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DEVELOPING CIVIL ENGINEERING STUDENT'S ORAL COMMUNICATIVE COMPETENCE THROUGH A DIFFERENTIATED APPROACH IN ESP CLASSES

Khaydarova Sarvinoz Zukhriddinovna
EFL teacher "Foreign languages" department
Namangan State Technical University
e-mail: sarvinozkhon2020@gmail.com
https://orcid.org/0000-0003-4169-2632
https://www.researchid.co/rid165043
Phone number: +998 94 843 44 55

Abstract. *The rapid development of globalization, international cooperation, and technological innovation has significantly increased the demand for engineers possessing advanced foreign language communication skills. In Uzbekistan, the modernization of higher education and the implementation of competence-based educational standards require future civil engineers to communicate effectively in professional environments. However, despite considerable improvements in English language teaching, many Civil Engineering students still experience difficulties in oral communication due to differences in language proficiency, learning styles, motivation, and professional background. Traditional English language instruction frequently ignores these individual differences, leading to insufficient development of oral communicative competence.*

The present study proposes a differentiated instructional methodology for improving oral communicative competence among Civil Engineering students enrolled in English for Specific Purposes (ESP) courses. The research is grounded in the principles of differentiated instruction, communicative language teaching, competency-based education, and learner-centered pedagogy. A mixed-methods research design combining quantitative and qualitative approaches was employed to investigate the effectiveness of the proposed methodology.

The research introduces differentiated speaking tasks, authentic engineering communication scenarios, project-based learning activities, collaborative discussions, technical presentations, and problem-solving tasks specifically designed for Civil Engineering students. The findings indicate that differentiated instruction significantly enhances students' fluency, interaction, vocabulary acquisition, pronunciation, confidence, and professional communication abilities.

The proposed methodological framework contributes to the modernization of ESP instruction in technical universities and offers practical recommendations for English language teachers working with Civil Engineering students.

Keywords: *differentiated instruction, oral communicative competence, ESP, Civil Engineering students, communicative approach, higher education, competency-based education.*

ESP MASHG'ULOTLARIDA QURILISH MUHANDISLIGI TALABALARINING OG'ZAKI NUTQ KOMPETENSIYASINI DIFFERENSIALLASHTIRILGAN YONDASHUV ASOSIDA RIVOJLANTIRISH

Annotatsiya. *Bugungi globallashuv sharoitida qurilish muhandisligi mutaxassislarining kasbiy faoliyatida xorijiy tillarni, ayniqsa ingliz tilini mukammal egallashi muhim ahamiyat kasb etmoqda. Mazkur maqolada qurilish muhandisligi yo'nalishi talabalarining og'zaki nutq kompetensiyasini differensiallashtirilgan yondashuv asosida rivojlantirish metodikasi yoritilgan.*

Tadqiqot davomida ESP (English for Specific Purposes) fanini o'qitishda differensial topshiriqlar, kommunikativ metodlar, loyiha asosida o'qitish, autentik kasbiy vaziyatlar hamda zamonaviy pedagogik texnologiyalarning samaradorligi o'rganildi.

Natijalar differensiallashtirilgan ta'lim talabalarning kasbiy muloqot ko'nikmalarini, erkin fikrlashini, kasbiy terminologiyani qo'llashini va ingliz tilida texnik muloqot olib borish kompetensiyasini sezilarli darajada rivojlantirishini ko'rsatdi.

Kalit so'zlar: *differensiallashtirilgan ta'lim, og'zaki nutq kompetensiyasi, ESP, qurilish muhandisligi, kommunikativ yondashuv.*

РАЗВИТИЕ УСТНОЙ КОММУНИКАТИВНОЙ КОМПЕТЕНЦИИ СТУДЕНТОВ НАПРАВЛЕНИЯ «ГРАЖДАНСКОЕ СТРОИТЕЛЬСТВО» НА ОСНОВЕ ДИФФЕРЕНЦИРОВАННОГО ПОДХОДА НА ЗАНЯТИЯХ ESP

Аннотация. *В условиях глобализации возрастает потребность в подготовке инженеров, владеющих английским языком для профессионального общения. В статье рассматривается методика развития устной коммуникативной компетенции студентов направления «Строительство» на основе дифференцированного подхода при обучении английскому языку профессиональной направленности (ESP).*

В исследовании предложена модель дифференцированного обучения, основанная на коммуникативном подходе, проектном обучении и профессионально ориентированных заданиях. Результаты исследования свидетельствуют о том, что использование дифференцированных заданий способствует развитию профессиональной коммуникативной компетенции будущих инженеров.

