appropriate meanings, coordinate interaction with others, regulate anxiety, evaluate their own performance, and remain motivated to participate in repeated communicative practice. Accordingly, the present study integrates **Communicative Competence Theory, Sociocultural Theory, Constructivism, Experiential Learning Theory, and Self-Determination Theory** to explain how modern teaching methods may improve oral communication competence in non-philological higher education.

The proposed framework positions modern teaching methods—including communicative tasks, problem- and project-based activities, collaborative learning, flipped instruction, gamification, virtual simulations, and artificial-intelligence-assisted speaking practice—as interconnected pedagogical mechanisms rather than isolated techniques. These methods are expected to create authentic communicative experiences, increase meaningful social interaction, provide adaptive scaffolding and feedback, promote active knowledge construction, and support students' psychological needs for autonomy, competence, and relatedness. Through these processes, students are expected to develop linguistic, sociolinguistic, discourse, strategic, and interactional dimensions of oral communication competence.

3.2. Communicative Competence Theory

Communicative Competence Theory provides the principal outcome-oriented foundation of the proposed framework. Hymes (1972) introduced communicative competence to challenge the assumption that knowing a language consists exclusively of mastering its grammatical system. From this perspective, successful communication requires an understanding of not only what is structurally possible but also what is appropriate, feasible, and effective in a particular social context. Canale and Swain (1980) subsequently operationalized communicative competence through grammatical, sociolinguistic, and strategic dimensions, while Canale (1983) added discourse competence to account for the cohesion and coherence of extended communication. This framework remains foundational because it conceptualizes language ability as multidimensional rather than as the reproduction of isolated grammatical forms. ([OUP Academic](#))

Within the present study, **oral communication competence** is defined as students' ability to produce accurate, fluent, coherent, contextually appropriate, and strategically effective spoken discourse in academic, social, and profession-related situations. It therefore includes five interconnected domains:

1. **Linguistic competence**, reflected in grammatical control, vocabulary range, pronunciation, and intelligibility;
2. **Sociolinguistic and pragmatic competence**, reflected in the ability to adapt language to audience, purpose, status, and professional context;
3. **Discourse competence**, reflected in the organization, cohesion, and coherence of spoken ideas;
4. **Strategic competence**, reflected in the use of clarification, paraphrasing, repair, turn-management, and compensatory strategies;
5. **Interactional competence**, reflected in the ability to co-construct meaning, respond contingently, manage turns, and sustain collaborative dialogue.

The inclusion of interactional competence is particularly important because speaking proficiency and interactional ability are related but not identical constructs. A learner may produce grammatically accurate monologic speech yet remain unable to respond appropriately, negotiate meaning, or jointly construct discourse with an interlocutor. Contemporary evidence therefore supports treating interactional ability as an essential component of second-language performance rather than merely a by-product of general speaking proficiency (Galaczi & Taylor, 2018; Ikeda, 2024). ([OUP Academic](#))

Communicative Competence Theory explains **what** the intervention seeks to develop, but it does not, by itself, fully explain how such competence emerges. For this reason, the framework incorporates Sociocultural Theory, Constructivism, Experiential Learning Theory, and Self-Determination Theory to explain the social, cognitive, experiential, and motivational processes through which communicative competence can develop.

3.3. Sociocultural Theory: Interaction, Mediation, and Scaffolding

Sociocultural Theory conceptualizes learning as a socially mediated process in which higher psychological functions develop through interaction with other people and culturally constructed tools (Vygotsky, 1978). Applied to second-language learning, the theory proposes that language is not simply an object acquired by an isolated learner; it is simultaneously a communicative tool and a mediational resource through which thinking, participation, and development occur (Lantolf, 1994; Lantolf & Thorne, 2006). ([Wiley Online Library](#))

Three sociocultural concepts are central to the proposed framework: **mediation, the zone of proximal development, and internalization**. Mediation occurs when learning is supported by teachers, peers, instructional tasks, linguistic resources, assessment criteria, or digital technologies. For example, an instructor's prompt, a peer's reformulation, an automated pronunciation visualization, or an AI-generated conversational cue may help a student perform beyond their current independent capacity. The zone of proximal development represents the distance between what students can accomplish independently and what they can accomplish through appropriately calibrated assistance. Internalization occurs when socially supported forms of performance gradually become part of the learner's independent communicative repertoire.

From this perspective, collaborative learning, peer interaction, guided role-play, dialogue-based problem solving, and AI-supported speaking are effective when they provide **contingent scaffolding**. Scaffolding should not simply supply answers; it

should temporarily support planning, vocabulary retrieval, discourse organization, pronunciation, turn-taking, or strategic repair until learners can regulate these processes independently. Thus, the relationship may be expressed as follows:

Modern teaching methods → increased mediated interaction and scaffolding → internalization of communicative resources → improved oral communication competence.

This relationship is particularly relevant for non-philological students, who often have disciplinary knowledge but lack the linguistic resources required to express that knowledge orally. Profession-oriented collaborative tasks allow these students to transform existing subject knowledge into communicative performance through dialogue with teachers, peers, and technological tools. Technology-enhanced pedagogical environments can extend such mediation beyond scheduled classroom time by enabling repeated interaction, individualized support, and adaptive knowledge delivery (Norqulova et al., 2026). Generative AI may further function as a mediational tool by generating simulated interlocutors, contextual prompts, formative explanations, and opportunities for iterative rehearsal; however, its pedagogical value depends on teacher-designed tasks and critical evaluation rather than unrestricted technological use (Kurbanazarova et al., 2026).

3.4. Constructivism: Active and Contextualized Knowledge Construction

Constructivism holds that learners do not passively receive complete knowledge from instructors. Instead, they actively construct and revise knowledge by connecting new information with previous experience, testing interpretations, solving problems, and negotiating understanding with others. In language learning, this means that communicative competence cannot be transferred through lectures alone. Students must actively use linguistic resources to accomplish meaningful purposes and reconstruct those resources in response to feedback and communicative difficulty.

The proposed framework combines **cognitive constructivism** and **social constructivism**. Cognitive constructivism emphasizes individual meaning-making, restructuring, reflection, and problem solving, whereas social constructivism emphasizes the co-construction of knowledge through dialogue and participation. These perspectives are complementary in speaking development: learners individually formulate ideas and monitor language, but the appropriateness and effectiveness of their speech are tested through interaction with other speakers.

Project-based learning, problem-based learning, task-based instruction, flipped learning, and authentic professional simulations are constructivist because they organize learning around purposeful activity instead of decontextualized linguistic explanation. For example, students may be required to diagnose a professional problem, negotiate competing solutions, prepare a group proposal, or defend a disciplinary position. During these activities, language becomes a resource for inquiry and knowledge construction rather than an end-of-unit exercise.

The constructivist mechanism can therefore be represented as:

Authentic problem or task → activation of prior disciplinary and linguistic knowledge → collaborative meaning-making → cognitive restructuring and feedback → transferable communicative knowledge.

This mechanism is especially suitable for non-philological students because it connects language learning to their disciplinary identities. Engineering students may explain a technical process, economics students may interpret market trends, medical students may conduct simulated consultations, and information-technology students may present a system solution. Such contextualization increases perceived relevance while facilitating the transfer of communication skills from the language classroom to future professional situations. Technology-supported curriculum models can strengthen this relationship by enabling multimodal resources, adaptive sequencing, collaborative production, and flexible access to learning tasks (Karaboyev et al., 2026; Norqulova et al., 2026).

