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Enhancing Communication Skills in Engineering: A Case Study in ESP

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Abstract: Communication skills are essential for engineering students, complementing their technical expertise and increasing their academic and professional growth. Effective communication enhances collaboration, ensures clarity in technical documentation, and enables engineers to articulate ideas persuasively. Therefore, employers value engineers who are able to communicate technical information clearly and collaborate within multinational teams. This paper explores the significance and challenges of developing communication skills in technical writing with an emphasis on teaching English for Specific Purposes to 2nd-year students in Computer Science and Applied Electronics from the Faculty of Engineering, Baia Mare, Technical University of Cluj-Napoca.

Keywords: professional communication, technical writing, ESP, engineering students.

1. Introduction

It is generally acknowledged that English, a shared language of professional communication, has provided access to global knowledge worldwide. In the modern engineering landscape, possessing proficient communication skills is no longer a supplementary advantage but a fundamental necessity. Communication competence complements technical expertise, enhancing teamwork, ensuring precision in documentation, and enabling persuasive articulation of ideas.

Consequently, employers prioritize engineers who can not only solve complex problems but also communicate solutions effectively within multinational and interdisciplinary environments. Employers value engineers who can effectively communicate technical information, collaborate with international teams, and adapt to diverse work environments (Basturkmen 2010). One of the eleven key outcomes required by an undergraduate engineering programme in the ABET (Accreditation

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Board for Engineering and Technology Engineering Criteria) is communication defined as "an ability to communicate effectively" (ABET 2000). Furthermore, as Cernicova-Bucă (2020) suggests

> "Universities and organizations on the labour market are jointly responsible for the formation of the highly skilled professionals. For the initial education, efforts have been made to align university programs with the competences and needs of work life, described in catalogues for the functions and procedures of specific needs that have a direct correspondence in the existing professions." (Cernicova- Bucă 2020, 5)

ESP language courses for engineering students should be designed considering the learners' needs and expectations about foreign language communication in a professional setting so that policy and resources need to be adjusted accordingly. Thus, the main question under discussion is whether foreign languages courses allow students to communicate successfully in professional settings that engineering graduates are likely to come across later in their careers.

This article presents the research findings based on two questionnaires administered to second-year students enrolled in Computer Science and Applied Electronics from the Technical University of Cluj-Napoca, Faculty of Engineering, Baia Mare. The main aims of the article are: to assess our engineering undergraduates' attitudes towards professional communication in an ESP context and to establish areas of competence in technical writing that an ESP learner needs to develop in order to deal with specialised types of discourse appropriately and effectively.

2. Theoretical and Practical Aspects on Designing ESP Courses

English for Specific Purposes can be defined as "an approach to language teaching in which all decisions as to content and methods are based on the learner's reason for learning" (Hutchinson and Waters 1987, 4). This approach is centred on language in terms of grammar, lexis, register, study skills, discourse and genre appropriate for these activities (Dudley-Evans and St John 1998). The main purpose for developing ESP activities implies a strong purpose of communication while focusing on specific content and language structures. Terms such as context, situational practice, cross-cultural issues, authentic communication and materials, as well as needs analysis, are frequently used in various descriptions of ESP (Dudley-Evans and St John 1998). "The concept of ESP achieves more in the education of engineering students by focusing the learner's attention on the particular terminology and communication skills required in the professional field" (Riemer 2007, 91). Moreover, "ESP requires the careful research and design of pedagogical materials and activities for an identifiable group of adult learners within a specific learning context" (Dudley-Evans and Johns 1991, 298).

Bell (2002) argues that the depth of knowledge of a subject matter that a teacher requires depends on a number of variables which include: the level of knowledge learners know about their specialist field; the learners' pre-experience or

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post-experience; the specificity of the language, skills and genres that students need to acquire. According to the same author (Bell 2002), three core characteristics are essential not only for teachers but also for students to develop their knowledge and skills in a specific area of English for Specific Purposes (ESP): curiosity, collaboration, and confidence. Curiosity involves a genuine interest in the subject matter and a desire to explore it further. Collaboration encourages both teachers and students to engage with subject specialists, share their work, and seek constructive feedback. Confidence, which develops over time, grows as teachers and students deepen their understanding and become more comfortable with the specialized content. Tertiary level students also bring to the ESP learning context their individual experiences of life, of the world, and of prior learning, thus, one should "feel accepted, respected, and supported", establishing "a spirit of mutuality between teachers and students as joint inquirers" (Knowles 1980, 47). Consequently, needs analysis has become useful in order to assess what language points students need to master as well as to meet their needs during the learning process. Hutchinson and Waters (1987) suggest that when ESP teachers understand the reasons learners need English, they can tailor the course content accordingly, ensuring that the teaching process focuses on those specific needs. As a result, curriculum content and developing teaching materials must be based on needs analysis.