Ключевые слова: *дифференцированное обучение, устная коммуникативная компетенция, ESP, студенты строительных специальностей, профессиональное образование.*

INTRODUCTION

The twenty-first century has witnessed unprecedented changes in science, technology, engineering, and international cooperation. These developments have transformed the competencies expected from university graduates, particularly those studying engineering disciplines. Modern civil engineers are no longer required solely to possess technical knowledge and engineering skills; they must also demonstrate effective

communication, collaboration, critical thinking, and the ability to operate successfully within multicultural and multilingual professional environments.

English has become the dominant language of science, technology, engineering, research, and international business. Consequently, higher education institutions throughout the world increasingly emphasize the development of English communicative competence among engineering students. Future civil engineers participate in international construction projects, communicate with foreign contractors, read technical documentation, attend professional conferences, prepare engineering presentations, and collaborate with multinational teams. These professional requirements necessitate a high level of oral communicative competence alongside technical expertise.

In Uzbekistan, large-scale educational reforms initiated in recent years have prioritized improving foreign language education within higher education institutions. National educational policies encourage universities to modernize teaching methodologies, introduce competency-based education, integrate digital technologies, and strengthen students' practical communication skills. Within this context, English for Specific Purposes (ESP) has become an essential component of engineering education. Nevertheless, despite curriculum reforms, many university graduates continue to experience considerable difficulties in professional oral communication.

One of the major reasons for this challenge is the considerable diversity among university students. Learners differ significantly in language proficiency, motivation, cognitive abilities, educational background, learning pace, communication anxiety, and professional interests. Traditional teacher-centered instruction generally provides identical learning tasks for all students regardless of these differences. As a result, advanced learners often become insufficiently challenged, whereas lower-achieving students experience frustration and reduced motivation.

Differentiated instruction has emerged as one of the most effective pedagogical approaches for addressing learner diversity. Rather than treating all students identically, differentiated instruction adapts educational content, learning processes, classroom activities, assessment methods, and instructional support according to learners' individual needs, abilities, readiness levels, and learning preferences. This learner-centered philosophy has gained considerable recognition in foreign language education because it promotes inclusion, engagement, motivation, and meaningful communication.

Although differentiated instruction has been extensively investigated within general education, considerably fewer studies have examined its application in ESP courses designed specifically for Civil Engineering students. Most existing research focuses either on general English instruction or on broad engineering education without considering discipline-specific communicative needs. Consequently, there remains a significant methodological gap concerning the systematic integration of differentiated instruction into ESP courses for future civil engineers.

The present study addresses this gap by proposing a methodological framework aimed at developing Civil Engineering students' oral communicative competence through differentiated instruction. Unlike conventional ESP methodologies, the proposed approach combines differentiated speaking tasks, authentic engineering communication scenarios, collaborative problem-solving, project-based learning, technical presentations, digital learning tools, and competency-based assessment within a unified instructional model. The study seeks to demonstrate that adapting instruction to learners' individual characteristics significantly improves not only linguistic competence but also students' confidence, professional identity, communication strategies, and readiness for international engineering practice.

LITERATURE REVIEW

The concept of communicative competence has undergone substantial theoretical development over the past five decades. Initially introduced by linguists who challenged

purely grammatical approaches to language teaching, communicative competence gradually evolved into a multidimensional construct encompassing linguistic, sociolinguistic, discourse, strategic, and pragmatic competencies. Contemporary English language education emphasizes learners' ability not only to produce grammatically accurate utterances but also to communicate meaning effectively within authentic social and professional contexts.

For engineering students, communicative competence possesses unique characteristics. Unlike learners enrolled in philological programs, future engineers require English primarily as a professional communication tool rather than as an academic discipline. Consequently, English for Specific Purposes (ESP) has become one of the most influential educational approaches in higher education worldwide. ESP courses are designed according to learners' professional needs, workplace situations, occupational terminology, and discipline-specific communicative tasks.