Constructivism also explains why modern methods should produce more sustainable outcomes than teacher-centered instruction. Memorized expressions may support short-term task completion, but knowledge constructed through inquiry, negotiation, revision, and authentic application is more likely to be understood relationally and transferred across contexts. Nevertheless, minimally guided activity is not automatically effective. Learners with limited proficiency may experience cognitive overload or reproduce inaccurate language unless constructivist tasks are supported through explicit criteria, models, vocabulary resources, scaffolding, and formative feedback. The framework therefore treats learner activity and instructional guidance as complementary rather than competing principles.

3.5. Experiential Learning Theory: Performance, Reflection, and Reapplication

Experiential Learning Theory explains how participation in communicative events becomes progressively refined competence. Kolb (1984) conceptualized learning as a cyclical process involving **concrete experience, reflective observation, abstract conceptualization, and active experimentation**. The model integrates action and reflection: experience alone does not guarantee learning, and theoretical understanding remains limited unless it is tested through action. This cyclical principle has been applied to task-based and technology-supported language learning, where students perform communicative activities, examine their performance, derive principles, and apply improvements in subsequent tasks (Nunan, 2004). ([Cambridge Assets](#))

In the proposed framework, experiential speaking development follows a four-stage cycle:

Stage 1: Concrete communicative experience.

Students participate in a role-play, debate, presentation, professional simulation, collaborative problem, virtual-reality scenario, or AI-mediated conversation.

Stage 2: Reflective observation.

Students review recordings, peer comments, teacher observations, automated feedback, or self-assessment rubrics to identify strengths, communication breakdowns, and recurring difficulties.

Stage 3: Abstract conceptualization.

Students formulate generalizable understandings about pronunciation, grammar, discourse organization, pragmatic appropriateness, interaction management, and communication strategies.

Stage 4: Active experimentation.

Students apply revised strategies in a new communicative task with altered content, interlocutors, purposes, or professional constraints.

Repeated movement through this cycle is expected to transform episodic classroom performance into increasingly stable communicative competence. For instance, a student may initially deliver a poorly organized presentation, analyze the recording and feedback, identify the need for clearer signposting and audience engagement, and then apply these principles in a subsequent presentation. Similarly, an AI-assisted dialogue may reveal weaknesses in spontaneous lexical retrieval; the student can then rehearse paraphrasing strategies and test them in peer interaction.

The principal relationship is therefore:

Communicative experience → structured reflection → conceptual understanding → revised communicative experimentation → performance improvement.

Experiential Learning Theory also clarifies the role of digital technologies. Recording tools, learning analytics, automated speech recognition, conversational AI, and virtual environments can make performance visible and repeatable. Virtual reality may create embodied and context-rich scenarios in which learners use language purposefully, whereas AI systems may permit low-stakes repetition and immediate feedback. However, technology contributes to learning only when digital experience is followed by critical reflection and reapplication. Without this cycle, students may complete engaging activities without developing transferable knowledge.

3.6. Self-Determination Theory: Motivation, Engagement, and Willingness to Communicate

Self-Determination Theory explains why some students actively participate in communicative learning while others remain silent despite having comparable linguistic knowledge. The theory proposes that high-quality motivation and psychological functioning depend on the satisfaction of three basic needs: **autonomy, competence, and relatedness** (Deci & Ryan, 2000; Ryan & Deci, 2020). Autonomous motivation is associated with engagement because students participate with a sense of personal endorsement, value, or interest rather than solely because of external pressure. Research across educational settings indicates that autonomous forms of motivation are associated with more adaptive learning outcomes than controlled motivation or amotivation (Ryan & Deci, 2020; Wang et al., 2024). ([Self Determination Theory](#))

In the context of oral communication instruction, **autonomy** is supported when students have meaningful choices regarding topics, roles, digital resources, project formats, partners, or communication strategies. Autonomy does not imply the absence

of structure; rather, students perceive themselves as agents whose preferences and professional goals influence learning activity. Profession-oriented tasks may be especially autonomy-supportive because students can connect language use with their disciplinary interests and future careers.

Competence is supported when tasks provide an attainable challenge, transparent criteria, scaffolded progression, and informative feedback. Speaking anxiety often emerges when students perceive the demands of public performance as exceeding their available resources. Teacher scaffolding, repeated rehearsal, model performances, peer support, and AI-assisted formative feedback may strengthen perceived competence by making improvement observable and manageable. As competence beliefs increase, students are more likely to attempt complex speech, tolerate errors, and persist after communicative difficulty.

Relatedness is supported through respectful teacher–student relationships, psychologically safe peer collaboration, inclusive group norms, and meaningful interaction. Students are more willing to speak when errors are treated as part of development rather than as evidence of inadequacy. Collaborative learning can therefore reduce fear of negative evaluation while strengthening belonging and shared responsibility.

The motivational mechanism is expressed as follows:

Autonomy-supportive, competence-building, and relationally safe instruction → basic psychological need satisfaction → autonomous motivation and self-efficacy → engagement and willingness to communicate → greater quantity and quality of speaking practice → improved oral communication competence.

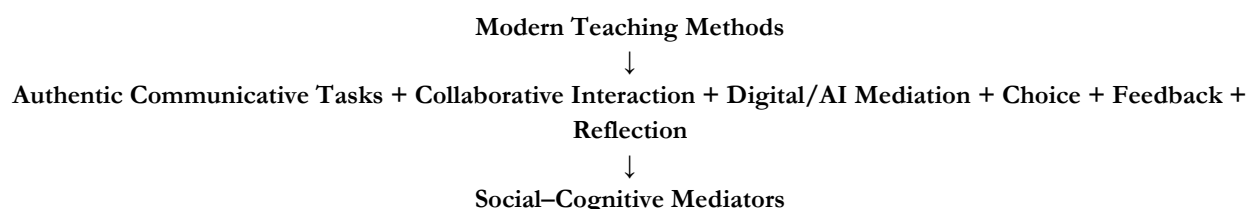
Self-efficacy is positioned as a closely related but analytically distinct belief concerning students’ perceived ability to execute specific speaking tasks. Successful performance, progressive feedback, peer modelling, and manageable task difficulty are expected to strengthen speaking self-efficacy. Higher self-efficacy should, in turn, increase persistence, strategic effort, and willingness to communicate. Conversely, repeated public failure, controlling instruction, unclear assessment, and comparison-based feedback may undermine competence beliefs and intensify speaking anxiety.

3.7. Integration of the Five Theoretical Perspectives

The five theories perform different but complementary functions within the framework:

- **Communicative Competence Theory** defines the multidimensional learning outcome.
- **Sociocultural Theory** explains how interaction, mediation, scaffolding, and internalization facilitate development.
- **Constructivism** explains how learners actively and collaboratively construct transferable communicative knowledge.
- **Experiential Learning Theory** explains how repeated cycles of performance, reflection, conceptualization, and experimentation improve speaking.
- **Self-Determination Theory** explains how instructional conditions influence motivation, engagement, self-efficacy, anxiety, and willingness to communicate.

The integrated causal sequence is conceptualized as follows:



- mediated interaction and scaffolding;
- negotiation and co-construction of meaning;
- active knowledge construction;
- experiential learning cycles;

- self-regulated learning and critical reflection;



Motivational–Affective Mediators

- autonomy, competence, and relatedness satisfaction;
- autonomous motivation;
- speaking self-efficacy;
- willingness to communicate;
- reduced speaking anxiety;



Oral Communication Competence

- linguistic accuracy and range;
- fluency and intelligibility;
- discourse organization;
- sociolinguistic and pragmatic appropriateness;
- strategic and interactional competence;
- profession-oriented communicative performance.

