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Developing Workplace Communication Skills Through Technical English Education

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Abstract

The development of effective workplace communication skills has become an important requirement for engineering and technical professionals, as technical knowledge alone may not ensure successful professional performance. This review examines the role of Technical English education in developing communication competencies required in contemporary workplaces. It focuses on workplace communication requirements, including technical writing, professional emails, reports, presentations, meetings, technical vocabulary and audience awareness. The review further examines how English for Specific Purposes (ESP), technical writing instruction, speaking activities and integrated language-skill development can connect classroom learning with professional communication requirements. Workplace-oriented approaches, including authentic learning, project- and problem-based learning, and workplace-integrated learning, are also considered in relation to employability and professional readiness. The reviewed studies indicate that authentic technical tasks, discipline-specific language instruction, collaborative learning and practical communication activities can strengthen professional communication, problem-solving, teamwork and self-directed learning. The review highlights the importance of aligning Technical English curricula with actual workplace communication practices to better prepare technical graduates for employment and professional environments.

Keywords: Technical English, Workplace Communication, English for Specific Purposes, Professional Communication, Employability

INTRODUCTION

English has become an increasingly important medium of professional and technical communication as engineering workplaces become more globally connected and require professionals to exchange information across organisations, disciplines and geographical boundaries. Recent research on engineering workplaces shows that English is used regularly by engineers, with writing emerging as a particularly frequent skill and English serving important informative and transactional functions in professional activities [1]. Consequently, engineers and other technical professionals require communication abilities that extend beyond general English proficiency. They need to understand and produce discipline-specific information, explain technical processes, participate in meetings and discussions, prepare reports and professional emails, and communicate technical ideas clearly to different audiences [2]. Technical English, closely associated with English for Specific Purposes (ESP), responds to these requirements by providing field-specific terminology, professional genres, language functions and communication practices relevant to particular occupational contexts. Research on engineering English has similarly emphasised the importance of aligning language instruction with the actual communicative tasks encountered in professional settings [3], [4].

Workplace communication therefore encompasses both written and oral skills, including technical documentation, reports, emails, presentations, meetings, explanations and professional interactions. These competencies are increasingly connected with workplace readiness and employability because technical knowledge alone may not enable graduates to perform effectively in collaborative and professional environments [5].

Studies involving engineering students have identified communication competence as an important dimension of employability and workplace preparedness. However, a continuing concern is that university English courses may not always correspond closely with the language demands and socio-contextual complexities of actual workplaces. Research on the transition from university to employment indicates that classroom-based preparation can be insufficient when learners encounter authentic workplace communication practices. Against this background, the present review examines how Technical English education can be designed and implemented to develop the workplace communication skills required by technical professionals.

Workplace Communication Requirements and the Role of Technical English

Technical professionals use English across a wide range of workplace situations, requiring them to communicate technical information accurately, efficiently and appropriately for different purposes and audiences. Research on engineering workplaces shows that English is frequently used for both written and oral communication, while workplace studies identify emails, reports, meetings, teleconferences and presentations as common professional activities. Therefore, Technical English needs to address not only general language proficiency but also the specific genres, terminology and communication practices of technical professions [6].

Written Workplace Communication

Written communication is a major component of technical work and includes technical reports, professional emails, project or progress reports, proposals, instructions, manuals, and maintenance documentation. Engineering studies identify emails and reports among the important workplace genres, while technical writing research emphasises that such documents have specialised objectives and audiences and therefore require appropriate organisation, clarity and technical accuracy. Technical English education should consequently develop the ability to present technical information logically, concisely and in a form appropriate to its professional purpose.

1. Oral and Interpersonal Communication

Technical professionals also require effective technical presentations, meetings and discussions, explanations of technical information, teamwork, and communication with colleagues, clients and non-technical personnel. Workplace research reports meetings and presentations as common English communication events, while industry-based studies emphasise communication for presenting ideas, networking and professional interaction. Presentation-based learning can also strengthen speaking alongside reading, listening and writing skills among engineering students.