Researchers in ESP emphasize that professional language instruction should simulate authentic workplace communication. Engineering students are expected to participate in technical meetings, discuss project documentation, negotiate engineering solutions, explain construction procedures, deliver presentations, interpret technical specifications, and collaborate within multidisciplinary teams. Therefore, communicative competence in engineering education extends beyond vocabulary acquisition to include professional interaction, critical thinking, problem-solving, intercultural communication, and teamwork.

The growing complexity of engineering professions has significantly influenced foreign language pedagogy. International construction companies increasingly require graduates who can communicate confidently with architects, designers, contractors, consultants, suppliers, and international clients. Consequently, oral communication has become one of the most essential competencies for Civil Engineering graduates entering the global labor market.

Recent international research demonstrates that engineering graduates often possess satisfactory technical knowledge while experiencing insufficient confidence in professional oral communication. Difficulties commonly arise during technical presentations, project discussions, negotiations, teamwork, spontaneous interaction, and participation in international conferences. These findings indicate that traditional grammar-oriented instruction cannot adequately prepare future engineers for authentic professional communication.

One pedagogical approach that has gained considerable international recognition is differentiated instruction. Differentiated instruction emerged from learner-centered educational philosophy, which recognizes that students learn differently according to their readiness, interests, cognitive styles, motivation, previous experiences, and learning preferences. Rather than delivering identical instruction to every learner, differentiated teaching adapts educational content, classroom activities, instructional strategies, assessment methods, and learning support according to individual learner characteristics.

Differentiation can occur across several dimensions. Content differentiation involves presenting learning materials with varying levels of complexity. Process differentiation refers to modifying learning activities according to students' learning preferences and abilities. Product differentiation allows learners to demonstrate knowledge through different forms of assessment. Learning environment differentiation creates flexible classroom conditions that support collaboration, autonomy, and active participation.

Numerous studies indicate that differentiated instruction increases learner motivation, classroom engagement, academic achievement, self-confidence, and communication skills. Students become more actively involved because instructional activities correspond to their current proficiency levels while simultaneously

encouraging continuous development. Teachers assume the role of facilitators who provide appropriate scaffolding rather than delivering uniform instruction.

Within ESP education, differentiated instruction offers particular advantages. Engineering classrooms often include students possessing diverse English proficiency levels despite sharing the same academic specialization. Some students demonstrate strong reading abilities but weak speaking skills, whereas others communicate fluently but possess limited technical vocabulary. Consequently, applying identical instructional activities frequently produces unequal learning outcomes.

Differentiated speaking instruction addresses these challenges by designing multiple communicative tasks with varying degrees of linguistic and cognitive complexity. Lower-level learners receive structured language support, sentence models, vocabulary guides, and collaborative activities, while advanced learners engage in technical debates, project presentations, engineering case analyses, and authentic problem-solving discussions. Such flexibility enables every learner to participate meaningfully regardless of language proficiency.

Project-Based Learning (PBL) has become another influential methodology within engineering education. PBL encourages students to investigate authentic engineering problems collaboratively while applying professional communication throughout the learning process. In Civil Engineering education, project-based activities may include designing construction plans, discussing sustainable building materials, presenting architectural solutions, evaluating safety procedures, and proposing infrastructure improvements. These activities naturally integrate technical knowledge with communicative competence.

Problem-Based Learning similarly contributes to oral competence development by placing learners in realistic engineering situations requiring collaborative decision-making. Students discuss alternative solutions, justify engineering decisions, negotiate responsibilities, and defend technical arguments using professional English. Such

authentic interaction significantly increases communicative confidence compared with traditional classroom exercises.

Digital technologies have further transformed ESP instruction. Virtual learning environments, Learning Management Systems, AI-supported applications, virtual simulations, online collaboration platforms, interactive speaking software, and multimedia resources provide engineering students with opportunities to practice communication beyond conventional classrooms. Artificial Intelligence, speech-recognition systems, virtual reality environments, and engineering simulation software increasingly support individualized language learning by providing immediate feedback, adaptive learning pathways, pronunciation analysis, and authentic communication scenarios.

For Civil Engineering education specifically, digital environments simulate construction sites, project meetings, structural design discussions, safety briefings, and engineering presentations. Such simulations enable students to experience authentic professional communication without physical workplace limitations.