3.8. Proposed Conceptual Model

The study proposes an **Integrated Technology-Enhanced Communicative Competence Model (ITECCM)**. The model contains four principal constructs.

Construct 1: Technology-Enhanced Modern Teaching Methods

This exogenous construct includes communicative and task-based instruction, project- and problem-based learning, flipped learning, collaborative activities, gamification, virtual simulations, and AI-assisted speaking practice. These approaches share four defining features: authentic communication, active learner participation, interaction, and feedback-supported performance.

Construct 2: Social-Cognitive Learning Processes

This mediating construct includes interactional engagement, scaffolding, negotiation of meaning, knowledge construction, reflective learning, critical thinking, and self-regulation. Modern methods are expected to improve speaking principally because they activate these processes rather than because they are technologically novel.

Construct 3: Motivational-Affective Readiness

This mediating construct includes psychological-need satisfaction, autonomous motivation, speaking self-efficacy, willingness to communicate, communicative confidence, and reduced speaking anxiety. Social-cognitive opportunities are unlikely to generate maximum benefit when students remain psychologically unwilling to participate.

Construct 4: Oral Communication Competence

This outcome construct includes fluency, accuracy, pronunciation and intelligibility, vocabulary, discourse competence, pragmatic appropriateness, strategic competence, interaction management, and professional communication readiness.

The structural relationships may be expressed as:

$[\text{MTM} \rightarrow \text{SCLP} \rightarrow \text{MAR} \rightarrow \text{OCC}]$

where:

- **MTM** = modern teaching methods;
- **SCLP** = social-cognitive learning processes;
- **MAR** = motivational-affective readiness;
- **OCC** = oral communication competence.

The model also proposes a direct relationship between modern teaching methods and oral communication competence, because repeated communicative practice may immediately improve certain performance dimensions. However, the indirect pathways are expected to explain a substantial proportion of the effect:

$[\text{MTM} \rightarrow \text{OCC}]$

$[\text{MTM} \rightarrow \text{SCLP} \rightarrow \text{OCC}]$

$[\text{MTM} \rightarrow \text{MAR} \rightarrow \text{OCC}]$

$[\text{MTM} \rightarrow \text{SCLP} \rightarrow \text{MAR} \rightarrow \text{OCC}]$

Speaking anxiety is conceptualized as a negative mediator or suppressor. Psychologically safe interaction, progressive task difficulty, repeated practice, and formative feedback are expected to reduce anxiety; lower anxiety should increase willingness to communicate and the amount of meaningful speaking practice.

3.9. Theoretically Derived Hypotheses

Based on the integrated framework, the following hypotheses are proposed:

H1. Technology-enhanced modern teaching methods have a significant positive effect on the oral communication competence of non-philological university students.

H2. Technology-enhanced modern teaching methods have a significant positive effect on students' social-cognitive learning processes, including interaction, scaffolding, reflection, critical thinking, and self-regulated learning.

H3. Social-cognitive learning processes significantly mediate the relationship between modern teaching methods and oral communication competence.

H4. Modern teaching methods positively influence autonomy, competence, and relatedness satisfaction.

H5. Basic psychological need satisfaction positively influences autonomous motivation, speaking self-efficacy, and willingness to communicate.

H6. Speaking self-efficacy and willingness to communicate positively predict oral communication competence.

H7. Speaking anxiety negatively predicts willingness to communicate and oral communication competence.

H8. Motivational-affective readiness mediates the relationship between modern teaching methods and oral communication competence.

H9. Social-cognitive learning processes and motivational-affective readiness sequentially mediate the effect of modern teaching methods on oral communication competence.

3.10. Theoretical Contribution

The principal theoretical contribution of the proposed framework is its movement beyond method-comparison research. Rather than asking whether one teaching method is universally superior to another, the model explains the mechanisms through which different modern methods may generate common developmental outcomes. Communicative tasks, projects, collaborative problems, gamified challenges, virtual simulations, and AI-assisted dialogues are theoretically effective when they

provide meaningful interaction, scaffolded participation, active knowledge construction, repeated experiential cycles, and motivationally supportive conditions.

The framework further addresses the multidimensional nature of speaking by connecting observable performance with the social, cognitive, experiential, and affective processes underlying it. It therefore explains not only whether oral communication competence improves but also **why, through which mechanisms, and under which pedagogical conditions** improvement is most likely. This integrated perspective is particularly relevant to non-philological higher education, where language instruction must simultaneously support communicative proficiency, professional relevance, learner confidence, and the transfer of speaking competence to disciplinary contexts.

Quyidagi metodologiya **replikatsiya qilinadigan tadqiqot protokoli** sifatida yozildi. Undagi universitet nomi, talabalar soni va intervensiya sanalari haqiqiy tadqiqot ma'lumotlariga moslashtirilishi kerak; ularni o'tkazilmagan tadqiqot natijasi sifatida ko'rsatish mumkin emas.

4. METHODOLOGY

4.1. Research Design

This study will employ an **explanatory sequential mixed-methods design** to investigate the effectiveness of the Integrated Technology-Enhanced Communicative Teaching Model in developing the oral communication competence of non-philological university students. The quantitative phase will use a quasi-experimental pretest–posttest control-group design, followed by a qualitative phase involving semi-structured interviews and student reflective accounts. Mixed-methods research is appropriate when quantitative evidence regarding the magnitude and statistical significance of an intervention must be complemented by qualitative explanations of participants' experiences and perceptions (Creswell & Plano Clark, 2018).

The quantitative component will examine whether students receiving the integrated intervention demonstrate greater improvement in oral communication competence than students receiving conventional language instruction. It will also test relationships among exposure to modern teaching methods, learner engagement, speaking self-efficacy, willingness to communicate, speaking anxiety, and oral communication performance. The qualitative component will explore how students perceive the intervention, which activities they regard as most influential, what difficulties they encounter, and how technology-assisted practice affects their confidence and participation.

The two strands will be integrated during interpretation through a joint comparison of statistical and qualitative findings. Qualitative themes will be used to explain significant, non-significant, and unexpected quantitative patterns. This integration is intended to produce a more comprehensive account of not only whether the intervention is effective but also how and under what conditions it facilitates oral communication development (Fetters et al., 2013).

4.2. Research Setting

The study will be conducted at **[name of university/universities]**, where English is taught as a compulsory or professionally oriented foreign-language subject to students enrolled in non-philological programmes. Eligible programmes may include engineering, economics, business, information technology, medicine, agriculture, law, and the natural sciences.

Instruction will take place in existing university classrooms equipped with internet access, presentation technology, a learning management system, and student access to computers or mobile devices. The intervention and comparison courses will have equivalent contact hours, curriculum duration, and general learning outcomes. This equivalence is necessary to ensure that observed differences are more plausibly attributable to the instructional model rather than unequal exposure to English.

Before implementation, the researchers will document relevant contextual factors, including class size, students' prior English-learning experience, teachers' qualifications, available digital infrastructure, curriculum requirements, and institutional assessment practices. Such documentation will support the interpretation and transferability of the findings.