Technical Vocabulary and Professional Genres

Technical English differs from General English through its emphasis on discipline-specific terminology, precise and concise language, technical descriptions, professional tone and audience awareness. Technical communication research shows that professional genres reflect the practices and expectations of particular communities, while engineering research demonstrates variation in communication across technical disciplines. Thus, Technical English should prepare learners to select terminology and language appropriate to both the technical subject and intended audience.

Table 1: Key Workplace Communication Requirements and the Role of Technical English

Communication Area	Major Requirements	Role of Technical English
Written Communication	Reports, emails, proposals, manuals, technical and project documentation	Develops clear, precise and professionally structured writing
Oral & Interpersonal Communication	Presentations, meetings, discussions, teamwork and client interaction	Improves technical explanation, speaking confidence and professional interaction
Technical Vocabulary	Discipline-specific terminology and workplace expressions	Builds accurate use of engineering and occupational vocabulary
Professional Genres	Technical descriptions, instructions and workplace documents	Develops awareness of professional format, tone and communication conventions
Audience Awareness	Communication with engineers, managers, clients and non-technical personnel	Helps adapt technical information to different audiences and purposes

Technical English Education for Developing Professional Communication Skills

Technical English education can be structured around the actual linguistic and communicative requirements of a particular engineering or technical discipline. English for Specific Purposes (ESP) supports this approach by

incorporating discipline-specific vocabulary, workplace terminology, professional situations and needs-based curriculum design rather than relying only on general English. Research on engineering ESP indicates that courses should connect classroom learning with authentic professional tasks and address the language requirements identified by students, teachers and industry professionals [7].

An important component of this education is the development of technical writing skills, including report writing, professional emails, technical descriptions, project documentation, proposals and summarising technical information. Research shows that engineering workplaces require writing for reports, emails, project documents, maintenance records and other technical genres, indicating the value of teaching the structure, language and conventions of authentic professional documents. Technical English education should also strengthen speaking and presentation skills through technical presentations, group discussions, meetings, explanations of engineering concepts and question-and-answer activities. Such activities provide opportunities to develop clarity, confidence, audience awareness and professional interaction. Recent ESP research similarly recommends authentic materials, task-based activities and simulations for engineering-specific oral communication [8].

Rather than teaching reading, writing, speaking and listening as isolated abilities, Technical English can integrate the four language skills through interconnected technical tasks. For example, students may read a technical manual, discuss its procedures, prepare a written report and present the findings to a group. Workplace research confirms that engineers commonly use several language skills together while completing reports, documentation, meetings and other professional tasks. Such integrated and authentic activities can therefore make Technical English education more closely connected with practical professional communication [9].

Workplace-Oriented Teaching Approaches and Employability Outcomes

Technical English education becomes more effective when classroom learning reflects the communication practices, tasks and expectations that students are likely to encounter in professional environments. Research in engineering education suggests that workplace-oriented approaches can connect language learning with technical knowledge, teamwork, problem-solving and professional communication. Such approaches also help reduce the gap between classroom-based English learning and the practical competencies required for employment.

1. **Authentic and workplace-oriented learning:** Authentic materials such as technical reports, professional emails, manuals, workplace cases and project documents can expose learners to the language conventions used in real professional contexts. Using realistic communication tasks helps students understand how technical information is communicated according to purpose and audience.

2. **Project-based and problem-based learning:** Project- and problem-based activities require students to use English while solving technical problems, gathering information, preparing reports and presenting solutions. Research with engineering students indicates that these approaches can support both oral and written communication while integrating professional and technical knowledge.

3. **Workplace-integrated learning:** Internships, industrial placements and other work-integrated learning activities provide opportunities to experience authentic workplace communication. Students can identify their communication needs, interact with professionals and develop practical language skills through actual workplace participation.

4. **Employability and professional readiness:** Effective Technical English instruction can contribute to communication, interpersonal, analytical and teamwork competencies that support graduate employability. Research involving engineering students has found that work-integrated learning is associated with the development of several employability competencies, including communication and interpersonal skills.

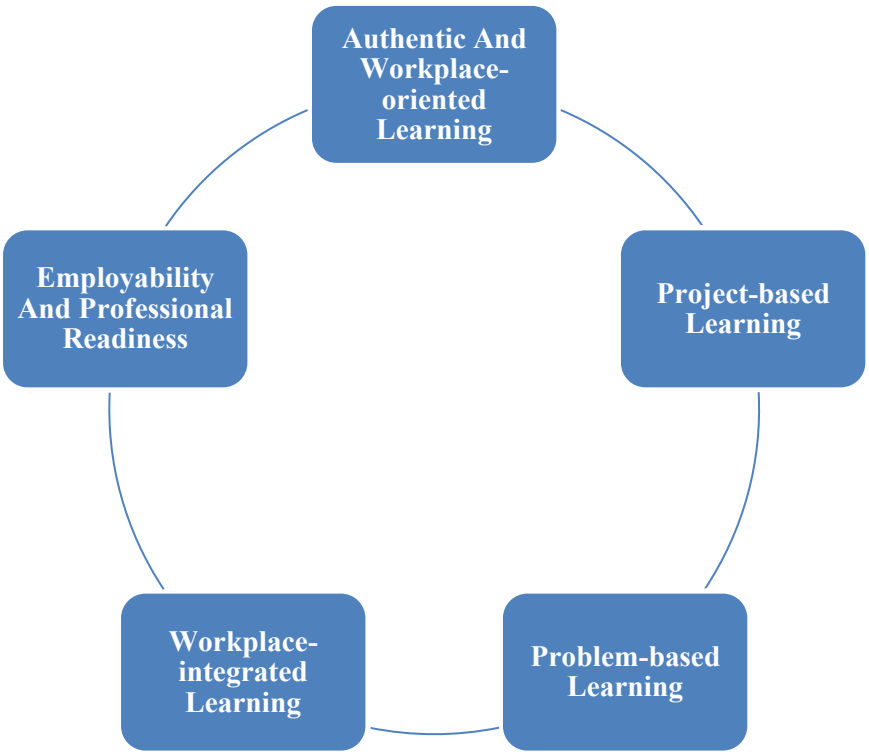

Figure 1: Workplace-Oriented Teaching Approaches

LITERATURE REVIEW

D. (2021) [10] highlighted that communication and soft skills have become essential prerequisites for employment and campus placements in the present-day professional environment. The study emphasised that English language proficiency, including fluency, vocabulary and effective oral and written narration, plays an important role in academic and career advancement. For engineering students, Professional Communication and Communication Skills courses are generally offered by Humanities and Social Sciences departments to develop communication competencies alongside technical expertise. Although engineering students primarily concentrate on developing their technical knowledge, the importance of improving communication skills for employability and placement opportunities is increasingly recognised. The study observed that despite Indian students receiving approximately twelve years of English education before entering higher education, recruitment organisations often find that students struggle to articulate their ideas appropriately. The study therefore identified gaps in existing teaching-learning methodologies and explored alternative methods and strategies to strengthen communicative competency, improve employment opportunities and bridge the gap between industry and academia.

Raemdonck et al. (2022) [11] examined employability among teaching staff in the context of increasing pressure on educational institutions to innovate and respond to workforce-related challenges. Using a survey of 3,139 participants from the Netherlands, the study investigated the predictive influence of quantitative and qualitative job demands, job autonomy and self-directed learning orientation on three employability competencies: occupational expertise, personal flexibility, and anticipation and optimisation. The findings showed that self-directed learning orientation was positively associated with all three employability competencies across young, middle-aged and senior employees. Positive relationships were also identified between quantitative job demands and occupational expertise and between qualitative job demands and personal flexibility. Differences were observed across age groups, with self-directed learning having a stronger relationship with personal flexibility and anticipation and optimisation among senior employees, while autonomy was more important for occupational expertise among younger employees. The study emphasised self-directed learning and customised workplaces as important for sustainable employability.

Jasti and Pavani (2021) [12] investigated Problem-Based Learning (PBL) as a teaching-learning methodology for

developing professional English communication skills among engineering students. The study was conducted with third-year Electronics and Communication Engineering students at Vidya Jyothi Institute of Technology. The experimental and non-experimental groups each consisted of 64 students enrolled in the Personality Development and Behavioural Skills course. Students in the experimental group were taught through PBL, while the comparison group followed the conventional approach. Data were collected through questionnaires to examine students' experiences and outcomes. The study found that students were aware of the PBL methodology and responded positively to learning through this approach. The findings indicated that PBL contributed to the development of professional communication skills, critical thinking, problem-solving, collaboration, self-directed learning and the effective presentation of ideas. The authors concluded that PBL can effectively support English communication development while simultaneously strengthening content knowledge and other professional competencies.

Suhaili et al. (2025) [13] examined the importance of Workplace English Communication skills for the work performance of TVET graduates in Sarawak. The study recognised the growing importance of English as an international business language in both native and non-native English-speaking contexts. Data were collected from employees of several companies through three methods: semi-structured interviews, observation and reflective notes. Four employers were interviewed, while six employees were observed during the study. The findings indicated that the importance of Workplace English Communication skills had remained significant in professional environments. Participants emphasised that English proficiency contributes to presenting a positive image of an organisation and can improve graduates' employment opportunities when entering the labour market. The study further found that effective Workplace English Communication can contribute to work excellence. Participants also stressed the importance of flexibility and agility in using English according to different situations and levels of formality. Speaking was identified by most participants as the most essential workplace communication skill.

(Vyshnevska et al., 2020) [14] An integrated approach to studying a foreign language in non-linguistic universities is required by today's rapidly evolving knowledge society. Teaching a foreign language for particular domains necessitates a novel syllabus approach designed to boost students' motivation to learn and advance both language proficiency and business communication abilities in order to satisfy modern criteria. The article discusses several interdisciplinary approach difficulties, outlines the basic principles of its application, and focuses on real program examples that use interdisciplinary linkages of ESP and profile disciplines in various higher education domains.

(Khabirova, 2025) [15] This study is part of the English for Special Subjects (ESP) syllabus for students studying computer and electrical engineering. Developing professional communication abilities, such as understanding technical vocabulary and oral presentation, is the goal of the research done with second-year students at Ajou University in Tashkent. By examining real-world situations like website usability comparisons and problem-solving exercises, the case study method promotes critical thinking and teamwork. Despite obstacles such a lack of technical vocabulary and presentation anxiety, survey findings demonstrated notable gains in students' English ability and engagement levels. The study demonstrates how case studies may effectively prepare students for real-world professional environments by bridging the gap between academic understanding and practical application.

CONCLUSION

Technical English education plays an important role in preparing engineering and technical students for the communication demands of contemporary workplaces. The review indicates that workplace communication extends beyond general English proficiency and requires discipline-specific vocabulary, technical writing, professional genres, presentations, meetings, teamwork and communication with both technical and non-technical audiences. English for Specific Purposes provides a useful framework for addressing these requirements by connecting language instruction with specific professional contexts and workplace tasks. The reviewed studies further indicate that technical writing, oral communication and integrated language activities can strengthen students' ability to communicate technical information clearly and appropriately. Workplace-oriented approaches, including authentic learning materials, project- and problem-based learning, and workplace-integrated learning, can further connect classroom instruction with professional practice. These approaches also support broader competencies such as collaboration, problem-solving, critical thinking and self-directed learning. Therefore, Technical English curricula should be designed around authentic professional communication requirements and should provide students

with opportunities to practise language through realistic technical and workplace situations.

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