



Развитие навыков публичных выступлений у студентов инженерных специальностей на занятиях по английскому языку: ключ к уверенности для будущих профессионалов

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АННОТАЦИЯ

Введение. Современный рынок труда на национальной и международной арене требует от выпускников технических специальностей владение как профессиональными навыками, так и навыками межличностного общения, в частности навыками публичных выступлений, развитие которых повышает уверенность и конкурентное преимущество будущих инженеров. *Цель нашего исследования* заключается в изучении эффективности включения систематической практики публичных выступлений в рамках курса по иностранному языку как инструмента для повышения уверенности в себе у студентов инженерных специальностей.

Материалы и методы. Исследование проводилось в течение 2024/2025 учебного года на базе Санкт-Петербургского горного университета. В нем участвовало 90 студентов второго курса различных технических специальностей. Для сбора эмпирических данных был применен количественный (статистический) метод с использованием авторского опросника, результаты которого представлены в процентном соотношении. В рамках эксперимента была разработана и внедрена педагогическая модель, направленная на развитие навыков ораторского мастерства на занятиях по иностранному языку. По окончании курса проведен детальный анализ итоговых публичных выступлений участников на основе заранее определенных критериев.

Результаты. Результаты опытного обучения свидетельствуют об успешном апробировании разработанной педагогической модели и демонстрируют значительное улучшение артикуляции, четкости речи, коммуникативной компетентности и уверенности в себе у студентов, прошедших курс по развитию навыков публичных выступлений. Анализ устных выступлений студентов выявил, что 90% из них полностью соответствовали требованиям для получения положительной оценки. Так, 95% презентаций характеризовались логичной структурой и последовательностью изложения, а в 85% случаев участники демонстрировали оптимальный темп речи и укладывались в регламент. Владение методами аргументации было отмечено у 75% студентов. Навыки взаимодействия с аудиторией продемонстрировали 80% выступающих. Нами был зафиксирован значительный прогресс и в самоконтроле над невербальным поведением. Уверенное владение материалом с минимальной опорой на текст на протяжении всего выступления было характерно для 70% участников. Результаты апробации, а также отзывы студентов позволили сделать выводы о том, что включение обучения публичным выступлениям в учебные программы по иностранному языку напрямую повышает готовность студентов к международной карьере, развивая важнейшие коммуникативные навыки.

Заключение. Полученные результаты показывают необходимость внедрения описанной педагогической модели в программы по иностранному языку в технических вузах, чтобы инженеры нового поколения могли не только создавать сложные проекты, но и убедительно их представлять. Перспективным направлением для дальнейшего изучения видится долгосрочное влияние этих навыков на будущую карьеру выпускников и их эффективность в межкультурном диалоге.

КЛЮЧЕВЫЕ СЛОВА

публичные выступления, навыки межличностного общения, профессиональная коммуникация, укрепление уверенности в себе, английский язык для специальных целей, коммуникативная компетентность, педагогическая модель

Для цитирования: Варлакова Е. А., Голерова С. Н. Развитие навыков публичных выступлений у студентов инженерных специальностей на занятиях по английскому языку: ключ к уверенности для будущих профессионалов // Перспективы науки и образования. 2026. № 2. С. 146–159. <https://doi.org/10.32744/pse.2026.2.8>

Поступила: 12.10.2025 | Одобрена: 21.12.2025 | Опубликовано: 30.04.2026



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The Development of Engineering Students' Public Speaking Skills in English Classes: a Key to Confidence for Future Professionals

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ABSTRACT

Introduction. The modern labor market in the national and international arena requires graduates of technical specialties to possess both professional skills and soft skills, in particular public speaking skills, the development of which increases the confidence and competitive advantage of future engineers. *The purpose of the study* is to examine the effectiveness of incorporating systematic public speaking practice in a foreign language course as a tool to increase self-assurance of engineering students.

Materials and methods. The study was conducted during the 2024/2025 academic year at Saint Petersburg Mining University. It was attended by 90 second-year students of various technical specialties. To collect empirical data, a quantitative (statistical) method was applied using the survey, the results of which are presented in percentage terms. As part of the experiment, a pedagogical model was developed and implemented aimed at developing public speaking skills in foreign language classes. At the end of the course, a detailed analysis of the final public speeches of the participants was carried out based on predefined criteria.

Results. The results of the experimental teaching demonstrate the successful pedagogical model implementation and significant improvements in articulation, clarity of speech, communication competence, and self-confidence among students who have completed a course on developing public speaking skills. An analysis of the students' oral presentations according to the set criteria revealed that 90% of them fully met the requirements for receiving a positive assessment. Thus, 95% of the presentations were characterized by a logical structure and sequence of presentation, and in 85% of cases, the participants demonstrated the optimal pace of speech and fit into the rules. Mastery of argumentation methods was noted in 75% of students. The skills of interacting with the audience were demonstrated by 80% of the speakers. We have also recorded significant progress in self-control over non-verbal behavior. In general, 70% of the participants had a confident command of the material with minimal reliance on the text throughout the speech. The results of the experimental work and also the student reviews confirm that the inclusion of public speaking training in foreign language curricula directly increases students' readiness for an international career by developing essential communication skills.

Conclusion. The results show the need to introduce the described pedagogical model into foreign language programs at technical universities so that new-generation engineers can not only create complex projects, but also present them convincingly. A promising area for further study is the long-term impact of these skills on the future careers of graduates and their effectiveness in intercultural dialogue.

KEYWORDS

public speaking, soft skills, professional communication, confidence-building, English for specific purposes, communication competence, pedagogical model

For Citation: Varlakova, E. A., & Golerova, S. N. (2026). The Development of Engineering Students' Public Speaking Skills in English Classes: a Key to Confidence for Future Professionals. *Perspektivy nauki i obrazovaniya = Perspectives of Science and Education*, (2), 146–159. <https://doi.org/10.32744/pse.2026.2.8>

Received: 12 October 2025 | Approved: 21 December 2025 | Published: 30 April 2026



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INTRODUCTION

UNESCO's strategy highlights the fundamental role of engineers in achieving all 17 Sustainable Development Goals (SDGs) by leveraging their expertise in technology, innovation, and infrastructure development to address global challenges [1]. The strategy emphasizes the importance of equal opportunities and inclusiveness, with a particular focus on motivating more young individuals and women to enter engineering fields, aiming to reduce the significant global skills shortage crucial for achieving the SDGs.

Governments align with UNESCO's sustainable development strategy by placing significant reliance on engineers involved in mineral extraction and processing to convert mineral resources into "social, human, and physical capital", thereby fostering sustainable and inclusive economic growth [2].

These necessitate educational institutions and industry to transform engineering education and capacity-building combining it with sustainable development needs. Technological advancements and innovations require higher education institutions to prepare engineers performing engineering tasks, solving complex problems, and capable to adapt to changing work environments, and excelling as "communicators" and "facilitators" as well [3]. The skills industries demand is spreading more quickly than ever, with a stronger emphasis on advanced soft skills [4], and the humanistic component to address complex social, environmental, and ethical challenges [5].

Empress Catherine II Saint Petersburg Mining University trains engineers and mining specialists who contribute significantly to Russia's economy and scientific advancement [6]. Education programs are designed to address the dynamic requirements of the national and global mining sectors. At the core of these initiatives lies the adoption of the "lifelong education" principle, which encompasses gaining essential knowledge through formal education followed by continuous professional growth to sustain and advance qualifications over a career span [7]. The university's national pilot project seeks to transform engineering education by merging science, technology, and the humanities to cultivate interdisciplinary competencies. Educators play a vital role in implementing these changes, which also feature foreign language instruction aimed at enhancing students' English communication skills, essential for effective global collaboration in engineering and technology [8] and students' employability [9].

Within this framework, innovative English language teaching at Saint Petersburg Mining University pursues development of engineering students' soft skills through effective modern foreign language pedagogies tailored for engineering education. For example, S.A. Boyko and E.A. Koltsova introduce a "corpus approach" in the formation of a lexical minimum, including terminological units of the studied technical specialty. [10]. Furthermore, E.R. Skornyakova's research scrutinizes improving terminology acquisition in an English for Specific Purposes course through a multicompetence approach, integrating various language learning activities to foster students' technical vocabulary and universal skills like critical thinking, teamwork, and communication [11]. Additional innovative practices include the incorporation of game technologies [12], and information technologies [13] that enhance student engagement and simulate professional communication scenarios relevant to mining and engineering fields. E.A. Varlakova and researchers underline that communicative and interactive abilities, reflexive thinking, and emotional intelligence can be effectively developed through well-designed online instructional methods to prepare effective business English communicators [14].

In the contemporary professional landscape, public speaking, one of the critical components of professional communication, remains a significant challenge for many non-native English speakers. A predominant focus on grammar and vocabulary acquisition in traditional language teaching often occurs at the expense of practical speaking exercises. This imbalance creates a gap between learners' passive knowledge and their ability to apply it spontaneously, ultimately undermining their preparedness for authentic professional interactions. Moreover, while mastering English for specific purposes, students often lack opportunities to practice and refine the acquired professionally-oriented language skills in academic settings.

This study aims to evaluate a novel pedagogical model designed to integrate public speaking into ESP curricula. Its central objective is to determine whether this integration effectively reduces communication apprehension and fosters the professional confidence essential for future engineers.