Another significant theoretical foundation of this study is the Common European Framework of Reference for Languages (CEFR). CEFR emphasizes communicative language ability through action-oriented learning, authentic tasks, learner autonomy, and competency-based assessment. Speaking descriptors provided by CEFR enable instructors to evaluate learners' progress according to internationally recognized standards. Within differentiated instruction, CEFR descriptors facilitate grouping learners according to communicative readiness while supporting individualized progression toward higher proficiency levels.

Despite extensive international research concerning differentiated instruction, several important research gaps remain. First, relatively few investigations specifically address Civil Engineering students rather than engineering students generally. Second, limited studies integrate differentiated instruction with ESP methodology, competency-

based assessment, and authentic engineering communication within one comprehensive instructional framework. Third, most existing research emphasizes general communicative competence without examining discipline-specific oral interaction required in construction engineering.

Furthermore, very limited methodological studies have been conducted within the context of Uzbek higher education institutions. Although significant reforms have modernized foreign language education, systematic methodological recommendations specifically designed for Civil Engineering students remain insufficient. Existing instructional materials frequently emphasize vocabulary acquisition and reading comprehension while providing comparatively limited opportunities for authentic professional speaking practice.

The present research addresses these methodological gaps by developing an integrated differentiated instructional model specifically tailored for Civil Engineering students studying English for Specific Purposes. Unlike previous approaches, the proposed model combines differentiated pedagogy, communicative language teaching, competency-based education, authentic engineering scenarios, project-based learning, collaborative interaction, digital learning technologies, and CEFR assessment principles into a unified instructional framework. This integrated methodology seeks to maximize students' oral communicative competence while simultaneously strengthening their professional readiness for international engineering practice.

MATERIALS AND METHODS

The present study employed a mixed-methods research design integrating quantitative and qualitative research approaches to investigate the effectiveness of differentiated instruction in developing Civil Engineering students' oral communicative competence within English for Specific Purposes (ESP) courses. The selection of a mixed-methods approach was based on the complexity of oral communicative competence, which cannot be adequately assessed using a single research method. Quantitative data

enabled the measurement of changes in students' communicative performance, whereas qualitative observations provided deeper insights into learners' participation, motivation, interaction patterns, and confidence during instructional activities.

The research was conducted following the principles of competency-based education, communicative language teaching, differentiated instruction, and learner-centered pedagogy. These pedagogical principles ensured that students actively participated in authentic communicative situations closely related to their future professional activities as civil engineers.

Unlike conventional language instruction emphasizing grammatical accuracy, the proposed methodology focused primarily on meaningful communication within engineering contexts. Students were encouraged to solve professional problems collaboratively, exchange ideas, present technical information, negotiate engineering decisions, and participate in simulated workplace communication.

The participants of the study consisted of undergraduate students enrolled in the Civil Engineering educational program at Namangan State Technical University. The participants were studying English for Specific Purposes as part of their professional curriculum.

A total of **60 second-year students** participated voluntarily in the experiment. They were divided into two comparable groups:

- Experimental Group (EG): 30 students
- Control Group (CG): 30 students

Both groups demonstrated relatively similar English proficiency levels at the beginning of the study according to the initial diagnostic assessment. Their proficiency generally corresponded to the **A2–B1 levels** of the Common European Framework of Reference for Languages (CEFR).

The experimental group received instruction based on differentiated teaching methodology specifically designed for Civil Engineering students, whereas the control group continued learning through traditional teacher-centered ESP instruction.

The experiment lasted **one academic semester (16 weeks)**, comprising two ninety-minute lessons each week.

Research Instruments

Several complementary research instruments were employed to collect reliable and comprehensive data.

Diagnostic Speaking Test

A diagnostic speaking assessment was administered before and after the experimental instruction. The test evaluated students according to internationally recognized communicative competence descriptors adapted from the CEFR framework.

The assessment criteria included:

- Fluency
- Accuracy
- Pronunciation
- Vocabulary Range
- Professional Terminology
- Interaction
- Coherence
- Communicative Confidence

Each criterion was evaluated using a five-point analytical rubric, producing an overall score ranging from 0 to 40 points.

Flexible grouping strategies enabled students to collaborate with classmates possessing different proficiency levels.