The process of needs analysis or target situation analysis consists of identifying the target situation and then carrying out a rigorous analysis of the linguistic features of that situation. This approach must be developed as an on-going process repeated throughout a language programme and not only a procedure delivered at the beginning of the seminar since the learners' needs are changing too. The moment learners and teachers establish the context in which English is needed, their awareness will have an influence on what will be acceptable as "reasonable content in the language course" and what "potential can be exploited" (Hutchinson and Waters 1987, 24). The role of needs analysis in a skill-centred approach is to provide a foundation for developing communicative competences that enables students to perform successfully in the target situation and to allow the course designer to become aware that the learners contribute to the ESP course with valuable knowledge and abilities.

Learners' motivation is another important aspect in the learning process; hence, the learners' perceived wants cannot be ignored. In some cases, engineering students have a better grasp of specialized technical terms related to their field than the language teacher, who may lack familiarity with industry-specific terminology. Being goal-oriented, language learners need to focus on using words appropriately in sentences, understanding authentic texts that contain field-specific expressions, and communicating effectively in common workplace situations. This highlights the growing importance of needs analysis, discourse genres, and linguistic corpora in ESP (Dudley-Evans and Johns 1991). As Smith and Strong (2009, 2) suggest adult learners "usually require immediate value and relevance from their studies, and they often learn best when they are engaged in developing their own learning objectives."

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Considering Basturkmen's view (2010), ESP courses are relevant for engineering students as they focus on specific technical vocabulary, professional genres, and engineering specific communicative practices including a variety of components designed to enhance language skills, such as technical writing, oral communication and comprehension of technical texts. Therefore, these tailored activities help students to develop the practical language skills needed in their future professional lives.

3. Challenges in Developing Communication Skills

Many engineering students begin their tertiary education with deficiencies related to foreign language proficiency or inadequate English language skills as non-native learners often find it difficult to construct grammatically correct and coherent sentences, leading to unclear technical documentation. ESP focuses on context-specific language, which further complicates the writing process for students who have only basic English proficiency (Dudley-Evans and St John 1998).

Technical disciplines are rich in specialized terminology; therefore, mastering this technical jargon while maintaining clarity and readability in technical documents is a considerable challenge for engineering undergraduates. They often prioritize technical competence over communication skills, viewing writing as a secondary concern (Basturkmen 2010). This type of mindset can hinder motivation, as students may not immediately perceive the importance of proficient writing skills in their future careers.

ESP teachers have consistently utilized available tools to develop materials and design scenarios that cater to their students' specific needs (Arnó-Macià 2012). However, the role of technology in language learning, particularly in English for Specific Purpose courses, has evolved significantly over time. In recent years, technology has transitioned from being a mere add-on to becoming an integral part of the classroom, both physically and pedagogically. Technology occupies a crucial role in the lives of the learners, who require advanced digital literacy skills to engage in cross-cultural communication through diverse media. Moreover, such competencies are essential for fostering learner autonomy, enabling students to navigate and adapt to the rapidly evolving professional environment. Educators who possess a positive disposition toward technology and demonstrate confidence in its use are more likely to stay informed about technological advancements and actively incorporate and experiment with innovative tools in both online and offline teaching contexts.

> "In ESP, as we can see from the case studies, the reason for using technology is not only or always because it makes learning the language more effective or efficient, but also because it can offer tools that simulate real life work situations, while giving students the opportunity to acquire and practise essential 21st century professional skills." (Kern 2013, 111)

A blended approach that combines face-to-face instruction with technology incorporation has been used into language courses early on due to its suitability for

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ESP learners. It offers flexibility in terms of time and place, prioritizes a student-centred approach, and addresses students' specific needs. Additionally, it provides comprehensible, field-specific input, promotes student production, and enables focused practice to enhance communicative skills. Blended learning also offers meaningful feedback and assessment of content knowledge while incorporating authentic materials and multiple modalities to accommodate diverse learning styles (Arnó-Macià, 2012). Integrating online platforms, language learning apps, and multimedia resources into language instruction provides students with interactive and effective tools to improve their language skills. Teachers may cultivate mutual engagement by addressing individual needs, seeking feedback on effective strategies, and identifying solutions to challenges. Combining traditional teaching approaches with advanced technological tools enables tertiary institutions to better prepare engineering students for success in the global workforce. The blended dimension of education connects in-class activities with extended learning spaces whether individual or group-based through virtual platforms like Moodle. These e-learning tools enable teachers to offer flexible access to adult learners, overcoming physical, temporal, and task-related constraints of traditional face-to-face settings.

4. The Importance of Professional Writing for Engineering Students

As technology facilitates more efficient communication and the world increasingly becomes a global community, the demand for interactions with individuals from diverse linguistic backgrounds continues to rise. The study of languages for specific purposes offers appropriate ways for organizing writing tailored to specific objectives, explores models of effective writing, and fosters critical thinking. Classroom environments often simulate real-world scenarios where students work in teams to solve problems or design solutions. On the one hand, poor communication can lead to misunderstandings, inefficiencies, and project failures. On the other hand, clear communication ensures that team members understand their roles, share feedback constructively, and achieve collective goals.

Written communication in professional settings consists of linguistic acts during which participants describe concepts and facts, negotiate meaning of messages, establish the basis for trusting one another, and deal with transactions. Given the diversity and evolving nature of workplace requirements, English for Specific Purposes courses should be in line with the workplace needs such as linguistic components and skills and help students in engineering to communicate successfully in their own professions. "When students write or speak for a broader and more international audience, they pay more attention to polishing their work, think more deeply about the content they produce, and consider cultural norms more thoughtfully" (Ramirez 2010, 4). Schulz (2008) supports this idea by stating that soft skills enhance hard skills, which encompass the technical expertise required for a job that students are trained to perform. He emphasizes the significance of soft skills such as communication, critical and structured thinking, problem-solving, creativity, self-confidence, empathy, business management, and other personal attributes. These

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skills are essential for students to develop alongside their academic and technical knowledge.

> "Written communication needs to be relevant, properly implemented and of a quality standard that can be benchmarked; it should also generate feedback and provide accurate assessment, as well as make a positive and permanent impact on student learning" (Riemer 2007, 92).

Despite its importance, many engineering students struggle with English proficiency due to various factors including: inadequate language instruction, insufficient course content, inappropriate teaching methods, limited exposure to English and lack of opportunity for engineering students to practise communication skills or students' attitudes towards communication (Riemer 2007, Murali et. al 2025).

Professional writing refers to communication produced within a workplace setting to support the objectives of an organization. To ensure effective collaboration, professionals use established formats and conventions that streamline the exchange of information. Such writing is typically intended to inform by sharing clear, accurate information or to persuade, fostering understanding and goodwill. In this context, technical communication is inherently persuasive, often using objective language to influence its audience. Moreover, professional writing not only communicates specialized content but also subtly conveys the cultural perspective of its author.

Effective writing is the result of a process consisting of three interconnected stages: the planning or conceptualising stage; the drafting stage and the revising/editing stage. Having a clear vision of what the writer wants to accomplish, and giving oneself adequate time to rephrase, delete, rearrange and add information to sections actually means creating one's work. The drafting stage is just a bridge between careful planning and structuring information. Writing is hierarchical if it is arranged as a cascade of sections or chapters at a high level of abstraction which, in turn, are composed into sections of greater detail, and those sections into subsections, and so on, each at an increasing level of detail in order to organise and convey ideas from high level to low level, that is, from abstract to concrete.

The main feature of creating a meaningful document is understanding both the aim the document serves and the audience who will read it. Technical writing involves two key competencies: the ability to understand technical language as well as the ability to express that knowledge in a clear, concise and coherent manner. Style and structure of technical content are shaped by the subject matter and the intended audience. Texts may contain definitions of technical terms, descriptions of products, instructions and examples. In most cases, they are accompanied by graphics, tables or illustrations.

According to Laplante (2019), technical writing is defined by two crucial features: precision and intent. Precision is defined by a combination of clarity and correctness "there should be no intent to evoke an emotional response from the

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reader. The technical writer should simply try to convey information as concisely and correctly as possible" (Laplante 2019, 15). By prioritizing communication training alongside technical education, engineering programs can equip students with the tools to excel in their careers. Technical writing plays a crucial role in engineering education, enabling students to effectively articulate complex concepts to a world-wide audience.