LITERATURE REVIEW

Modern researchers agree about the strong relationship between the degree of proficiency in public speaking and the factors determining the employment opportunity of a future specialist [15]. Public speaking has become a powerful tool that not only helps professionals motivate colleagues and express their thoughts clearly, but also serves as a catalyst for productive cooperation [16]. According to the study, conducted by R. Grieve, students experience fears related to public speaking and oral presentations. One of the specific fears is “fear of being judged by peers or instructors”, that have the overall negative effect on students’ higher education experience [17]. Speaking English in front of an audience is recognized as “the most dreaded experience” [18]. That’s why implementation of effective methods and techniques and offering students greater practical help to manage their public speaking anxiety is essential.

The theoretical foundation of this research draws on key psychological principles developed by the Russian psychologist A. N. Leontiev [19]. In his Activity Approach to Personality Study, confidence can be seen as a psychological trait that arises through the active involvement in meaningful, goal-oriented activities. It strengthens as individuals successfully pursue actions that fulfill their motives, thereby reinforcing their belief in their capacity to achieve objectives through deliberate effort. This is a dynamic, evolving process – confidence is continuously shaped and reshaped as people face challenges and gain mastery within their social and cultural environments.

When analyzing various authoritative works on mastering public speaking skills, several key components and aspects consistently emerge. Authors emphasize that effective public speaking is a multi-faceted skill set that integrates both physical and intellectual elements, requiring conscious management of one’s body, voice, and message to achieve clarity, persuasiveness, and meaningful engagement with the audience [20].

Many specialists, such as Alyson Connolly spotlight the constituent role of physical preparation – in particular breath control, tone, pitch, and articulation—in ensuring vocal clarity and strength, so the entire audience can understand the speaker. Issues like curing common vocal problems, learning to modulate voice for emphasis, and utilizing body language to project confidence are seen as foundational for impactful communication [21]. Media strategies can help to comprehend the material more quickly, and develop interest and motivation to learn and practice skills [22]. Body language – posture, gesture, facial expression – is highlighted as a key to exuding confidence and fostering trust.

Preparing the speech is a universal recommendation, involving carefully structuring the message, ensuring logical coherence, and adapting the tone to avoid alienating listeners [23]. Authors stress the importance of clarity, conciseness, dramatic but controlled emotionality, and the importance of establishing the relevance of the topic for the audience [24]. Working on the speech’s organization, choosing meaningful arguments, and practicing transitions all contribute to a more effective presentation [25].

Modern perspectives, especially in the realm of education, suggest that engaging students in public speaking tasks fosters critical thinking by challenging them to analyze, synthesize, and present information from multiple sources in a coherent manner [26]. Practice with all language skills – listening, speaking, reading, and writing – is nurtured through public speaking activities, reinforcing overall communicative competence.

The use of nonverbal elements, such as gestures and visual aids, is recognized as substantial for reinforcing verbal messages and sustaining audience attention. These nonverbal cues can greatly influence the audience’s perception and engagement [27].

A number of authors underline the need for interactivity and establishing a genuine connection with the audience one cannot be effective in public speaking and speech presentation without having the ability to influence or persuade or make the other people to see things the way he is seeing them [28]. Y. Lee and Y. Liu examine how drama-based activities impact the improvement of oral presentation skills, finding that pedagogical approaches incorporating drama are more effective than traditional methods. It can more effectively improve EFL learners' oral presentation abilities, specifically structure, audience adaptation, and content quality [29]. Audience interaction includes techniques for maintaining

eye contact, reading and adjusting to audience reactions, and engaging listeners via questions and dialogue. Being prepared for feedback and adjusting delivery in real-time is also integral.

Mastery in public speaking requires the ability to present strong, logical, and evidence-based arguments. References to facts, laws, statistics, expert opinions, and authoritative sources are encouraged for convincing communication. The use of examples that evoke emotion, rather than purely emotional appeals, is seen as especially effective [30].

Based on this analysis we united the main skills of public speaking mastering into 4 groups that logically proceed from one to another: speech techniques, speech composition, natural behavior and audience interaction.

MATERIALS AND METHODS

The study was conducted at Empress Catherine II Saint Petersburg Mining University from September 2024 to May 2025 (two academic terms). The focus group included second-year students with different level of English proficiency (aged 18–20) enrolled in technical programs such as mining, oil and gas, mechanical, chemical and IT majors (90 students in total). Such methods as observation, focus groups, survey, empirical research, analytical and descriptive methods were used.

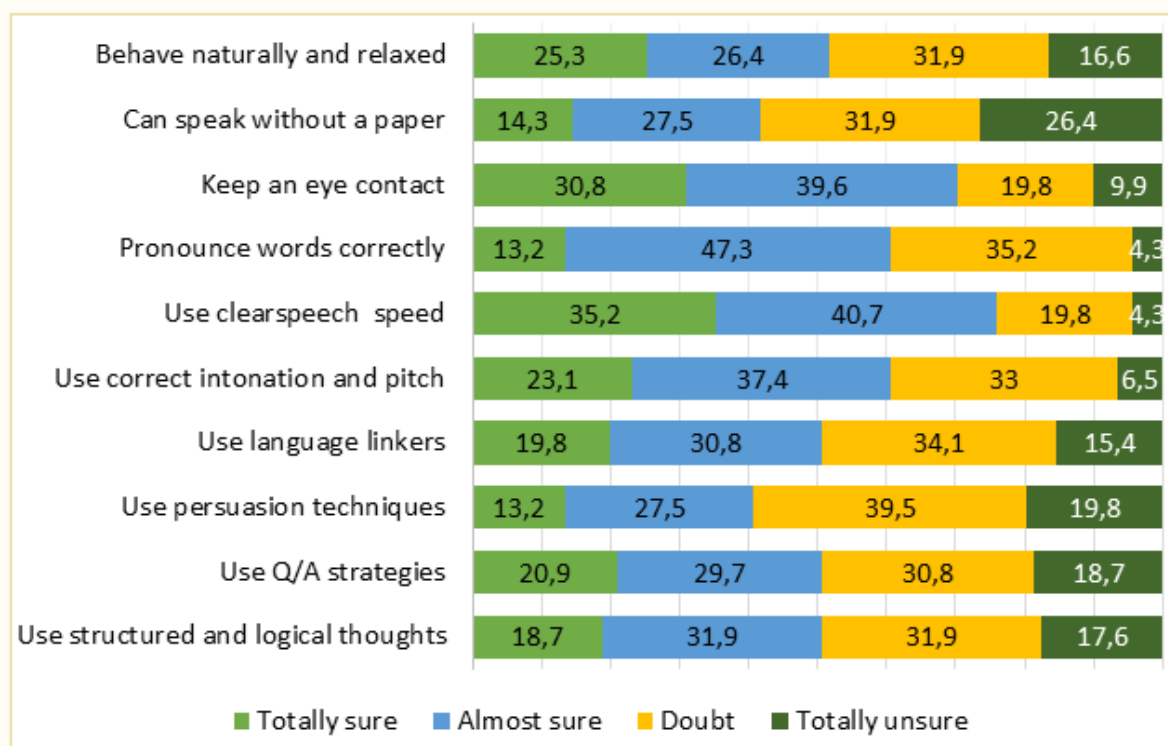


Figure 1 Students' self-assessment of oral presentation skills confidence (compiled by the authors)

A recent survey among second-year university students assessed their self-perceived confidence across various public speaking competencies. Over 70% reported feeling sure or almost sure in their ability to maintain eye contact during presentations, with only about 10% expressing complete uncertainty. The majority of students indicated confidence in maintaining an appropriate speech speed. Nearly 40% of students reported doubts or uncertainty, indicating a need for further practice and instruction. Fewer than one-fifth of students felt fully confident in using linking words and phrases to connect ideas. Nearly half reported doubt or total uncertainty, highlighting a gap in this essential skill.

Turning to weakness areas: the ability to present without relying on written notes was identified as one of the weakest areas. Less than 15% of students felt fully confident, while more than half experienced doubt or a complete lack of confidence. Managing question and answer sessions

also presented challenges, with nearly half of the students lacking confidence in this skill. Fewer than one-fifth of students felt totally sure about their ability to structure thoughts logically during presentations. Many students reported a lack of confidence in using persuasive techniques and cause-and-effect language linkers, both of which are important for effective public speaking.

The survey reveals that while second-year university students demonstrate strengths in certain public speaking skills, such as maintaining eye contact and appropriate speech speed, significant lack of confidence persists in essential areas including persuasive techniques, handling Q/A sessions, logical structuring, use of language linkers, and presenting without notes. The survey results highlight a critical need for focused instruction and more opportunities to practice these specific skills. Closing these identified gaps through dedicated instructional modules will enable students to gain greater confidence and proficiency in public speaking.

A figure below provides a structured overview of the key elements that contribute to building confidence in university students, especially those preparing for professional careers.

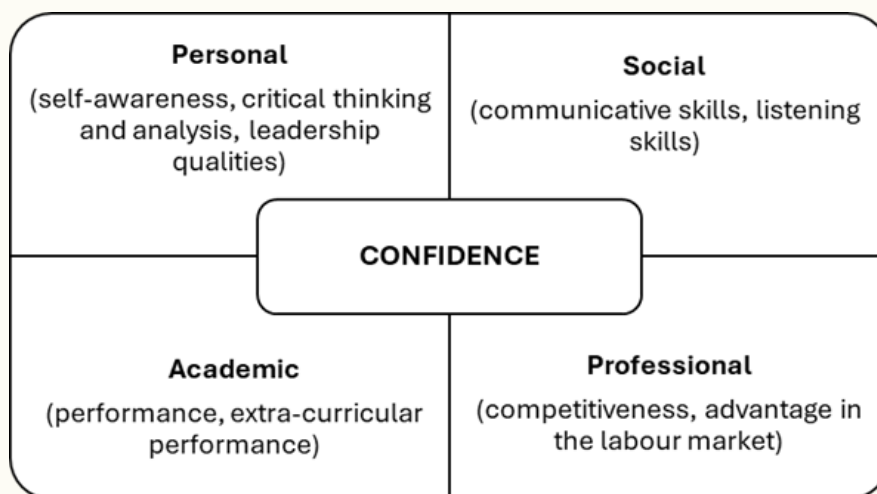


Figure 2 Influence of confidence on life domains (compiled by the authors)

Developing personal confidence (self-awareness) involves understanding one’s own strengths, weaknesses, values, and emotional triggers. When a student develops greater self-awareness, they are better equipped to set realistic goals, seek relevant opportunities, and respond constructively to feedback. Developing greater self-awareness helps students make better-informed decisions and define their personal and professional goals more clearly.

To build a good social confidence a person must improve their communication skills. Strong communication skills form the foundation for clearly articulating ideas, productive collaboration, and establishing professional networks. As students strengthen their communication abilities, they become more persuasive presenters, attentive listeners, and effective team members. This leads to better academic performance, stronger networking, and greater influence in professional contexts. It gives social support which encompasses encouragement, guidance, and assistance from peers, mentors, and educators. As students build stronger support networks, they gain access to valuable advice, emotional reassurance, and collaborative opportunities. Improved social support increases a student’s sense of belonging and confidence in facing new challenges.

Academic confidence increases student’s self-efficacy, they become more willing to take on challenges, persist through difficulties, and demonstrate initiative in academic and professional settings. This improvement results in increased resilience and a proactive approach to problem-solving.

Good academic performance builds competence which is essential for future professional life. Competence is the possession of necessary knowledge, skills, and abilities to perform tasks effectively. When students enhance their competence, they are more likely to participate actively in class, contribute meaningfully to group projects, and handle professional responsibilities with confidence. Improved competence directly supports academic achievement and workplace readiness.

Besides, the raise of confidence influences directly on the motivation. Motivation drives students to pursue their goals with energy and persistence. When motivation is high, students are more likely to set ambitious objectives, engage deeply with their studies, and seek out professional development opportunities. Enhanced motivation leads to greater academic engagement and a continuous desire for self-improvement.

Each component is essential for university students as they prepare to transition from academic environments to professional roles, where confidence will be a key factor in their success. By developing these core areas, students can build greater self-confidence and initiative, better manage stress, and adapt to new challenges. They will also strengthen their communication and interpersonal skills for effective teamwork, find higher motivation in their studies and career.

Table 1 Pedagogical model for public speaking skill development (compiled by the authors)

Target block		
Building confidence in public speaking in a foreign language		
Content block		
Integrating communicative approach, interactive, active learning experiences within social and professional contexts and include practical skill development through effective public speaking strategies tailored to the students' field of study		
Procedural block		
Steps	Skills	Exercises
Speech techniques	Articulation and breathing	- tongue twisters - controlled breathing techniques - reading aloud with focus on enunciation
	Intonation, tempo	- training rising and falling intonation patterns - marking scripts for intonation and pauses - mimicking native speaker recordings
Speech composition	Coherence and structural logic	- practicing transitions between ideas - creating outlines for short talks - sequencing jumbled sentences or paragraphs
	Information processing	- summarizing and paraphrasing articles or short texts - problem-solving scenarios - mind mapping and outlining
Natural behavior	Body language: postures, gestures	- comparing open, closed and "power postures" while speaking - playing games using facial expressions to convey emotion - charades
	Eye-contact	- audience scanning with sections - partner storytelling with eye contact maintenance - nonverbal games
Audience interaction	Q&A strategies	- role-play challenging questions - spontaneous Q&A sessions- pause and think drills
	Persuasion methods	- defining structures of persuasive speeches (claim, evidence, reasoning) - debating on familiar topics - giving counterarguments
Result block		
Confidence in public speaking		
<i>Cognitive component</i>		
- self-efficacy, a rational foundation of confidence based on self-knowledge and understanding of one's capabilities		
<i>Motivational component</i>		
- internal drives and aspirations that sustain the desire to perform and develop as a speaker, persistence in achieving goals, overcoming fear and nervousness by channeling energy into professional direction		
<i>Activity component</i>		
- specific actions and skills that realize confidence in practice, allowing the speaker to interact effectively within academic, social and professional environment		

The chart provides a comprehensive overview of the essential steps in building public speaking confidence for university students with practical exercises to develop them.

The pedagogical model proposed for second-year technical university students illustrates systematic building confidence in public speaking in a foreign language by combining a communicative approach with interactive, active learning situated in authentic social and professional contexts. The model is structured into four interconnected blocks: target, content, procedural, and result.

Target Block: the primary goal is to develop students' self-assurance in delivering public speeches in a foreign language, equipping them with the skills and mindset necessary for effective communication in their future technical careers.

Content Block: the programme module integrates practical skill development with effective public speaking strategies tailored specifically to the students' field of study. It emphasizes communicative competence through interactive and active learning experiences that simulate real-world social and professional situations, thereby fostering relevant and transferable skills.

Procedural Block: this block details the step-by-step instructional activities organized into thematic areas:

Speech Techniques: articulation and breathing are essential for producing clear and intelligible speech, as well as for maintaining vocal stamina throughout a presentation. Articulation involves precise pronunciation of sounds and words, while proper breathing supports voice projection and reduces tension. Focus on articulation and breathing through exercises like tongue twisters, controlled breathing, and reading aloud to enhance enunciation. Intonation and tempo play an essential role in conveying meaning, emotion, and emphasis, while also sustaining the audience's interest. Mastering pitch variation and controlling the speed of speech make presentations more expressive and easier to follow. Both affect the clarity and expressiveness of spoken English.

Speech Composition: coherence and logic ensure that ideas are presented in a clear and logical sequence, which helps the audience understand and retain the message. Organizing main points, using appropriate linking words, and outlining presentations contribute to a logical flow of information. Here a focus is given to variety of linking words and phrases practice. Students develop coherence and structural logic by practicing smooth transitions between ideas, creating outlines for short talks, and sequencing jumbled sentences or paragraphs. Information processing involves selecting, organizing, and delivering relevant information in a clear and concise manner. Summarizing key points, highlighting main ideas, and using visual aids help ensure that the message is communicated effectively.

Natural Behavior reinforce spoken messages and engage the audience through effective use of body language, including gestures, facial expressions, posture, and eye contact. These skills help speakers appear more confident and approachable. Nonverbal communication is addressed through body language exercises comparing open, closed, and "power postures," emotion conveyance games using facial expressions, and charades to build expressive skills.

Audience Interaction: rapport with the audience is vital for building a connection with listeners, fostering engagement, and establishing trust. Adapting to audience reactions, using inclusive language, and demonstrating empathy create a positive and interactive speaking environment. Persuasion methods and strategies are necessary for influencing the attitudes or actions of the audience through effective argumentation. Using logical, emotional, and ethical appeals, structuring persuasive speeches, and addressing counterarguments enable speakers to convince and motivate their listeners.

Result Block: the model targets three core components of confidence in public speaking:

The cognitive component is related to a person's thinking and beliefs. It includes awareness of one's knowledge, skills, and resources, as well as positive beliefs about one's own abilities (self-efficacy), internal self-worth, and optimism. This component helps perceive mistakes as part of the learning process, which supports cognitive flexibility and resilience to failures. Therefore, the cognitive component is rooted in self-knowledge and understanding of one's capabilities.

The motivational component reflects internal drives to perform and develop as a speaker. It includes a positive mindset, internal consistency of thoughts, words, and actions, as well as optimism and persistence in achieving goals. Motivation helps overcome fear and nervousness by channeling energy into productive directions, for example, through positive visualization of success and focusing on the importance of the speech topic.

The activity component manifests in specific actions and skills that realize confidence in practice. This includes speech preparation, practicing delivery techniques, the ability to manage nonverbal signals (gestures, posture, eye contact), as well as emotional control and self-regulation during the presentation. This component ensures the practical implementation of confidence, allowing the speaker to interact effectively within academic and future professional environment.

RESULTS

During the final oral presentation, all students receive forms to complete as future audience members. The forms include a chart to fill with the following sections: a) Name of the speaker, b) Topic of the presentation, c) Content, d) Questions. Analyzing these forms provides valuable insight into the level of comprehension and understanding that students have regarding the presentation content delivered by their peers.

The final oral presentations by second-year students across various majors at the technical university were assessed using a comprehensive set of criteria. The results highlight significant improvements in several key areas, demonstrating the students' growth in soft skills.

The assessment of the presentations was conducted with the use of the set of criteria depicted in the following table.

Table 2 Criteria for evaluating oral presentation performance (compiles by the authors)

Name of criteria	Attention is paid to:	Mark "PASS"
Pronunciation accuracy	Number of pronunciation errors. Whether errors affected the meaning of words.	The presentation contains no significant pronunciation errors (≤ 3 errors). Any minor mistakes do not distort the meaning of words or hinder understanding.
Logical structure	Clarity and logic of the presentation's organization.	The presentation is clearly and logically organized. All points are presented in a coherent sequence, making the argument easy to follow.
Use of linking phrases	Frequency and appropriateness of linking words and phrases within the speech and between speech and visual aids.	A wide variety of linking words and phrases (≥ 10) are used appropriately both within the speech and to connect the spoken content with the visual aids, ensuring smooth transitions.
Speech rate and timing	Appropriateness of speech speed. Whether the student finished within the settled time or spoke too quickly/slowly.	The speaker maintains an optimal pace, neither too fast nor too slow. The presentation fits precisely within the time limit, with all main points covered thoroughly.
Reliance on text	Percentage of time the student read from notes or slides.	The presenter speaks freely with minimal reliance on notes or slides, demonstrating strong command of the material and the ability to engage the audience directly ($\leq 30\%$ of note reading).
Non-verbal communication	Where the speaker directed their gaze. Position and movement of hands. Presence of distracting movements.	The speaker maintains confident posture, consistent eye contact with the audience, and purposeful hand gestures. There are no distracting movements, and non-verbal cues reinforce the spoken message.
Use of pauses and rhetorical questions	Effective use of pauses. Inclusion of rhetorical questions to engage the audience.	Pauses are used effectively for emphasis and clarity. Rhetorical questions are incorporated naturally to engage the audience and stimulate interest.
Intonation clarity	Use of intonation to signal completion of ideas or transitions.	Intonation is varied and expressive, clearly signaling the completion of ideas and transitions between points, which aids audience comprehension.
Argumentation	Number and quality of arguments used to support or elaborate on the topic.	The presentation includes ≥ 3 well-developed arguments or examples that convincingly support and elaborate on the topic.
Handling questions	Understanding of questions from the audience. Completeness and relevance of responses.	The presenter fully understands all questions from the audience and provides comprehensive, relevant, and thoughtful responses.

As a result, approximately 85% of students demonstrated remarkable improvement in audience engagement through confident non-verbal communication, effective use of pauses, and rhetorical questions. Their ability to maintain eye contact and use purposeful gestures contributed to a stronger connection with their listeners. Approximately 80% of students demonstrated improved skills in responding to questions from the audience. They provided comprehensive, relevant, and thoughtful answers, demonstrating a deeper understanding of the topic and increased spontaneity. About 75% of students effectively used arguments and connecting phrases to structure their presentations convincingly. Many used at least three well-thought-out arguments or examples, which made their presentations more convincing. A significant 70% of students reduced their dependence on written notes or slides, speaking freely for at least 70% of the presentation time. This demonstrates their increased confidence and mastery of the material.

The students demonstrated increased confidence, as evidenced by their clear intonation, logical structure, and smooth transitions. Their understanding of the material allowed them to deliver their presentations with minimal distractions and maintain a confident, composed behaviour. The assessment showed that the students demonstrated excellent performance in pronunciation accuracy, logical structure, and speech tempo, most of which met or exceeded the PASS criteria.

These results demonstrate the students' progress in developing their effective communication skills, their ability to deliver flawless and convincing presentations with minimal reliance on notes, and their focus on audience engagement.

Data collected from presentations and surveys indicated a marked improvement in both the communicative competence and self-assurance of students following the integration of public speaking activities. The experimental group showed considerable improvements across several dimensions: a) increased fluency: students exhibited a higher speech rate and fewer pauses compared to their performance results at the beginning of the academic year, indicating a measurable rise in speech fluency and reduced hesitation; b) enhanced vocabulary: participants showed greater use of professional and technical terminology, reflecting an expanded lexical repertoire relevant to their fields; c) reduced anxiety: self-reported communication apprehension decreased, suggesting that public speaking practice effectively reduce students' anxiety; d) improved motivation: students reported feeling more confident and engaged, and were more willing to participate in class and continue their language studies; e) professional readiness: students gained practical, immediately applicable skills that prepare them for communication in professional settings.

Our empirical results corroborate the existing body of research on the efficacy of experiential learning, demonstrating that a structured public speaking framework specifically fosters both psychological and communicative development. We observed that a supportive classroom environment, reinforced by systematic feedback, was instrumental in cultivating these positive outcomes.

At the same time, the study has limitations, including a relatively small sample size and a short intervention period, which may influence the generalizability of the findings. Future research should investigate the long-term effects of public speaking integration and explore its impact across diverse student populations and educational settings.

DISCUSSIONS

Our educational research proves that confidence in public speaking – especially in a foreign language – can be systematically developed through structured pedagogical interventions that integrate communicative, interactive, and professionally-oriented activities in technical university contexts, which corresponds to the results of the authors [31] who claim that students' self-esteem positively correlates with public speaking skills, indicating that higher self-esteem can help manage nervousness during speeches and presentations.

The study's findings align with M. Rudneva [32], who highlights the effectiveness of incorporating authentic video materials, such as TED Talks, in ESP classrooms to enhance listening and speaking skills. Well-designed pedagogical interventions foster motivation, comprehension, and communicative confidence among technical students, supporting the conclusion that context-specific, interactive public speaking activities build engineering students' confidence and professional readiness.

The research confirms that targeted training, combining speech techniques, speech composition, authentic behavioral practice, and audience engagement strategies lead to significant, measurable improvements in students' communicative competence, confidence, and professional readiness.

We agree with S.A. Sveshnikova and researchers, who identify the language learning ways that most effectively "influence motivation and independent learning skills", while also show how these tools aid in developing essential non-technical skills [33].

The data confirm that when students learn by doing in a supported environment, their belief in their own abilities grows, their anxiety about communicating drops, and they become more willing to engage in public speaking. The effective incorporation of scenario-based learning and formative feedback was essential in supporting skill acquisition, bridging the gap between theoretical language knowledge and practical application.

The research by I. G. Gerasimova and I.S. Oblova [34] proves that integrating edutainment activities such as simulated workplace conversations, role plays, and project-based learning not only improves language proficiency but also "boosts innovative potential of engineering students".

In line with previous studies by O. Yu. Malakhova, A. N. Popov, and A. A. Khandrimailov [35], our observations show that technical university environment creates ways for students' self-development and self-determination.

A prominent insight from the study is the identification of specific strengths and challenges among second-year technical students. Strengths included the ability to maintain appropriate eye contact and speech speed, while persisting gaps – such as limited confidence in persuasive communication, logical structuring, and managing Q&A sessions – reveal the necessity for further curricular attention and personalized coaching in these skill domains.

These findings complement broader educational imperatives reflected in federal and international standards, such as the emphasis on transferable communication skills outlined by the Common European Framework of Reference. The model echoes global trends prioritizing the integration of soft skills within technical curricula to better prepare graduates for professional roles in multicultural and interdisciplinary environments.

The interpretation of these findings should be considered in light of two primary limitations. First, the duration of the intervention was limited to two academic terms. Second, the sample size, while sufficient for this pilot study, limits the broad applicability of the results. Future studies with longer timelines and larger cohorts are needed to corroborate these initial findings. Furthermore, student self-assessment data may be influenced by subjective biases or initial unfamiliarity with evaluative criteria. Addressing these constraints in future research – perhaps by implementing longitudinal studies, broadening participant diversity, or introducing external assessment benchmarks – could give deeper insights into the sustained development of public speaking training.

The positive results overall demonstrate that integrating structured public speaking practice into language education provides essential improvements for students in technical fields. As the demand for globally-competent professionals, continued innovation and research into scalable, evidence-based pedagogical frameworks remain essential for equipping students with the confidence and skills required for success in academic and professional spheres.

CONCLUSION

The development of public speaking skills in English language classes is the most important factor in building self-confidence and professional readiness of future engineers and technical specialists. A curriculum that integrates multimedia and formative assessment creates a motivating and supportive environment for skill acquisition. This study demonstrates that integrating systematic public speaking practice into the ESP curriculum effectively bridges the gap between abstract language knowledge and the confident, proficient communication demanded of future engineers in globalized industries. The presented pedagogical model demonstrates that interactive practice sessions contribute to significant improvements in fluency, vocabulary and self-confidence and prepare students for the demands of an international professional environment.

The data from this study – drawn from student feedback, focus groups, and direct observation – consistently point to one outcome: targeted public speaking training directly boosts motivation, communicative skill, and readiness for an international career.

By addressing communicative apprehension and providing opportunities for authentic practice, instructors can better prepare students for the demands of an international professional environment. These gains in fluency, motivation, and confidence cement public speaking's role as a critical skill for future engineers, managers, and professionals.

Further research should explore the impact of the proposed model on long-term public speaking training in different educational spheres.

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Авторы заявляют об отсутствии конфликта интересов

Author's contribution**Ekaterina A. Varlakova:** Conceptualization,
Writing - Review & Editing, Visualization, Supervision**Svetlana N. Golerova:** Methodology, Investigation,
Writing - Original Draft, Validation

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The author's declared no conflicts of interest