This diversity allowed students to demonstrate competence according to their strengths while maintaining common learning objectives.

Learning Environment Differentiation

The classroom environment emphasized active participation, collaboration, learner autonomy, and supportive communication.

Teachers functioned primarily as facilitators, providing individualized guidance rather than delivering continuous lectures.

Digital learning tools were integrated whenever appropriate, including multimedia presentations, engineering videos, online vocabulary platforms, AI-assisted pronunciation applications, and collaborative online discussion environments.

Experimental Speaking Tasks

Professional speaking tasks represented the central component of differentiated instruction. Students participated in authentic engineering communication situations such as:

To compare pre-test and post-test results, statistical significance was determined using an independent samples **t-test** with a significance level of $\mathbf{p < 0.05}$.

Qualitative data collected from observations and interviews were analyzed through thematic coding. Recurring themes regarding learner motivation, communicative confidence, participation, and professional readiness were identified and compared across both groups.

The integration of quantitative and qualitative findings enhanced the validity and reliability of the research while providing a comprehensive understanding of differentiated instruction in Civil Engineering ESP education.

RESULTS

The primary objective of the experimental study was to evaluate the effectiveness of differentiated instruction in improving the oral communicative competence of Civil Engineering students studying English for Specific Purposes (ESP). Students' performance was assessed before and after the sixteen-week instructional intervention using standardized communicative competence criteria aligned with CEFR descriptors.

Before the implementation of differentiated instruction, both the experimental and control groups demonstrated relatively similar levels of oral communicative competence. Statistical analysis confirmed that no significant differences existed between the groups at the beginning of the experiment ($p > 0.05$). This result ensured the comparability of both groups and increased the reliability of subsequent findings.

Table 1

Initial Speaking Competence Scores

Assessment Criteria	**Experimental Group**	**Control Group**
Fluency	2.63	2.59
Pronunciation	2.71	2.67
Vocabulary Range	2.54	2.56
Grammar Accuracy	2.68	2.65
Professional Vocabulary	2.32	2.29
Interaction	2.61	2.58
Communicative Confidence	2.44	2.47
Overall Mean	**2.56**	**2.54**

The initial assessment revealed that students in both groups experienced similar communicative difficulties. The weakest indicators were associated with professional vocabulary, spontaneous interaction, and communicative confidence. Many students hesitated while speaking, frequently switched to their native language, and experienced anxiety when discussing engineering topics in English.

Classroom observations further indicated that students possessed satisfactory knowledge of basic grammar but lacked sufficient opportunities for authentic professional communication. Their responses were generally short, highly structured, and dependent upon teacher support.

During the sixteen-week intervention, the experimental group participated in differentiated instructional activities specifically designed for Civil Engineering students. The instructional model incorporated:

Meanwhile, the control group continued learning according to conventional teacher-centered ESP instruction, where classroom interaction primarily consisted of textbook exercises, vocabulary explanation, grammar practice, and teacher-directed questioning.

Following the intervention, both groups demonstrated improvement; however, the progress achieved by the experimental group was substantially greater across all communicative competence indicators.

Table 2

Post-Test Speaking Competence Scores

Assessment Criteria	**Experimental Group**	**Control Group**
Fluency	4.18	3.24
Pronunciation	4.06	3.18
Vocabulary Range	4.11	3.20
Grammar Accuracy	3.96	3.14
Professional Vocabulary	4.29	3.05
Interaction	4.24	3.19
Communicative Confidence	4.33	3.12
Overall Mean	**4.17**	**3.16**

The findings indicate that students exposed to differentiated instruction demonstrated greater improvement not only in linguistic accuracy but also in communicative confidence, professional vocabulary, interaction skills, and fluency.

The largest increase was observed in **professional engineering vocabulary** and **communicative confidence**, suggesting that authentic professional speaking tasks substantially contributed to students' willingness to communicate.

To better illustrate students' progress, learning gains were calculated by comparing pre-test and post-test scores.

Table 3

Learning Gain Analysis

Indicator	**Experimental Group**	**Control Group**
Pre-test Mean	2.56	2.54
Post-test Mean	4.17	3.16
Improvement	+1.61	+0.62
Percentage Growth	**62.9%**	**24.4%**

The comparative analysis clearly demonstrates that differentiated instruction produced considerably higher learning gains than traditional ESP instruction.

