THE ROLE OF ARTIFICIAL INTELLIGENCE IN DEVELOPING PROFESSIONAL COMMUNICATION COMPETENCE IN ESP

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Annotation. This thesis examines the role of artificial intelligence (AI) in developing professional communication competence among students studying English for Specific Purposes (ESP). It explores how AI-powered tools can support the development of speaking, writing, vocabulary, and interactional skills required in professional environments. Particular attention is paid to personalized learning, simulated professional communication, and immediate feedback. The thesis also considers the challenges associated with AI integration, including the reliability of generated information, overdependence on technology, and academic integrity. It argues that the effective use of AI, combined with teacher guidance and learner autonomy, can contribute to preparing students for professional communication in English.

Keywords: artificial intelligence, English for Specific Purposes (ESP), professional communication competence, language learning, digital technologies, personalized learning, AI-assisted learning, higher education.

In the modern world, English has become an essential tool for international professional communication. Specialists in business, medicine, engineering, information technology, and other fields need not only general English proficiency but also the ability to communicate effectively in professional situations. These requirements make English for Specific Purposes (ESP) an important component of higher education. The development of professional communication competence involves the ability to use appropriate terminology, write professional documents,

participate in meetings, deliver presentations, negotiate, and communicate with colleagues and clients. Traditional teaching methods provide a foundation for these skills; however, students also need opportunities to practise realistic professional situations and receive timely feedback.

Artificial intelligence has introduced new opportunities for ESP teaching and learning. AI-powered applications can generate dialogues, explain professional vocabulary, correct grammatical errors, and simulate workplace interactions. Therefore, examining the role of artificial intelligence in developing professional communication competence is particularly relevant to contemporary language education. The aim of this thesis is to identify how artificial intelligence can support the development of professional communication competence in ESP and to determine the pedagogical conditions necessary for its effective application.

English for Specific Purposes differs from general English because its content is determined by learners' academic, professional, and occupational needs. According to Hutchinson and Waters (1987), ESP is a learning-centred approach that considers learners' specific purposes for studying a language. Consequently, ESP instruction should focus on communication tasks that reflect the actual demands of students' future professions. Professional communication competence includes several interconnected components: linguistic competence, discourse competence, sociolinguistic competence, and strategic competence. Linguistic competence involves accurate grammar and appropriate vocabulary. Discourse competence concerns the ability to organize ideas logically, while sociolinguistic competence involves selecting language appropriate to a particular professional context. Strategic competence enables speakers to clarify meaning, overcome communication difficulties, and maintain interaction.

Artificial intelligence can support the development of these components through interactive and individualized learning activities. For example, conversational AI tools

can simulate job interviews, business meetings, academic discussions, and client consultations. Students can practise responding to professional questions, asking for clarification, expressing opinions, and explaining complex information in English. Such activities create additional opportunities for language practice outside the classroom. One significant advantage of AI-assisted ESP learning is personalized feedback. AI tools can identify grammatical errors, suggest more appropriate vocabulary, and offer alternative ways to express ideas. Students can also request explanations of their mistakes and practise revised versions of their responses. This process encourages self-correction and helps learners become more aware of their linguistic strengths and weaknesses. Artificial intelligence can also contribute to the development of professional writing skills. In ESP courses, students frequently need to prepare emails, reports, summaries, presentations, and formal requests. AI applications can help learners improve the organization, clarity, tone, and grammatical accuracy of these texts. For instance, students can compare an informal email with a professionally appropriate version and analyse the differences in register, vocabulary, and structure. However, students should evaluate AI-generated suggestions critically rather than accept every correction without consideration. Another important application of AI is the creation of profession-specific learning materials. A teacher can use AI tools to prepare terminology exercises, role-play scenarios, reading comprehension tasks, and case studies relevant to students' specializations. Engineering students, for example, may practise explaining technical procedures, whereas business students may simulate negotiations or prepare presentations about market trends. Such activities connect language learning with practical professional requirements. Research on AI dialogue systems in foreign language education also highlights their potential to support interactional competence. Zhai and Wibowo (2023) emphasize the importance of meaningful interaction and task design in AI-assisted language learning. Their review suggests that AI-based dialogue practice can provide useful learning opportunities,

although the development of complex communication abilities requires further attention. Despite these advantages, the integration of AI into ESP instruction presents several challenges. First, AI-generated information may contain inaccurate terminology, inappropriate expressions, or misleading explanations. Second, excessive dependence on AI may reduce learners' independent thinking and their ability to communicate spontaneously. Third, professional communication requires empathy, cultural awareness, ethical judgement, and an understanding of context, which cannot be fully developed through automated feedback alone.

UNESCO (2023) emphasizes the importance of human-centred, ethical, and responsible approaches to generative AI in education. Accordingly, AI should function as a supplementary learning resource rather than a replacement for teachers. Teachers remain responsible for selecting appropriate activities, checking the accuracy of learning materials, monitoring progress, and helping students develop independent communication skills. For effective implementation, ESP teachers should integrate AI into clearly defined learning objectives. Students may first complete a professional communication task independently, then use AI to receive feedback, revise their responses, and explain the changes they have made. Finally, teachers can assess students through presentations, role-plays, discussions, or other tasks that require independent performance. This approach combines technological support with authentic assessment and teacher supervision.

Artificial intelligence offers valuable opportunities for developing professional communication competence in English for Specific Purposes. It can provide personalized feedback, facilitate professional dialogue simulations, support the acquisition of specialized vocabulary, and improve written communication. These applications can make ESP learning more flexible, interactive, and closely connected to students' future professional needs. Nevertheless, the effectiveness of AI-assisted learning depends on its pedagogically appropriate use. Accuracy, academic integrity,

learner autonomy, and human interaction must remain central considerations. AI should complement teachers' expertise and create additional opportunities for meaningful language practice. When integrated systematically into ESP instruction, artificial intelligence can contribute to preparing students for the linguistic and communicative demands of the modern professional environment.

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