5. Research Methodology- Enhancing Communication Skills Awareness Among Engineering Students

The study aimed to raise awareness towards the understanding and practices of written communication in a professional context among second-year engineering students in Computer Science and Applied Electronics from the Faculty of Engineering, Baia Mare, Technical University of Cluj- Napoca. Data collection was carried out using two questionnaires and classroom discussions. Each questionnaire required approximately fifteen minutes to complete.

The first research tool (Digital Communication in the Workplace Quiz) consisted of a structured questionnaire including ten multiple-choice questions. It was designed to assess participants' knowledge and attitudes toward professional communication in a digital context. The questionnaire covered key topics such as the purpose of professional communication, best practices for digital communication tools, email etiquette, handling sensitive information, and the importance of tone adjustment. It was administered online via Google Docs and completed by thirty-six participants.

The second research tool (Engineering Students' Perceptions Toward Enhancing English Communication Skills) assessed the target group's attitudes towards the ESP course using the Communication Skills Attitude Scale (CSAS) (Rees and Sheard 2002). The scale included ten items as included in Table 1, eight of them were formulated as positive statements, whereas two were negative statements. Each statement was accompanied by a five-point Likert scale ranging from one (strongly disagree) to five (strongly agree). The positive attitude scale included items 1, 3, 5, 7, 8, 9, 10 and items 2, 4 were related to negative attitudes towards communication. It was completed online by forty-three students.

Data Collection and Analysis: The data collected were analysed quantitatively and qualitatively. Each question was reviewed for response distribution, with percentages calculated to identify the most common perceptions and behaviours among the participants. Results were presented using percentages to highlight prevalent attitudes and practices.

Table 1. Research Tool Nr. 1- Digital Communication in the Workplace Quiz

Topic	Findings and Discussion of the Results
1.Purpose of Professional	All participants identified the primary purpose as to convey information clearly and effectively, indicating a strong

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Communication	understanding of the fundamental goal of professional communication.
2. Benefits of Digital Communication Tools	91.7% of respondents recognized improving collaboration and efficiency as the primary benefit, showing an appreciation for teamwork in digital environments.
3. Best Practices for Professional Emails	97.2% of respondents highlighted the importance of keeping the subject line clear and concise reflecting a high level of awareness for clarity in digital communication.
4.Poor Digital Communication Etiquette	88.9% of them considered sending long, unorganized messages with no subject as poor etiquette. Such practices hinder effective communication, as they make it difficult for recipients to grasp the purpose of the message, reducing overall clarity and efficiency.
5. Instant Messaging Practices	86.1% of respondents agreed that sending messages late at night without considering time zones should be avoided, implying sensitivity toward professional courtesy.
6. Ensuring Message Understanding	All respondents chose being clear, concise, and providing necessary context, demonstrating an undisputed understanding of effective communication.
7. Tone Adjustment in Communication	91.7% of participants recognized that messages can be misinterpreted without verbal cues, indicating an awareness of adjusting communication style according to a certain audience.
8. Handling Sensitive Information	94.4% of participants preferred using company-approved, secure channels, reflecting a strong understanding of information security.
9. Formal Email Etiquette	91.7% of students stated that emojis and informal abbreviations should be avoided, recognizing the role of formal communication in a professional setting.
10. Importance of Proofreading	All participants acknowledged that proofreading helps ensure clarity and professionalism, emphasising the value of attention to detail.

The results reveal that second-year engineering students generally exhibit a strong understanding of best practices for digital communication in the workplace. High percentages across various categories ranging from 86.1% to 100% indicate that our students are well-prepared to communicate professionally in digital environments. However, minor deviations, such as the 8.3% who underestimated the importance of timing in instant messaging and the 11.1% who did not prioritize brevity, suggest areas where further education could enhance communication skills. Overall, these findings highlight the importance of incorporating digital communication etiquette into engineering curricula to ensure students are workplace-ready. Educators can better equip engineering students with the communication competencies that are necessary for academic and career success.

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Table 2. Research Tool Nr.2- Engineering Students' Perceptions Toward Enhancing English Communication Skills

Nr.	Communication Skills Attitudes Statements
1.	Good communication in English is just as important as technical expertise for a successful engineering career.
2.	Learning communication skills in English is not necessary because engineers mostly work with numbers and formulas.
3.	Improving my ability to explain engineering concepts in English will make me a better problem-solver.
4.	I don't need special communication training because my technical skills are enough to succeed in engineering.
5.	Learning how to communicate clearly in English will help me avoid misunderstandings in technical discussions.
6.	Engineers can rely on translators or software instead of improving their own English communication skills.
7.	I feel more confident when I can explain my engineering projects clearly in English.
8.	By practicing structured technical writing, I can effectively communicate complex concepts in English, improving clarity and precision in formal technical documents.
9.	Writing professional emails and reports in English is a key skill for engineers working in global companies.
10.	Effective communication skills in a foreign language will give me an advantage when applying for international engineering jobs.

The survey results suggest that the majority of respondents believe that good communication in English is just as important as technical expertise for a successful engineering career.

Considering statement nr. 1, over 80% of respondents agree that communication skills are as important as technical knowledge. This highlights a broad acknowledgment that language proficiency, especially in English, is crucial in engineering careers, likely for collaboration, documentation, and presentations. Around 12% of them disagree or strongly disagree which might indicate the belief that technical skills outweigh communication abilities or that engineers can succeed with minimal communication skills. A few respondents (7%) are neutral, possibly signifying that they see communication skills as important but not equally critical as technical expertise.

In connection with statement nr. 2, the overwhelming disagreement (89%) shows that most students acknowledge the importance of English communication skills in engineering. 11% of the participants agree with the statement, suggesting that they believe that technical skills alone are sufficient for success in engineering roles.

The answers associated with statement nr. 3 show that most respondents (53%) believe that better articulation in English correlates with improved problem-

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solving. Nearly a quarter of the respondents (23 %) are unsure, indicating the fact that they see potential benefits but are not convinced that language skills directly impact problem-solving ability. However, 24% of them disagree or strongly disagree, suggesting they view technical problem-solving as largely independent of language proficiency, since it depends more on mathematical and analytical abilities than on verbal communication.

Regarding statement nr. 4, the majority of the respondents (77%) believe that communication skills are essential for success in engineering, beyond just technical expertise. A smaller group (16%) is unsure or indifferent/ neutral, possibly recognizing some value in communication skills but not prioritizing them. They may require greater awareness of how communication skills influence their career growth. Only 7% of the respondents believe that technical skills alone are sufficient for success in engineering because they underestimate the importance of communication or may have encountered situations where technical expertise seemed enough.

In relation to statement nr. 5, a significant majority (67% strongly disagree & disagree) believe that communication skills are crucial in engineering. This shows recognition that engineers need more than just technical expertise to succeed. 16% of the respondents are uncertain or consider that the importance of communication skills might depend on the specific engineering role. 7% of the students think that technical skills alone are sufficient. This might suggest they work in roles with minimal collaboration or external communication needs. Alternatively, they may underestimate the value of soft skills such as teamwork and effective communication in career growth.

The results associated with statement nr. 6 reveal that 53% of the respondents who strongly disagree or disagree believe that engineers should improve their own English communication skills rather than relying on translators or software. 28% of them are undecided or neutral; whereas, 19% agree or strongly agree think that translation tools or human translators are sufficient, possibly due to advancements in technology or their field-specific requirements.

Considering statement nr. 7, 77% of respondents, representing a strong majority, expressed confidence in explaining their engineering projects in English. This indicates that communication skills in English are generally strong among participants. A small portion of respondents (14%) are unsure about their confidence which implies occasional difficulties in articulating their projects. 9% of our engineering students struggle with explaining their projects in English, which could be due to language barriers, lack of technical vocabulary, or low confidence in communication.

In reference to statement nr. 8, 79% of the participants agree/strongly agree that structured technical writing helps improve clarity and precision in formal technical documents. Only 11% are unsure. This could indicate a lack of confidence, experience, or understanding of its benefits. A minority (10 % strongly disagree/ disagree) suggests uncertainty, which could stem from insufficient exposure or confidence in their technical writing skills, lack of proper training, or alternative

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perspectives on communication. The overall response is positive, but targeted interventions such as training sessions or workshops demonstrating real-world examples of structured vs. unstructured technical writing or hands-on practice can help address scepticism and uncertainty, ensuring that everyone benefits from structured technical writing.

As for statement nr. 9, the vast majority of respondents (91%) agree or strongly agree, suggesting that they recognize English proficiency in professional writing as crucial for communication, collaboration, and career advancement in global companies. A very small percentage (2%) remained neutral, possibly indicating uncertainty or a belief that while English is important, it may not be absolutely essential in every engineering role. Those who strongly disagree (7%) may work in environments where they only use Romanian in communication or feel that technical skills outweigh the need for proficient writing in English.

In connection with the last statement nr.10, 91% of the participants are in favour of the idea that effective communication skills in a foreign language provide an advantage in international engineering job applications. This indicates that most of our engineering undergraduates recognize the importance of foreign language proficiency in securing international engineering roles. A small percentage (7%) strongly disagrees. Possible reasons for this could include: the belief that technical skills outweigh language skills or preference for localized job markets where foreign language skills are less relevant. Very few respondents (2%) are undecided, suggesting that most have a clear opinion on the topic.

Engineering students generally acknowledge that collaboration, teamwork, and strong communication skills are essential for problem-solving, leadership, and successful project execution. However, the negative or neutral responses suggest that for some respondents more awareness may be needed about how communication affects career success.

6. Conclusion

The study confirms that our second-year students have demonstrated a high level of awareness regarding the status of foreign language proficiency as a competitive advantage in international engineering careers. Though positive attitudes dominate, negative attitudes should not be overlooked. Our engineering students seem to have a fairly objective perspective on the language learning strategies that are effective in enhancing both their skills and knowledge in professional communication.

Developing good communication skills in technical writing for 2nd-year engineering undergraduates can be regarded as a complex challenge influenced by language proficiency, technical complexity and motivation. Addressing these issues requires an integrated approach that combines language learning with technical education, provides structured support, and underscores the relevance of writing skills in a professional context. Future research could explore long-term interventions and their impact on academic outcomes.

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References

1. ABET. 2017. Criteria for Accrediting Engineering Programs, 2018-2019. Retrieved from https://www.abet.org/wp-content/uploads/2018/02/E001-18-19-EAC-Criteria-11-29-17.pdf
2. Arnó-Macià, Elisabet. 2012. "The Role of Technology in Teaching Languages for Specific Purposes Courses." *The Modern Language Journal*.96: 89-104.
3. Basturkmen, Helen. 2010. *Developing Courses in English for Specific Purposes*. Basingstoke: Palgrave Macmillan.
4. Bell, Maureen. 2002. *Peer Observation of Teaching in Australia*. York: LTSN Generic Centre.
5. Cernicova- Bucă, Mariana. 2020. "Communication and Linguistic Competences for Middle Management: A Content Analysis of Job Advertisements Scientific." Bulletin of the Politehnica University of Timişoara, Transactions on Modern Languages, Vol. 19, Issue 1 / 2020: 5- 22.
6. Dudley-Evans, Tony and Johns, Ann. 1991. "English for Specific Purposes: International in Scope, Specific in Purpose." TESOL Quarterly 25/2: 297- 314.
7. Dudley-Evans, Tony and St John Maggie Jo. 1998. *Developments in ESP. A Multi-Disciplinary Approach*. Cambridge: Cambridge University Press.
8. Hutchinson, Tom and Waters, Alan. 1987. *English for Specific Purposes: A Learner-Centred Approach*. Cambridge: Cambridge University Press.
9. Kern, Nergiz. 2013. "Technology-Integrated English for Specific Purposes Lessons: Real-Life Language, Tasks, and Tools for Professionals." Innovations in Learning Technologies for English Language Teaching, edited by Gary Motteram. 111-118. London: British Council.
10. Knowles, Malcom. 1980. *The Modern Practice of Adult Education: From Pedagogy to Andragogy.* New York: Cambridge Adult Education Company.
11. Laplante, Phillip. 2019. *Technical Writing: A Practical Guide for Engineers, Scientists, and Nontechnical Professionals*. Boca Raton: CRC Press, Taylor & Francis Group.
12. Murali, Venkatesh, Krishna Chaitanya Emani, and Sucharan Reddy. 2025. "Building Bridges: Enhancing Engineering Students' English Skills for Global Success." International Journal of Research in English 6 (2): 498- 504.
13. Ramirez, Lori Langer. 2010. *Empower English Language Learners with Tools from the Web*. London: Corwin.
14. Rees, Charlotte and Sheard, Charlotte. 2002. "The Development of a Scale to Measure Medical Students' Attitudes towards Communication Skills Learning: the Communication Skills Attitude Scale (CSAS)." Medical Education, 36(2), 141-147.
15. Riemer, Marc. 2007. "Communication Skills for the 21st Century Engineer." Global Journal of Engineering Education. 11(1): 89-100.
16. Schulz, Bernd. 2008. "The Importance of Soft Skills: Education Beyond Academic Knowledge." Journal of Language and Communication 2 (1): 145-154.
17. Smith, Ann and Strong, Gregory. 2009. *Adult Learners: Context and Innovation*. Alexandria, Virginia: TESOL Publications.

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