Students receiving differentiated instruction improved approximately **2.5 times more** than students studying through conventional methods.

Observation data indicated remarkable changes in classroom interaction throughout the intervention.

Initially, only approximately **38%** of students actively participated in classroom discussions. By the end of the experiment, active participation in the experimental group increased to **87%**, whereas participation within the control group increased only modestly.

Approximately **93%** of respondents expressed a preference for continuing ESP instruction using differentiated learning strategies rather than traditional grammar-based teaching.

Qualitative interviews provided additional evidence supporting the effectiveness of differentiated instruction.

Students reported that authentic engineering scenarios made classroom activities more meaningful because they could directly connect English learning with their future professional careers.

Several participants emphasized that presenting construction projects and discussing engineering problems significantly increased their confidence in speaking English.

One participant explained:

"Before this course, I was afraid of speaking English in front of my classmates. After participating in engineering presentations and project discussions, I became much more confident because I understood that communication is part of my future profession."

Another student noted:

"Working in groups helped us exchange ideas, learn technical vocabulary naturally, and solve engineering problems together."

Teachers participating in the study similarly reported noticeable improvements in learner autonomy, classroom interaction, motivation, and professional communication.

Independent samples t-test analysis confirmed statistically significant differences between the experimental and control groups following the instructional intervention.

The calculated significance level ($\mathbf{p < 0.05}$) indicates that the observed improvements cannot be attributed to random variation alone. Instead, they demonstrate the positive educational impact of differentiated ESP instruction on Civil Engineering students' oral communicative competence.

Overall, the results provide strong empirical evidence supporting the effectiveness of differentiated instruction as a pedagogical approach for developing professional English speaking skills among future civil engineers.

DISCUSSION

The findings of the present study demonstrate that differentiated instruction significantly improves the oral communicative competence of Civil Engineering students studying English for Specific Purposes (ESP). The experimental group consistently outperformed the control group across all evaluated dimensions, including fluency, communicative confidence, interaction, professional vocabulary, pronunciation, and

overall communicative performance. These findings provide empirical evidence supporting the effectiveness of learner-centered instructional strategies in technical higher education.

One of the most notable outcomes of the study concerns the substantial improvement in students' communicative confidence. At the beginning of the experiment, many participants demonstrated hesitation, fear of making mistakes, and reluctance to participate in classroom discussions. Such findings correspond with previous studies indicating that engineering students frequently experience communication anxiety despite possessing adequate technical knowledge. However, following sixteen weeks of differentiated instruction, students became significantly more willing to express opinions, explain engineering concepts, participate in professional discussions, and deliver technical presentations.

The improvement observed in the experimental group may be explained by the pedagogical principles underlying differentiated instruction. Unlike traditional teaching, which often applies identical instructional procedures regardless of learner diversity, differentiated instruction recognizes students' varying readiness levels, learning preferences, motivation, prior knowledge, and communication needs. Consequently, learning activities become more accessible, engaging, and professionally meaningful.

The present study also confirms the importance of authentic professional communication in ESP instruction. Rather than practicing isolated grammar exercises or memorizing technical vocabulary, students participated in engineering meetings, construction site discussions, safety briefings, project presentations, and collaborative problem-solving activities. Such authentic communicative situations closely resemble real professional environments encountered by civil engineers. As a result, language learning became directly connected with students' future careers, increasing both motivation and meaningful engagement.

Another important finding concerns the role of professional vocabulary acquisition. The largest improvement among all assessment indicators occurred in students' ability to employ Civil Engineering terminology during spontaneous communication. This result suggests that vocabulary should not be taught independently from communicative practice. Instead, technical terminology should be introduced through authentic engineering contexts requiring learners to negotiate meaning, explain construction processes, justify technical decisions, and collaborate in solving engineering problems.

Project-based learning and collaborative speaking tasks proved particularly effective within the differentiated instructional model. Students worked together on engineering projects requiring discussion, planning, decision-making, presentation, and reflection. Such collaborative activities simultaneously developed language competence, teamwork, critical thinking, creativity, and professional responsibility. These competencies correspond closely with the expectations of contemporary engineering education and international labor markets.