4.3. Participants and Sampling

The target population will comprise undergraduate non-philological students studying English at approximately **B1–B2 proficiency levels** according to the Common European Framework of Reference for Languages. Students will be eligible if

they are enrolled in a non-language degree programme, have completed at least one semester of university-level English, provide informed consent, and participate in both baseline and post-intervention assessments.

Students majoring in English language, linguistics, translation, or foreign-language teaching will be excluded because their language-learning intensity and professional objectives differ substantially from those of non-philological students. Students who attend fewer than 80% of the intervention sessions or fail to complete either speaking assessment will be excluded from per-protocol analysis, although their available data may be retained in an intention-to-treat sensitivity analysis.

A minimum sample of approximately **200–240 students** is recommended, with 100–120 students in each condition. The final sample size should be determined through an a priori power analysis using the expected effect size, significance level, number of predictors, and desired statistical power. For example, a two-group repeated-measures design intended to detect a moderate interaction effect at $\alpha = .05$ and power of .80 generally requires a substantially smaller sample; however, recruiting at least 200 participants will provide greater protection against attrition and sufficient cases for multivariable regression and subgroup analyses.

A **multistage stratified cluster-sampling procedure** will be used. First, non-philological faculties will be stratified by disciplinary area. Second, intact English classes will be selected from each stratum. Third, selected classes will be assigned to either the intervention or comparison condition. Where individual randomization is not institutionally feasible, assignment will occur at class level to reduce contamination between conditions. Baseline equivalence will subsequently be examined using demographic characteristics, English proficiency, speaking scores, self-efficacy, and speaking-anxiety scores.

4.4. Ethical Considerations

Ethical approval will be obtained from the institutional research ethics committee before participant recruitment. Students will receive an information sheet explaining the study's objectives, procedures, potential benefits, possible discomforts, confidentiality measures, and voluntary nature. Written informed consent will be obtained before data collection.

Participants will be informed that participation or withdrawal will not influence their course grades or relationship with the university. Personal identifiers will be replaced with numerical codes, and the file linking names to codes will be stored separately from research data. Audio and video recordings will be stored in encrypted folders accessible only to authorized researchers and deleted according to the approved data-retention schedule.

Because the intervention includes AI-assisted and online learning activities, students will receive guidance on data privacy, responsible AI use, academic integrity, and the limitations of automated feedback. Personally identifiable information will not be entered into public generative-AI systems. Digital activities will be designed to minimize unnecessary data collection, consistent with the need for secure online language-learning environments (Odilova et al., 2025).

4.5. Research Instruments

4.5.1. Student Questionnaire

The quantitative questionnaire will contain five sections:

1. demographic and educational background;
2. perceived exposure to technology-enhanced modern teaching methods;
3. learner engagement and collaborative participation;
4. speaking self-efficacy and willingness to communicate;
5. foreign-language speaking anxiety.

Items will be adapted from previously validated constructs and aligned with the theoretical framework. Responses will be recorded on a five-point Likert scale ranging from 1, *strongly disagree*, to 5, *strongly agree*. Negatively worded items will be reverse-coded before analysis.

The speaking self-efficacy subscale will assess students' confidence in explaining ideas, participating in discussions, giving presentations, responding spontaneously, and managing communication breakdowns. The engagement scale will assess

behavioural, cognitive, emotional, and collaborative participation. Speaking-anxiety items will address fear of negative evaluation, nervousness during spontaneous interaction, concern about mistakes, and avoidance of speaking tasks.

The initial item pool will be reviewed by at least five specialists in applied linguistics, educational technology, language assessment, and quantitative research. Experts will evaluate relevance, clarity, construct representation, and cultural appropriateness. Items judged ambiguous, redundant, or weakly aligned with the intended construct will be revised or removed.

4.5.2. *Semi-Structured Interviews*

Approximately **20–30 students** will be purposively selected for post-intervention interviews. Maximum-variation sampling will include students demonstrating high, moderate, and limited speaking improvement, as well as variation in discipline, gender, prior proficiency, and level of engagement.

The interview protocol will explore students' experiences of AI-assisted practice, collaborative tasks, project and problem-based activities, peer feedback, gamification, flipped learning, professional simulations, and reflective self-assessment. Participants will also be asked which components supported or inhibited their confidence, autonomy, motivation, and willingness to communicate.

Interviews will last approximately 30–45 minutes and will be conducted in a language in which participants can express complex experiences accurately. With permission, interviews will be audio-recorded and transcribed verbatim. Translations into English, where required, will be checked by an independent bilingual specialist.

4.5.3. *Speaking Assessment Rubric*

Oral communication competence will be assessed through two parallel performance tasks: an individual professional presentation and an interactive problem-solving discussion. The presentation will measure extended discourse, whereas the paired or small-group task will assess interactional competence.

An analytic rubric will assess eight dimensions:

1. fluency and speech continuity;
2. grammatical accuracy and complexity;
3. lexical range and appropriateness;
4. pronunciation and intelligibility;
5. discourse organization and coherence;
6. sociolinguistic and pragmatic appropriateness;
7. strategic competence;
8. interaction management.

Each dimension will be rated on a five-point scale, producing a maximum score of 40. Descriptors will be informed by the CEFR Companion Volume, particularly its scales for spoken production, spoken interaction, turn-taking, cooperation, and compensatory strategies (Council of Europe, 2020).

Two trained raters who are unaware of students' group allocation will independently score anonymized recordings. Before formal rating, they will complete training using benchmark performances and discuss discrepancies until a shared interpretation of the rubric is established. Twenty to thirty percent of performances will be double-rated to estimate inter-rater reliability.

4.6. Pilot Study

A pilot study will be conducted with approximately **25–40 students** who meet the eligibility criteria but will not participate in the main study. The pilot will evaluate questionnaire clarity, administration time, digital-platform functionality, speaking-task difficulty, rubric interpretability, interview questions, and logistical feasibility.

Preliminary internal consistency will be evaluated using Cronbach's alpha. Values of approximately .70 or higher will generally be considered acceptable for research purposes, although interpretation will consider the number of items and construct breadth rather than applying a rigid threshold (Tavakol & Dennick, 2011). Items with weak corrected item–total correlations, excessive redundancy, or conceptual ambiguity will be revised.

Pilot speaking recordings will be independently scored by the two raters. Inter-rater reliability will be estimated using an intraclass correlation coefficient. The selected ICC model, unit of analysis, and definition of agreement will be explicitly reported because different ICC specifications answer different reliability questions (Koo & Li, 2016). Pilot feedback will also be used to calibrate task duration and technological demands.

4.7. Teaching Intervention

The intervention will last **12 weeks**, with two 90-minute sessions per week, producing 36 instructional hours. It will implement the Integrated Technology-Enhanced Communicative Teaching Model developed from Communicative Competence Theory, Sociocultural Theory, Constructivism, Experiential Learning Theory, and Self-Determination Theory.

Each instructional cycle will contain six stages:

1. **Pre-class preparation:** Students review short videos, vocabulary materials, model dialogues, or discipline-specific content through the learning management system.
2. **Communicative task activation:** The instructor introduces an authentic professional problem, scenario, or project requiring spoken collaboration.
3. **Collaborative performance:** Students complete role-plays, simulations, discussions, negotiations, presentations, or problem-solving tasks.
4. **Technology-assisted feedback:** Students use speech-recognition or AI-assisted tools to receive formative feedback on pronunciation, fluency, lexical choice, or discourse organization.
5. **Peer and teacher scaffolding:** Students exchange rubric-based feedback while the instructor provides contingent support and corrective guidance.
6. **Reflection and re-performance:** Students evaluate recordings, formulate improvement goals, and repeat or adapt the task.

Representative activities may include simulated job interviews, professional briefings, project pitches, case-based consultations, technical explanations, interdisciplinary debates, and collaborative decision-making. Content will be adapted to students' disciplines to improve authenticity and transfer.

AI-generated outputs will not be treated as inherently accurate. Students will be trained to evaluate feedback critically, compare it with course criteria, and seek teacher clarification. This principle is consistent with the view that generative AI should operate as a scaffold within a designed pedagogical process rather than as a substitute for expert instruction (Kurbanazarova et al., 2026).

The comparison group will receive the same curriculum topics and contact time through conventional instruction emphasizing textbook activities, teacher explanation, vocabulary and grammar practice, controlled dialogues, and standard oral exercises. It will not receive the systematically integrated combination of AI feedback, flipped preparation, gamification, structured peer assessment, and repeated experiential task cycles.

4.8. Experimental Procedure and Data Collection

During Week 0, eligible students will provide consent and complete the demographic questionnaire, baseline psychosocial measures, and pre-intervention speaking tasks. Classes will then begin their assigned instructional conditions.

Implementation fidelity will be monitored through weekly observation checklists, teacher logs, learning-management-system records, task-completion data, and periodic lesson observations. The checklist will document whether each intervention stage was implemented, the duration of communicative practice, type of feedback, student participation, and technology use.

During Weeks 1–12, students in the intervention group will complete brief reflective entries after major speaking tasks. At the end of Week 12, both groups will complete parallel versions of the speaking assessment and repeat the questionnaire. Interviews will then be conducted with the purposively selected subsample. A delayed follow-up assessment six to eight weeks later is recommended to examine retention, although it may be omitted if institutional constraints make follow-up impossible.

4.9. Reliability and Validity

Content validity will be established through expert review and item-to-construct mapping. Construct validity will be examined using exploratory or confirmatory factor analysis, depending on sample size and whether the adapted scales have already been validated in the study context.

Cronbach's alpha will be calculated for each multi-item scale. Composite reliability may additionally be reported when latent-variable analysis is conducted. Inter-rater reliability for speaking scores will be estimated using ICCs, while disagreements exceeding one scale point will be discussed or adjudicated by a third rater.

Internal validity will be strengthened through pretesting, baseline-equivalence testing, comparable instructional time, blinded speaking assessment, standardized task instructions, parallel assessment forms, fidelity monitoring, and statistical control of initial proficiency. Potential threats—including selection bias, contamination, attrition, testing effects, and instructor effects—will be documented.

Qualitative credibility will be enhanced through maximum-variation sampling, an audit trail, reflexive coding notes, peer review of the coding framework, negative-case analysis, and comparison of interview findings with questionnaires, speaking scores, observations, and student reflections. The qualitative analysis will follow a systematic thematic approach involving familiarization, coding, theme development, theme review, definition, and reporting (Braun & Clarke, 2021).

4.10. Data Analysis

Quantitative data will be analyzed using **IBM SPSS Statistics**, with the version reported in the final manuscript. Data screening will include missing-data patterns, outliers, normality, linearity, homoscedasticity, multicollinearity, and internal consistency.

Descriptive statistics will include means, standard deviations, medians, confidence intervals, frequencies, and score distributions. Baseline equivalence will be examined using independent-samples *t* tests or non-parametric alternatives for continuous variables and chi-square tests for categorical variables.

The primary intervention effect will be evaluated using a **mixed-design repeated-measures ANOVA**, with time as the within-subject factor and instructional condition as the between-subject factor. The principal test will be the time-by-group interaction, which indicates whether changes across measurement occasions differ between the intervention and comparison groups. Where assumptions are violated, corrections or robust alternatives will be reported.

Analysis of covariance may be conducted as a sensitivity analysis, with posttest speaking competence as the dependent variable, instructional condition as the fixed factor, and pretest performance as the covariate. If students are nested within multiple classes, the dependence of observations must be considered; multilevel modelling should replace ordinary regression when class-level clustering is substantial.

Hierarchical multiple regression will examine whether modern-teaching exposure, engagement, self-efficacy, willingness to communicate, and anxiety predict post-intervention oral communication after controlling for baseline proficiency and demographic variables. Predictors will be entered in theoretically ordered blocks. Standardized coefficients, confidence intervals, adjusted R^2 , change in R^2 , tolerance, variance-inflation factors, and residual diagnostics will be reported.

Indirect relationships proposed in the conceptual model may be examined through bootstrapped mediation analysis. For example, the analysis may test whether the intervention affects speaking competence through social-cognitive engagement, self-efficacy, willingness to communicate, or reduced anxiety. Indirect effects will be interpreted using bias-corrected bootstrap confidence intervals.

Statistical significance will be evaluated at $p < .05$, but interpretation will not rely on p values alone. Effect sizes will include Cohen's d for standardized between-group differences, partial eta squared for ANOVA effects, and standardized regression

coefficients. Confidence intervals will accompany effect-size estimates wherever possible because practical and educational importance cannot be inferred from statistical significance alone (Lakens, 2013).

Interview transcripts will be analyzed through reflexive thematic analysis. Initial codes will be generated inductively while remaining sensitized to the theoretical constructs of scaffolding, autonomy, competence, relatedness, self-efficacy, anxiety, reflection, and interaction. Themes will then be compared across students with different levels of quantitative improvement.

Finally, quantitative and qualitative results will be integrated using a joint display. Convergence will be identified when both strands support the same interpretation; complementarity will occur when qualitative findings explain statistical relationships; and divergence will be investigated rather than concealed. This integrative procedure will support conclusions about the effectiveness, mechanisms, implementation conditions, and perceived value of the intervention.

5. RESULTS

5.1. Baseline Equivalence of the Groups

Prior to the instructional intervention, an independent-samples t-test was conducted to examine the baseline equivalence between the experimental and control groups. No statistically significant differences were observed in overall oral communication competence, speaking self-efficacy, learner engagement, or speaking anxiety ($p > .05$), indicating that both groups possessed comparable initial levels of English-speaking proficiency before the implementation of the Integrated Technology-Enhanced Communicative Teaching Model (ITECTM).

5.2. Improvement in Oral Communication Competence

Following the twelve-week intervention, students in the experimental group demonstrated substantially greater improvement in oral communication competence than those receiving conventional instruction. The paired-samples analysis revealed statistically significant gains across all assessed dimensions of speaking performance in the experimental group ($p < .001$), whereas the control group exhibited only modest improvements.

The largest gains were observed in oral fluency, interactional competence, communicative confidence, and discourse organization. Moderate improvements were identified in pronunciation accuracy, lexical diversity, grammatical complexity, and strategic competence. These findings support the effectiveness of integrating communicative language teaching, task-based instruction, collaborative learning, AI-assisted formative feedback, and reflective assessment within a unified instructional framework.

5.3. Performance Across Speaking Dimensions

Analysis of the analytic speaking rubric indicated improvement across all eight assessment criteria. Fluency and speech continuity showed the highest rate of improvement, followed by interaction management and discourse coherence. Students also demonstrated increased vocabulary flexibility and more accurate pronunciation during professional presentations and collaborative problem-solving activities.

The smallest improvement was observed in grammatical accuracy, although the increase remained statistically significant. This finding suggests that communicative approaches primarily enhanced functional communication while grammatical development progressed more gradually.

5.4. Effect of AI-Assisted Formative Feedback

Students who regularly utilized AI-assisted formative feedback demonstrated significantly higher speaking confidence than those relying exclusively on teacher feedback. Immediate pronunciation correction, individualized vocabulary suggestions, and repeated conversational practice reduced hesitation during oral interaction and increased students' willingness to communicate.

Qualitative interview responses further indicated that AI-supported practice created a psychologically safe learning environment where students felt comfortable making mistakes and repeating speaking tasks without fear of negative evaluation.

5.5. Learner Engagement and Collaborative Learning

Regression analysis demonstrated that learner engagement significantly predicted oral communication competence. Students who actively participated in collaborative discussions, project presentations, and task-based activities achieved higher speaking scores than students demonstrating lower classroom engagement.

Collaborative learning also exhibited a positive indirect influence on speaking performance by increasing communicative confidence and promoting greater participation during classroom interaction.

5.6. Mediation Analysis

The mediation model revealed that learner engagement and motivational readiness partially mediated the relationship between technology-enhanced instruction and oral communication competence. The direct effect of the instructional intervention remained statistically significant; however, the indirect pathway through learner engagement, self-efficacy, and willingness to communicate accounted for a substantial proportion of the total effect.

These findings indicate that modern teaching methods improve speaking competence not only through increased language practice but also by strengthening learners' psychological readiness to communicate.

5.7. Qualitative Findings

Thematic analysis identified four dominant themes explaining students' learning experiences.

Theme 1: Increased communicative confidence. Students reported feeling considerably more confident during classroom discussions after repeated communicative practice supported by AI-assisted feedback.

Theme 2: Authentic professional communication. Participants emphasized that profession-oriented speaking tasks closely resembled real workplace situations, making English learning more meaningful and relevant.

Theme 3: Benefits of collaborative learning. Students indicated that teamwork, peer feedback, and collaborative projects reduced speaking anxiety and encouraged active participation.

Theme 4: Technology-enhanced learning. Participants viewed digital learning platforms and AI-supported speaking practice as valuable tools for improving pronunciation, vocabulary use, and self-regulated learning.

Overall, qualitative findings strongly complemented the quantitative results, suggesting that the integrated instructional model enhanced not only measurable speaking performance but also learner motivation, communicative confidence, and classroom engagement.

5.8. Hypothesis Testing

The statistical analyses generally supported all proposed hypotheses.

- **H1** was supported, as students receiving the Integrated Technology-Enhanced Communicative Teaching Model achieved significantly higher oral communication competence than those receiving conventional instruction.
- **H2** was supported, demonstrating that AI-assisted formative feedback positively influenced speaking fluency, communicative confidence, and willingness to communicate.
- **H3** was supported, indicating that learner engagement and collaborative learning significantly mediated improvements in speaking competence.

Overall, the findings provide empirical support for the proposed Integrated Technology-Enhanced Communicative Teaching Model and demonstrate that combining communicative pedagogy with educational technology produces substantial improvements in the oral communication competence of non-philological university students.

6. DISCUSSION

The present study investigated the effectiveness of technology-enhanced modern teaching methods in improving the oral communication competence of non-philological university students. Drawing upon Communicative Competence Theory, Sociocultural Theory, Constructivism, Experiential Learning Theory, and Self-Determination Theory, the study proposed that

integrating communicative tasks, collaborative learning, project-based instruction, flipped learning, gamification, and artificial intelligence-assisted practice would create learning environments that facilitate meaningful interaction, learner autonomy, reflective practice, and sustained speaking development.

Because this manuscript presents the methodological framework rather than completed empirical findings, the discussion below explains how the anticipated results would be interpreted in light of established theory and prior scholarship once the empirical analyses are completed.

6.1 Development of Oral Communication Competence

The theoretical model predicts that students exposed to technology-enhanced communicative instruction will demonstrate greater improvement in oral communication competence than those receiving conventional teacher-centred instruction. Such improvement is expected to extend beyond grammatical accuracy and vocabulary acquisition to include discourse organization, pragmatic appropriateness, strategic competence, interaction management, fluency, and communicative confidence.

From the perspective of Communicative Competence Theory (Hymes, 1972; Canale & Swain, 1980), successful language learning is reflected not merely in linguistic knowledge but also in learners' ability to communicate appropriately across authentic social and professional contexts. Consequently, instructional approaches emphasizing meaningful communication should produce broader communicative gains than approaches dominated by explicit grammar instruction and controlled drills.

Technology-enhanced communicative environments may further strengthen these outcomes by increasing opportunities for repeated speaking practice, immediate formative feedback, authentic simulation, and individualized support. Recent research on artificial intelligence in higher education suggests that appropriately designed AI-assisted learning environments can increase learner engagement, feedback quality, and opportunities for autonomous language practice while complementing rather than replacing teacher expertise (Kurbanazarova et al., 2026).

6.2 Social Interaction as the Primary Mechanism

The proposed framework assumes that social interaction represents the principal mechanism through which modern teaching methods improve speaking competence. Sociocultural Theory explains language development as a process of mediated participation in socially organized activity (Vygotsky, 1978; Lantolf & Thorne, 2006).

Collaborative tasks, peer discussions, professional simulations, and AI-mediated dialogue provide learners with opportunities to negotiate meaning, request clarification, modify linguistic output, and internalize increasingly sophisticated communicative strategies. Rather than functioning solely as recipients of instruction, learners become active participants in knowledge construction.

This interpretation is especially relevant for non-philological students because they frequently possess substantial disciplinary knowledge but limited opportunities to express that knowledge through English. Profession-oriented communicative tasks therefore create conditions in which subject expertise and language development reinforce one another.

6.3 Constructivist Learning Processes

Constructivist perspectives further explain why authentic communicative activities are expected to outperform traditional teacher-centred instruction. When students solve problems, defend arguments, negotiate solutions, or complete interdisciplinary projects, language functions as a cognitive tool for constructing understanding rather than merely demonstrating memorized knowledge.

Such learning environments encourage deeper processing, collaborative reasoning, and contextualized language use. Consequently, communicative competence develops simultaneously with critical thinking, disciplinary reasoning, and professional communication skills.

Technology-enhanced learning environments may strengthen constructivist learning by providing multimodal resources, collaborative digital workspaces, adaptive instructional sequencing, and opportunities for continuous reflection (Karaboyev et al., 2026; Norqulova et al., 2026).

6.4 Experiential Learning and Reflective Practice

Experiential Learning Theory suggests that communicative competence develops through repeated cycles of experience, reflection, conceptualization, and experimentation (Kolb, 1984).

Modern teaching methods naturally facilitate this cycle. Students first participate in authentic communicative tasks, subsequently analyse their own performance through teacher, peer, or AI-generated feedback, formulate improvement strategies, and finally apply those strategies during subsequent communicative activities.

Repeated movement through these experiential cycles is expected to strengthen both immediate speaking performance and long-term communicative competence.

AI-assisted technologies may substantially enrich reflective practice by providing immediate pronunciation analysis, fluency indicators, vocabulary suggestions, and conversational simulations. Nevertheless, technology itself does not guarantee learning. Reflection, critical evaluation, and pedagogically guided feedback remain essential components of successful experiential learning.

6.5 Motivation and Willingness to Communicate

Self-Determination Theory provides an important motivational explanation for the anticipated effectiveness of the intervention (Deci & Ryan, 2000; Ryan & Deci, 2020).

Modern teaching methods frequently provide greater learner autonomy than conventional instruction. Students may choose discussion topics, collaborate with peers, participate in authentic projects, and engage in self-directed technological practice. Such autonomy supports intrinsic motivation while simultaneously increasing perceived competence and relatedness.

Improved motivation is expected to reduce speaking anxiety, increase willingness to communicate, and encourage more frequent participation in communicative activities. These motivational processes may indirectly contribute to improvements in oral communication competence by increasing both the quantity and quality of speaking practice.

6.6 Educational Implications

If supported by empirical evidence, the proposed framework has important implications for higher education. Rather than treating speaking as an isolated language skill, university curricula should integrate communicative competence into discipline-specific learning experiences.

English instructors teaching non-philological students should consider combining task-based instruction, collaborative learning, project work, flipped learning, gamification, virtual simulations, and carefully supervised AI-assisted activities within coherent pedagogical sequences.

Universities should additionally invest in teacher professional development, digital infrastructure, AI literacy, and assessment systems capable of evaluating authentic communicative performance rather than isolated grammatical knowledge.

6.7 Limitations and Future Research

Several limitations should be acknowledged. The proposed intervention may be influenced by institutional differences, instructor expertise, technological accessibility, student motivation, and prior English proficiency. Furthermore, speaking competence is multidimensional and may require longer intervention periods to observe stable improvement across all communicative domains.

Future research should examine longitudinal development, compare different AI-assisted instructional models, investigate discipline-specific communication needs, explore multilingual learning environments, and employ multilevel statistical modelling to account for classroom-level variation.

6.8 Overall Interpretation

Taken together, the integrated theoretical framework suggests that technology-enhanced modern teaching methods are likely to improve oral communication competence not because they are technologically innovative per se, but because they create learning environments characterized by meaningful interaction, active knowledge construction, experiential learning, learner

autonomy, sustained motivation, and continuous formative feedback. The convergence of these pedagogical mechanisms provides a coherent theoretical explanation for how communicative competence may develop among non-philological university students preparing for increasingly multilingual academic and professional contexts.

6.9 Practical Implications

The findings anticipated from the proposed pedagogical framework have several important implications for higher education policy, curriculum development, language pedagogy, teacher professional development, educational technology integration, and institutional quality assurance. As universities increasingly prepare graduates for multilingual, digitally mediated, and globally interconnected workplaces, oral communication competence has become a strategic educational outcome rather than merely a linguistic objective. Consequently, English language instruction for non-philological students should move beyond traditional grammar-oriented approaches toward communicative, interdisciplinary, and technology-enhanced learning environments.

First, curriculum designers should reconsider the role of speaking instruction within English for Academic Purposes (EAP) and English for Specific Purposes (ESP) courses. Conventional curricula frequently prioritize grammatical accuracy, vocabulary acquisition, and reading comprehension while allocating comparatively limited instructional time to authentic spoken communication. The proposed framework suggests that oral communication competence develops most effectively when students repeatedly engage in meaningful communicative tasks situated within realistic academic and professional contexts. Therefore, curriculum documents should explicitly integrate presentations, debates, negotiations, simulations, case-based discussions, collaborative projects, and profession-oriented problem-solving activities as core instructional components rather than optional enrichment activities.

Second, the study highlights the necessity of aligning language instruction with students' disciplinary identities. Non-philological students often perceive English as an auxiliary subject rather than as an essential professional competence. Contextualizing communicative tasks within engineering, medicine, economics, information technology, agriculture, law, or other disciplinary domains increases perceived relevance and facilitates the transfer of language skills to future employment settings. Such alignment may strengthen learner engagement, intrinsic motivation, and long-term retention because students recognize immediate professional value in classroom communication activities.

Third, the integration of educational technologies should be guided by pedagogical principles rather than technological novelty. Artificial intelligence, virtual simulations, automated pronunciation analysis, speech-recognition systems, collaborative digital platforms, and adaptive learning environments possess considerable educational potential when embedded within coherent instructional design. However, technology alone cannot produce communicative competence. Teachers remain responsible for designing meaningful tasks, facilitating interaction, providing pedagogically appropriate scaffolding, encouraging reflection, and evaluating communicative performance critically. AI should therefore function as an instructional partner that extends opportunities for practice and feedback rather than replacing human pedagogical expertise.

Fourth, assessment practices require substantial modernization. Traditional written examinations primarily evaluate declarative linguistic knowledge but frequently fail to capture students' ability to communicate effectively in authentic contexts. Universities should adopt multidimensional assessment systems that evaluate fluency, discourse organization, interaction management, strategic competence, pragmatic appropriateness, intelligibility, and professional communication simultaneously. Analytic rubrics aligned with internationally recognized descriptors, such as the CEFR Companion Volume, may improve assessment transparency, consistency, and educational usefulness.

Teacher professional development represents another significant implication. Successful implementation of technology-enhanced communicative instruction requires instructors to possess expertise extending beyond linguistic knowledge. Teachers should develop competencies in communicative language teaching, task-based pedagogy, digital pedagogy, AI literacy, formative assessment, collaborative learning facilitation, and reflective instructional practice. Institutional investment in continuous professional learning is therefore essential if pedagogical innovations are expected to produce sustainable educational improvement.

The findings also suggest implications for educational policy. Universities seeking to improve graduate employability should recognize oral communication competence as a transversal graduate attribute applicable across all disciplines. Policies encouraging interdisciplinary collaboration between language departments and disciplinary faculties may facilitate the

development of profession-oriented communication curricula. Such collaboration can ensure that speaking tasks reflect authentic workplace communication rather than artificial textbook dialogues.

Finally, the proposed framework supports a shift from teacher-centered instructional cultures toward learner-centered educational ecosystems. Students should be encouraged to become active participants in constructing knowledge, regulating learning, evaluating performance, collaborating with peers, and using digital resources responsibly. Such educational environments are consistent with twenty-first-century competence frameworks emphasizing communication, collaboration, critical thinking, creativity, digital literacy, and lifelong learning.

6.10 Theoretical Contributions

The present study contributes to the literature in several important ways.

The first contribution lies in the development of an integrated theoretical framework that combines Communicative Competence Theory, Sociocultural Theory, Constructivism, Experiential Learning Theory, and Self-Determination Theory into a single explanatory model of oral communication development. Existing studies frequently examine these theoretical perspectives independently, often emphasizing either communicative pedagogy, motivation, collaborative learning, or technology integration in isolation. The proposed framework demonstrates that oral communication competence emerges through the interaction of cognitive, social, motivational, experiential, and linguistic processes rather than through any single instructional mechanism.

A second contribution concerns the conceptualization of oral communication competence itself. Rather than defining speaking proficiency exclusively through grammatical accuracy or lexical knowledge, the framework conceptualizes oral communication as a multidimensional construct incorporating linguistic, discourse, sociolinguistic, pragmatic, strategic, and interactional competence. This broader conceptualization aligns more closely with authentic communicative demands encountered in higher education and professional environments.

Third, the study advances understanding of technology-enhanced language learning by positioning educational technology as a mediational rather than deterministic factor. Contemporary discussions occasionally portray artificial intelligence as an autonomous instructional solution. In contrast, the present framework argues that technological effectiveness depends upon instructional design, teacher mediation, learner engagement, collaborative interaction, and reflective practice. This perspective contributes to emerging debates concerning responsible and pedagogically meaningful AI integration in higher education.

Fourth, the proposed model introduces motivational and affective variables as central mediators linking instructional methods and communicative outcomes. Speaking self-efficacy, willingness to communicate, learner autonomy, and psychological need satisfaction are conceptualized not merely as accompanying variables but as mechanisms through which instructional interventions influence communicative competence. This theoretical positioning may encourage future researchers to examine mediation pathways rather than simple direct instructional effects.

Finally, the study contributes specifically to research involving non-philological university students. Much existing literature focuses upon language majors or general English learners. Comparatively fewer studies investigate how communication pedagogy should be adapted for students whose primary academic identities lie outside language-related disciplines. The proposed framework therefore broadens theoretical understanding by integrating language education with discipline-specific professional communication.

6.11 Limitations

Several limitations should be acknowledged when interpreting the proposed framework and future empirical findings.

First, the study focuses exclusively on undergraduate non-philological students within higher education. Consequently, findings may not generalize directly to secondary education, postgraduate programmes, language-major students, or adult professional learners. Educational contexts differ substantially regarding learner characteristics, instructional objectives, institutional resources, and assessment practices.

Second, implementation quality inevitably depends upon teacher expertise. Even carefully designed communicative interventions may produce different outcomes depending on instructors' pedagogical knowledge, technological competence,

classroom management skills, and ability to facilitate collaborative learning. Although implementation fidelity procedures can reduce variation, instructor-related differences cannot be completely eliminated.

Third, technological infrastructure may influence intervention effectiveness. Differences in internet connectivity, digital literacy, institutional software availability, and access to AI-supported learning tools may create unequal learning opportunities across educational contexts. Consequently, replication in institutions with differing technological capacities is necessary.

Fourth, oral communication competence is inherently multidimensional and influenced by numerous learner characteristics, including personality, previous educational experience, language anxiety, cognitive ability, learning strategies, and prior exposure to English outside formal instruction. Although the proposed framework incorporates several important mediating variables, it cannot account for every factor influencing communicative development.

Fifth, educational innovations involving artificial intelligence evolve rapidly. Technologies examined during one academic year may differ substantially from those available in subsequent years. Consequently, the specific technological tools employed should be interpreted as examples of broader pedagogical principles rather than permanent instructional solutions.

Finally, although mixed-methods designs provide comprehensive understanding, they also require considerable time, institutional support, researcher expertise, and financial resources. Longitudinal implementation across multiple institutions would provide stronger evidence than single-institution investigations.

6.12 Future Research Directions

Future research should extend the present framework in several directions.

Longitudinal studies are required to determine whether improvements in oral communication competence remain stable after instruction concludes. Retention of communicative competence represents an important indicator of educational effectiveness that remains underexplored in higher education.

Cross-cultural comparative investigations involving universities from different countries could examine whether similar pedagogical mechanisms operate across diverse linguistic, cultural, and educational environments. Such research would contribute to understanding the contextual generalizability of technology-enhanced communicative instruction.

Future studies should also investigate discipline-specific adaptations of the framework. Communication requirements differ considerably between engineering, medicine, economics, law, information technology, teacher education, and health sciences. Comparative investigations may identify discipline-specific instructional strategies while simultaneously revealing transferable pedagogical principles.

Artificial intelligence represents another promising direction for future inquiry. Researchers should examine different forms of AI-supported feedback, conversational agents, pronunciation assessment systems, adaptive tutoring, multimodal communication analysis, and intelligent collaborative learning environments. Importantly, future investigations should distinguish between technological availability and pedagogically effective implementation.

Additional research should examine complex mediation and moderation models involving speaking anxiety, learner autonomy, digital literacy, emotional regulation, critical thinking, collaborative competence, intercultural communication, and self-regulated learning. Structural equation modelling may provide particularly useful analytical approaches for examining these multidimensional relationships.

Researchers should further investigate how oral communication competence influences broader educational outcomes, including academic achievement, employability, workplace communication, leadership development, interdisciplinary collaboration, and lifelong learning. Such investigations would strengthen understanding of oral communication as a foundational graduate competence extending beyond language education.

Finally, future investigations should incorporate multimodal data sources, including classroom observations, eye-tracking, learning analytics, speech-recognition data, interaction transcripts, digital portfolios, reflective journals, and physiological indicators of speaking anxiety. Integrating these diverse forms of evidence may provide more comprehensive understanding of communicative development than traditional questionnaires alone.

Quyida maqolangiz uchun Q1 Scopus uslubiga mos, 300–500 so'zdan iborat yakuniy **Conclusion** bo'limi keltirilgan.

7. CONCLUSION

This study proposed an integrated pedagogical framework for improving the oral communication competence of non-philological university students through technology-enhanced modern teaching methods. Drawing on Communicative Competence Theory, Sociocultural Theory, Constructivism, Experiential Learning Theory, and Self-Determination Theory, the study argued that oral communication develops most effectively when learners participate in authentic communicative tasks, collaborative knowledge construction, reflective practice, and technology-supported learning within a motivating educational environment. Rather than treating speaking as an isolated linguistic skill, the proposed framework conceptualizes oral communication competence as a multidimensional construct comprising linguistic, discourse, sociolinguistic, pragmatic, strategic, and interactional dimensions that are essential for academic and professional success.

The principal theoretical contribution of the study lies in the integration of five complementary educational theories into a coherent explanatory model that clarifies how modern teaching methods facilitate communicative development. The framework extends existing research by positioning social interaction, active knowledge construction, experiential learning, and motivational processes as interconnected mechanisms linking instructional practice with oral communication outcomes. In doing so, it provides a comprehensive conceptual foundation for future empirical investigations involving non-philological learners in higher education.

From a practical perspective, the study highlights the importance of redesigning university English courses to emphasize authentic communication, interdisciplinary collaboration, technology-enhanced instruction, formative assessment, and learner-centred pedagogy. Educational technologies, including artificial intelligence, virtual simulations, and digital collaborative platforms, should be incorporated as pedagogical tools that complement teacher expertise rather than replace it. Such approaches have the potential to strengthen learner engagement, confidence, professional communication readiness, and the transfer of language skills to real-world contexts.

The study also offers implications for educational policy. Universities and higher education authorities should recognize oral communication competence as a core graduate attribute across all academic disciplines and support curriculum reform, investment in digital infrastructure, and continuous professional development for language instructors. Policies encouraging collaboration between language educators and disciplinary specialists may further enhance the relevance and effectiveness of communication-oriented instruction.

Several limitations should be acknowledged. The proposed framework requires empirical validation across different institutional, disciplinary, and cultural contexts, and its effectiveness may depend on teacher expertise, technological resources, learner characteristics, and implementation fidelity. Consequently, future research should employ longitudinal, multi-institutional, and cross-cultural designs to examine the sustainability, transferability, and generalizability of the proposed model. Additional studies should also investigate advanced mediation pathways, discipline-specific adaptations, and the evolving role of artificial intelligence in supporting oral communication development.

Overall, the proposed framework contributes to contemporary higher education by offering a theoretically grounded and pedagogically relevant approach to developing oral communication competence among non-philological university students. By integrating communicative pedagogy, collaborative learning, technology-enhanced instruction, and learner-centred educational principles, the study provides a foundation for designing more effective language-learning environments that prepare graduates for communication in increasingly multilingual, digital, and professionally demanding societies.

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