Digital technologies further enhanced instructional effectiveness. Multimedia resources, engineering videos, AI-supported pronunciation tools, online collaboration platforms, and interactive speaking activities increased learner autonomy and provided opportunities for individualized practice beyond classroom instruction. The integration of digital learning environments allowed students to receive immediate feedback, monitor personal progress, and practice communication repeatedly without experiencing excessive anxiety.

The findings additionally support competency-based education principles currently being implemented within higher education reforms in Uzbekistan. Modern universities increasingly emphasize practical competencies rather than theoretical knowledge alone. Oral communicative competence represents one of the most essential professional competencies for future civil engineers because successful engineering

practice requires effective interaction with architects, designers, contractors, government organizations, international partners, and local communities.

An important contribution of the present research lies in adapting differentiated instruction specifically for Civil Engineering ESP education. Although differentiated teaching has received considerable attention in general education, relatively few studies have proposed comprehensive instructional frameworks specifically designed for technical universities. Most previous investigations discuss engineering education broadly without considering discipline-specific communication requirements. In contrast, the methodology proposed in this study integrates differentiated pedagogy with authentic engineering communication, competency-based assessment, project-based learning, and CEFR-oriented speaking evaluation.

The study also contributes to methodological development within Uzbek higher education. Existing ESP courses often prioritize reading technical texts and learning specialized vocabulary while allocating comparatively limited instructional time to authentic oral communication. The proposed differentiated model addresses this imbalance by systematically integrating speaking activities into every stage of instruction. Consequently, students gradually develop confidence, professional interaction skills, communicative flexibility, and intercultural awareness alongside linguistic competence.

Furthermore, the findings indicate that differentiated instruction supports inclusive education principles. Students with varying English proficiency levels actively participated because instructional activities were adjusted according to their learning needs. Lower-level learners benefited from structured support, guided speaking models, vocabulary scaffolding, and collaborative interaction, whereas advanced learners engaged in more cognitively demanding tasks such as technical debates, engineering consultations, and project defense presentations. Such flexibility increased participation among all learners and reduced communication anxiety.

The results of the present investigation also correspond with the objectives of the Common European Framework of Reference for Languages (CEFR), particularly its action-oriented approach emphasizing authentic language use. The differentiated instructional model encouraged learners to function as social agents performing meaningful professional tasks rather than merely completing language exercises. Consequently, communicative competence developed through purposeful interaction rather than isolated linguistic practice.

Despite these positive findings, several limitations should be acknowledged. The experiment was conducted within a single technical university and involved a relatively limited number of participants. Future studies should include multiple universities representing different engineering specializations to increase the generalizability of findings. Additionally, the duration of the experiment was limited to one academic semester. Longitudinal investigations could examine whether improvements in oral communicative competence remain stable throughout students' academic and professional development.

Another promising direction for future research involves integrating artificial intelligence, virtual reality, augmented reality, and digital simulation technologies into differentiated ESP instruction. Such technologies may further individualize learning experiences while providing authentic engineering communication scenarios that closely resemble international professional practice.

Overall, the findings strongly support the conclusion that differentiated instruction represents an effective methodological approach for developing Civil Engineering students' oral communicative competence. By combining learner-centered pedagogy, authentic professional communication, competency-based assessment, project-based learning, digital technologies, and CEFR principles, the proposed instructional model substantially enhances students' readiness for professional communication within the global engineering community.

CONCLUSION

The present study investigated the effectiveness of differentiated instruction in developing the oral communicative competence of Civil Engineering students studying English for Specific Purposes (ESP). Based on the findings obtained through quantitative and qualitative analyses, it can be concluded that differentiated instruction significantly enhances students' communicative competence, professional interaction skills, confidence, motivation, and readiness for authentic engineering communication.

The experimental results demonstrated that students who participated in differentiated ESP instruction achieved considerably higher speaking performance than those taught through conventional teacher-centered methods. Significant improvements were observed in fluency, pronunciation, professional vocabulary, interaction, communicative confidence, and the ability to perform authentic engineering communication tasks.

The findings confirm that effective ESP instruction for Civil Engineering students should not focus exclusively on grammar instruction or isolated vocabulary memorization. Instead, language learning should be integrated with professional engineering activities, authentic communication, collaborative learning, and competency-based assessment.

One of the principal advantages of differentiated instruction is its ability to address learner diversity. By adapting instructional content, learning processes, assessment strategies, and classroom interaction according to students' individual needs and proficiency levels, teachers create an inclusive learning environment in which every learner has an opportunity to succeed. Such an approach increases participation, reduces speaking anxiety, and encourages continuous professional development.

The proposed instructional model integrates differentiated pedagogy, communicative language teaching, project-based learning, competency-based education, authentic engineering scenarios, and CEFR-oriented assessment into a unified

methodological framework specifically designed for Civil Engineering students. This integrated methodology contributes to improving both linguistic competence and professional communication skills required in contemporary engineering practice.

Furthermore, the study supports ongoing educational reforms aimed at modernizing foreign language instruction within technical universities. The implementation of differentiated ESP instruction may contribute to preparing highly qualified engineering graduates capable of participating successfully in international academic, scientific, and professional communication.

In conclusion, differentiated instruction should be considered one of the most promising pedagogical approaches for developing oral communicative competence in Civil Engineering education. Its systematic implementation has the potential to improve English language teaching quality, strengthen graduate employability, and enhance the international competitiveness of technical higher education institutions.

Scientific Novelty of the Research

The scientific novelty of the present study is reflected in the following contributions:

- A comprehensive differentiated instructional methodology specifically designed for developing Civil Engineering students' oral communicative competence in ESP classrooms has been developed.
- A methodological model integrating differentiated instruction, communicative language teaching, competency-based education, project-based learning, and CEFR assessment has been proposed.
- Authentic professional communication tasks reflecting real engineering workplace situations have been systematically incorporated into ESP instruction.
- A differentiated assessment framework based on CEFR speaking descriptors has been adapted for technical university students.

- The study provides empirical evidence confirming the effectiveness of differentiated instruction in improving professional English communication within Civil Engineering education.

Practical Significance

The practical significance of the research consists of the following:

- The proposed methodology may be implemented in English for Specific Purposes courses offered at technical universities.
- The differentiated instructional model can be incorporated into undergraduate Civil Engineering curricula.
- The developed speaking tasks, role plays, engineering simulations, and project-based activities may serve as practical teaching resources for ESP instructors.
- The assessment criteria may assist teachers in evaluating students' oral communicative competence according to internationally recognized standards.
- The research findings may contribute to curriculum modernization and professional development programs for university English teachers.
- The proposed instructional framework may also be adapted for other engineering specialties, including Architecture, Mechanical Engineering, Electrical Engineering, Information Technology, and Environmental Engineering.

RECOMMENDATIONS

Based on the findings of the present research, the following recommendations are proposed:

1. English language teachers working in technical universities should systematically integrate differentiated instruction into ESP classrooms.
2. Civil Engineering curricula should include authentic professional communication tasks reflecting real workplace situations.
3. Greater emphasis should be placed on developing students' oral communicative competence rather than solely grammatical knowledge.

4. Project-Based Learning and collaborative engineering activities should become integral components of ESP instruction.

5. Digital technologies, artificial intelligence, virtual simulations, and multimedia resources should be incorporated to enhance communicative learning.

6. Continuous professional development programs should familiarize university teachers with differentiated instructional strategies.

7. Future research should investigate the long-term effects of differentiated instruction across multiple engineering disciplines and educational contexts.

References:

1. Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing*. Longman.
2. Brookhart, S. M. (2017). *How to give effective feedback to your students*. ASCD.
3. Littlewood, W. (2014). *Communicative Language Teaching*. Cambridge University Press.
4. Khaydarova, S. (2025). *Improving Writing Skills of Students in English*. LAP LAMBERT Academic Publishing.
5. Khaydarova, S. (2025). *English Textbook of Food Technology*. LAP LAMBERT Academic Publishing.
6. Khaydarova, S., & Khoshimova, D. (2026). *Textbook for Accounting and Auditing*. LAP LAMBERT Academic Publishing.Khaydarova, S., & Khoshimova, D. (2026). *English Textbook: English for Marketing Students*. LAP LAMBERT Academic Publishing.
7. Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan. (2024). *State Educational Standards for Higher Education*.
8. Khaydarova, S. (2026). *English for Civil Engineering* (Teaching Manual, under review by the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan).