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ESP IN CONTEXT: A SYSTEMATIC REVIEW OF PRACTICES, CHALLENGES AND INNOVATIONS IN A MIDDLE-INCOME COUNTRY

Abstract

English for Specific Purposes (ESP) is an important component in educational systems worldwide, particularly in middle-income countries (MICs) such as Indonesia, where globalisation and internationalisation have driven the demand for English proficiency. This systematic literature review synthesises existing research on ESP practices within the Indonesian context to identify key trends, gaps, and challenges in current practices and inform future curriculum development and policy directions. Sixty studies, screened against predefined inclusion criteria, were analysed to address the overarching question of how ESP is conceptualised and implemented in Indonesia. The synthesis identified three themes concerning students' language and communication needs across professional fields, the challenges and strategies involved in ESP teaching, and the use of innovations such as technology and alternative pedagogical approaches. Overall, the review synthesises current trends, challenges, and practices in ESP education, while offering insights transferable to other MICs with similar socioeconomic conditions. The findings provide implications for researchers, educators, and policymakers seeking to enhance ESP provision in comparable contexts.

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Key words

English for specific purposes, higher education, systematic literature review, middle-income country, Indonesia.

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1. INTRODUCTION

English for Specific Purposes (ESP) courses are designed to help individuals develop general language proficiency alongside the specific vocabulary and communication skills necessary for participation in their fields. ESP has been defined as “the teaching and learning of English as a second or foreign language where the goal of the learners is to use English in a particular domain” (Paltridge & Starfield, 2013, p. 2). ESP courses are distinguished by materials and objectives aligned with students’ specific needs and equip them with communication skills for academic and professional contexts (Dudley-Evans & St John, 1998; Hyland, 2017; Paltridge & Starfield, 2013). According to Basturkmen (2021), ESP studies have centred on linguistic exploration to offer insights into academic, professional, or workplace English. In conjunction with this, ESP programs have been developed for fields such as law, medicine, and engineering to support professional communication.

Over the past five decades, ESP has been the subject of extensive scholarly investigation, documented in books, chapters, and journals that analyse and report on key advancements in the field (see Basturkmen, 2005, 2019; Belcher, 2009; Belcher et al., 2011; Dudley-Evans & St John, 1998; Hutchinson & Waters, 1987; Hyland, 2022; Paltridge, 2016; Paltridge & Starfield, 2013). More recently, ESP scholars have highlighted the need to broaden discussions of challenges and implementation of ESP in a range of contexts, including middle-income countries (MICs) (Basturkmen, 2021).

MICs have become areas of interest for researchers examining English language practices (e.g., Linn et al., 2021; Simpson, 2019). The World Bank classifies MICs based on size, population, and income level (World Bank, 2024b). MICs include lower middle-income economies, with a gross national income (GNI) per capita of \$1,086 to \$4,255, and upper middle-income economies, with a GNI per capita of \$4,256 to \$13,205 (World Bank, 2024a). MICs in Asia include India, Thailand, and Indonesia. In Africa, countries such as South Africa and Morocco hold the MIC classification, while in the Middle East, countries such as Iraq and Iran align with this categorisation. Similarly, Latin America has several MICs, including Mexico, Brazil, and Chile, and MICs in Europe include Albania, Romania, and Ukraine (World Bank, 2024b).

The rapid growth and development of MICs over the past few decades have led to an increased demand for English language proficiency as an important skill for career progression (Al-Tarawneh & Osam, 2019; Hakamada et al., 2023; Roshid & Kankaanranta, 2023; Yu & Liu, 2018). Many employers recognise the importance of strong English skills among their employees, resulting in more job listings that require high levels of English proficiency (Gagalang, 2020; It-ngam et al., 2023). This trend is likely to continue as global interconnectedness grows, requiring ESP programs to adapt to diverse cultural and linguistic contexts. Understanding the resultant global and local communication practices can facilitate effective

communication and academic success across socioeconomic settings (Hyland & Jiang, 2021).

2. UNDERSTANDING THE DYNAMICS OF ESP IMPLEMENTATION IN MICs

Studies of ESP implementation in MICs highlight the importance of needs analysis, the challenges faced, and evolving pedagogical approaches. For example, Ranasuriya and Herath (2020) conducted a mixed-methods study in Sri Lanka, revealing a significant demand for English-speaking skills in the mechatronics industry, particularly for job interviews and workplace communication. Similarly, Çal et al. (2022) highlighted the necessity of global English proficiency, career development, and technical exchanges for Turkish engineers, advocating for closer collaboration between universities and industry partners for curriculum enhancement.

ESP implementation has been extensively documented as facing challenges. Petraki and Khat (2022) examined the difficulties faced in designing an ESP course at a university in Cambodia, including limited resources, diverse student backgrounds, and the need to align with industry demands. Similarly, ESP teachers encounter difficulties, including limited technological resources and low student motivation in North Macedonia and Romania, as found by Kamberi et al. (2020). These findings underscore the need to tailor ESP courses to meet students' individual language learning needs and backgrounds. They highlight the importance of addressing diverse linguistic, teaching, and environmental challenges to enhance ESP training outcomes for success in professional contexts.

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Research on pedagogical innovations in ESP has identified strategies for improving language learning in specialised domains. Banegas (2018) conducted action research to explore the impact of integrating CLIL into ESP courses at a university in Argentina, revealing enhanced language awareness and comprehension skills among student-teachers. This study demonstrates the potential of integrating content and language instruction to foster content and language learning in ESP contexts (Banegas, 2018). Moreover, Safdar et al. (2021) investigated the use of MOOCs in ESP pedagogy offering valuable insights into online learning environments for Pakistani students. These studies demonstrate the role of technology in supporting student engagement and outcomes in digital learning environments.

The ESP scenario in Indonesia mirrors the interconnection between the worldwide demand for specialised English language skills and the inherent challenges of a developing economy. In the last 50 years, Indonesia has experienced robust economic expansion and significant reductions in extreme poverty, leading to middle-income status (World Bank, 2019). Raising aspirations for Indonesians to enter the middle class requires more students to complete secondary and tertiary education equipped with job-relevant skills (World Bank, 2019). Skills for the labour

market in Indonesia include basic skills (math and literacy), thinking skills, behavioural skills, computer skills, and English skills (di Gropello et al., 2011; World Bank, 2019). English skills require both written and oral communication for real-world application (Fudiyartanto, 2024).

Examining ESP initiatives' strategies, challenges, and effectiveness is essential within this context to comprehend their complexities and potential impact on educational development for MICs. Indonesia's journey to enhance practices in ESP mirrors the broader challenges and possibilities faced by MICs seeking to integrate specialised English language education into their socioeconomic structures. By synthesising existing research, this systematic review provides a comprehensive understanding of the current status, gaps, and potential directions for ESP development in Indonesia. This study was guided by the following research questions:

- (1) What are the key characteristics of ESP studies conducted in Indonesia?
- (2) What are the identified needs of students participating in ESP programs in Indonesia?
- (3) How can the identification of gaps in the implementation of ESP programs in Indonesian higher educational settings inform policy and practice to improve ESP delivery and outcomes?

These research questions structured the review and directed analysis towards a broader understanding of the current state of ESP in Indonesia. Addressing these questions contributes to the discourse on specialised language education and provides valuable insights to policymakers and teachers in Indonesia and abroad. To address the issues in ESP courses, this systematic literature review aims to offer evidence-based insights into the efficacy and relevance of ESP education within a specific socioeconomic context of MICs with implications for ESP theory and practice nationally and internationally.

3. METHODOLOGY

3.1. Systematic review process

The systematic identification of relevant literature is crucial to ensure the thoroughness and rigour of this literature review. Searches were conducted in Web of Science, Scopus and ERIC (ProQuest), and the national Garuda database, which provides coverage of Indonesian scholarship. The articles included were scholarly works indexed in SINTA 1 and SINTA 2. The Indonesian Science and Technology Index, SINTA, is a repository of high-quality research articles, ensuring a comprehensive and rigorous literature examination within the specified criteria. This approach allowed us to present a comprehensive and relevant perspective on our research topic, potentially covering areas not fully addressed by global databases.

The search was refined using Boolean operators (AND, OR, and NOT). Further, variations of keywords such as “English for specific purposes” and the acronym “ESP” were used to identify appropriate titles following the scope of the systematic literature review. Following retrieval, relevant information was systematically extracted from selected articles, including publication details, study objectives, research methods, key findings, and implications. The review’s main focus was on peer-reviewed articles, a criterion used to gauge each publication’s scientific quality and credibility.

3.2. Selection criteria

A standardised form ensured consistency across diverse sources. In the initial phase of searching electronic databases, we defined the parameters for our literature review, setting specific criteria such as restricting the time frame to 2015-2023. The period was selected to capture educational and policy developments linked to the Indonesian Qualification Framework (*Kerangka Kualifikasi Nasional Indonesia/KKNI*) fully implemented during these years. KKNI emphasises the need for English language skills to align with workforce competencies. This framework, together with the *Kurikulum 2013* for elementary to high school levels (later replaced by *Kurikulum Merdeka* in 2022) underlines the growing demand for English skills driven by globalisation and economic growth, further drawing attention to the significance of this period for educational advancements in Indonesia.

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We focused on articles in English to maintain methodological consistency and to draw on literature presented in international ESP contexts. This approach aligns with the review’s aim to map how ESP is conceptualised and discussed in globally accessible academic literature, particularly in middle-income country contexts such as Indonesia. Moreover, our emphasis was on ESP within the higher education landscape of Indonesia, providing a targeted exploration of this academic domain. Additionally, we prioritised studies investigating the students’ various perspective on implementing ESP and on how students experience and engage with ESP methodologies. Following these criteria (see Table 1), the synthesis provides a perspective on ESP in higher education from multiple dimensions.

• published in peer-reviewed academic journals
• written in English
• published between 2015 and 2023
• primarily focus on ESP students
• include research with clear methodological approaches such as qualitative, quantitative and mixed-methods
• explicitly address topics related to the implementation of ESP within Indonesia

Table 1. Criteria for article selection

3.3. Analysis

After screening, a final set of 60 articles meeting the inclusion criteria was identified for detailed analysis. In the analytical part of the systematic literature review on ESP in the Indonesian context, we used thematic analysis to understand the existing literature. Thematic analysis is used to identify, analyse, and report themes within datasets (Braun & Clarke, 2006). The details and number of papers identified, screened, and included in the review are presented in the PRISMA flow diagram (Figure 1). The first step was data familiarisation, involving repeated reading of the literature to ensure understanding and to identify recurring ideas, concepts, or topics within the literature.

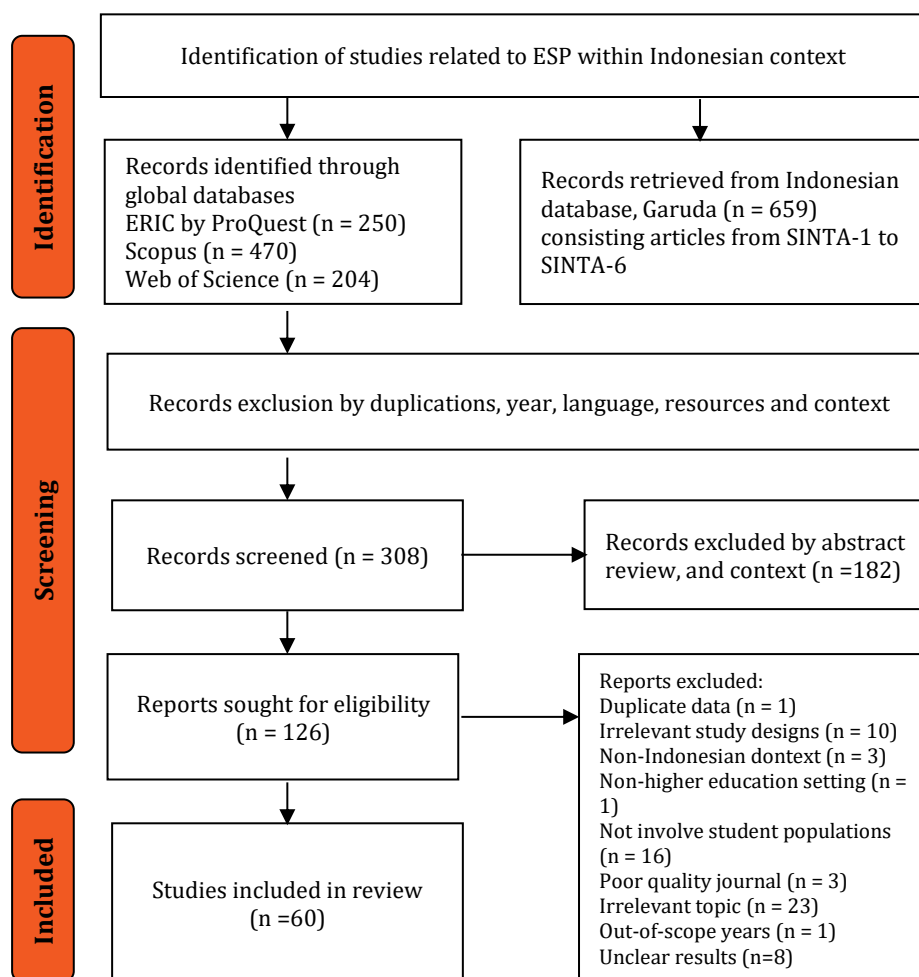


Figure 1. Article search and selection procedure using the PRISMA flow diagram (adapted from Page et al., 2021)

Once familiarised with the data, we began the process of coding to identify and label relevant information according to thematic categories or codes. This analysis involved grouping articles according to their primary focus, such as needs analysis, challenges and perspectives in ESP, ESP teaching and learning strategies, and ESP instruction and technology integration. After coding the data, we developed the theme by organising the coded data into overarching themes or patterns. Themes were generated through iterative analysis, where researchers identified similarities and differences among the codes and grouped them based on their relevance to the research questions.

Themes were then interpreted and reported to show how patterns across studies relate to the research questions and reflect common issues in the literature. The analysis followed the steps of thematic analysis (Braun & Clarke, 2006) and applied criteria for clarity and consistency in reporting (Nowell et al., 2017).

4. FINDINGS

4.1. Study characteristics

Publication years and methodological approaches illustrate how ESP studies in Indonesia have developed over the selected period, with chronological data showing shifts in activity and methodological trends revealing common research approaches. This summary provides background context that supports the interpretation of the themes presented in the next sections.

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Year	Number of Articles
2015	1
2016	0
2017	2
2018	6
2019	7
2020	11
2021	11
2022	10
2023	12
TOTAL	60

Table 2. Chronological overview of ESP studies in Indonesia (2015-2023)

The number of articles published between 2015 and 2023 (Table 2) also suggests responses by researchers to the key education policy initiatives enacted over time by the Indonesian government. This period marks an increased attention to internationalisation in Indonesian higher education and the expanding role of English in various academic and occupational settings (Lauder, 2020). Although only one study was identified for 2015, the number doubled in 2017 and significantly increased to six in 2018. This upward trend continued with seven studies in 2019, peaking at 11 in 2020. The number of publications remained relatively stable in the following years, with 11 studies in 2021, 10 in 2022, and 12 in 2023.

Analysis of ESP research methods in Indonesia highlights diverse approaches, with quantitative methods being the most common ($n = 20$). These studies often analysed numerical data to explore learning difficulties, outcomes, and the effectiveness of interventions (e.g., *Ayuningtyas et al., 2022;¹ *Betaubun, 2021; *Habibi et al., 2022). Longitudinal designs examined the long-term impact of ESP interventions (*Hartono et al., 2023), while pre-experimental and quasi-experimental designs assessed the immediate impacts of instructional interventions on learner outcomes (e.g., *Mulyadi et al., 2021; *Nugroho, 2020). Descriptive studies have also been conducted to provide an overview or profile of specific ESP contexts, students, or instructional practices (e.g., *Muhammad, 2020).

On the other hand, qualitative methodologies were employed in 21 studies to explore the experiences, perceptions, and subjective contexts surrounding the practice of ESP in Indonesia (e.g., *Kultsum et al., 2021; *Madkur, 2018; *Rajasa, 2018). In addition, 19 studies adopted mixed-method research designs that combined elements of quantitative and qualitative methodologies to provide a comprehensive understanding of ESP phenomena (e.g., *Adi, 2023; *Arifuddin et al., 2020; *Dewi & Indriani, 2021). This methodological variation reflects the different angles from which researchers have approached ESP, depending on focus and research aims. These characteristics, along with the increase in publications over time, help situate the studies in context and inform the thematic discussion that follows.

4.2. The key themes of ESP research

The review identified three themes from the synthesised findings: students' needs and stakeholder expectations in ESP; challenges, perspectives, and pedagogical strategies; and innovations in enhancing ESP learning. The first theme concerns the appropriateness of teaching adaptations to meet students' language and communication requirements in professional or academic contexts. The second area

¹ The studies marked with an asterisk (*) are those included in this systematic review and listed in the supplementary file (see the Appendix).

of our review focused on challenges, perspectives, and pedagogical strategies for overcoming obstacles in ESP teaching and learning. Lastly, we explored innovations aimed at enhancing ESP learning through technological advancements, interdisciplinary approaches, and learner-centred methodologies to improve ESP instruction's effectiveness and relevance.

4.2.1. Theme 1. Students' needs and stakeholder expectations in ESP

ESP is an important component of English Language Teaching (ELT), particularly when considering students in specialised fields. ESP research emphasises the importance of tailoring instruction to students' multifaceted needs. Consequently, conducting a comprehensive needs analysis remains relevant to ensuring that ESP instruction effectively meets the specific needs of students across a variety of professional fields.

1. Addressing industry-specific language needs. An ESP program allows students to take courses tailored to their language and career requirements. Many scholars have presented various perspectives on this topic. *Bandu et al. (2021) noted that context evaluation is essential to ESP project implementation, especially in higher education institutions. Understanding the nuances of situations allows teachers to develop more effective teaching strategies.

Technical terminology can be challenging for ESP students, but communication strategies tailored to their needs can help address these difficulties. *Aeni et al. (2018) demonstrated the importance of technical terminology and communications strategies tailored to students in the maritime domain. Furthermore, *Araminta and Halimi (2015) underlined the need for authentic materials and intercultural communication skills, particularly for engineering students who need to understand complex engineering vocabulary.

Each academic and professional field has its own distinctive needs. *Basri et al. (2020) focused on the requirements of pharmacy students for medical terminology and regulatory compliance, while *Gusmuliana et al. (2023) proposed integrating religious texts for Islamic university students. The literature also indicates the need for specialised content in other fields, such as preparing law students with legal terminology (*Rumalessin & Farah, 2021), equipping informatics engineering students with technical vocabulary (*Nimasari, 2018), or training healthcare students with the ability to communicate effectively using medical terminology (*Hidayati & Meisani, 2023; *Nurindah et al., 2019; *Sujana et al., 2020). Across professional fields, a needs analysis is crucial in ensuring that students can effectively apply the knowledge acquired in their field of study, enhancing their preparedness for future careers to thrive in the 21st century.

2. Integration of 21st century skills needs. Integrating 21st-century skills into the ESP curriculum aims to equip students for today's dynamic work setting. Studies highlight the integration of skills such as digital literacy, critical thinking, teamwork, and problem-solving into ESP courses (*Alawiah et al., 2022). Stakeholders' input in

developing ESP curriculum design is also critical to ensure that the course remains relevant to students' needs and expectations (*Poedjiastutie & Oliver, 2017). Through such integration, ESP can help ensure that English language skills are practical and relevant to real-world contexts.

To ensure the effectiveness of ESP instruction, it is important to tailor the curriculum by addressing the communication challenges and objectives within each professional domain. For instance, midwifery students may require negotiation training to confidently handle challenging practical situations (*Sujana et al., 2019). Similarly, nursing students may benefit from personalised guidance to improve their communication skills in healthcare (*Pradana et al., 2022). In fields such as hospitality and tourism, grammar and vocabulary specific to the industry are also highlighted (*Widianingtyas et al., 2023). These findings demonstrate the importance of a comprehensive understanding of the cultural and social aspects in different subject areas.

In global industries such as Islamic banking, English proficiency is required to understand financial terminology and conduct international transactions (*Madkur, 2018). Individuals studying economic development also find academic writing and critical analysis skills invaluable for showcasing their academic and professional accomplishments (*Dewi & Indriani, 2021). On the other hand, Communication Science program students need English for their academic success and job opportunities (*Talib et al., 2018). To meet ESP students' diverse academic and professional needs, teachers can implement various strategies tailored to the specific requirements of different professions and academic disciplines.

4.2.2. Theme 2. Challenges, perspectives, and pedagogical strategies

In specialised contexts, learning English presents challenges and opportunities for students and requires focused attention and strategic solutions. As part of this systematic literature review, we examined ESP research from the students' perspective, including the extensive linguistic, psychological, and institutional challenges they face in learning English within their specific fields of study.

1. *The challenges of ESP learning from students' perspectives.* ESP learning extends beyond grammar and vocabulary acquisition. ESP students also face various challenges associated with language diversity, cultural differences, and psychological barriers. Numerous studies conducted in various contexts explore ESP students' challenges. For instance, *Rajasa's (2018) study of EFL students in Indonesia presented the complex challenges of learning ESP. Students face challenges including linguistic complexity, cultural barriers, and limited self-confidence. Languages and cultures intersect, creating significant obstacles. The study highlights the crucial role of teachers, including cultural competence and language skills, in ESP programs.

Similarly, *Wahyuni and Darmansyah (2021) revealed that computer science students struggle with English writing due to outdated resources and limited class

time. This finding underscores the role of up-to-date teaching materials and appropriate teaching support in ESP education. In addition, *Asrifan et al. (2017) surveyed students' perceptions of bilingual English materials available through the educational technology department. This study foregrounds the challenges and benefits of bilingual resources in ESP projects. As well as aiding understanding, bilingualism challenges language integration and skills. It emphasises the need to design language materials to address the specific language needs of students within their chosen fields, ensuring relevance and applicability to real-world contexts (*Dewi et al., 2023; *Nuraeningsih, 2019; *Sofa & Dewi, 2020).

In addition to linguistic and cultural challenges, students' experiences of language anxiety also have a significant impact on their engagement and mastery in learning ESP. *Ayuningtyas et al. (2022) conducted a study exploring foreign language anxiety (FLA) among vocational students and found that fear of communication was a significant obstacle to language learning. On the other hand, a study by *Mardianti et al. (2021) showed that students' reading anxiety stems from various factors, including unfamiliar vocabulary and cultural references, leading to difficulties in understanding English texts. In this regard, teachers have a significant role in creating supportive environments conducive to effective language learning, as suggested by *Sofa and Dewi (2020), who claim that teachers' roles are dynamic within the classroom context for engaging students in activities according to their learning needs.

Within these challenges, students provide invaluable perspectives on improving ESP teaching and learning. *Sjaifullah and Laksmi (2022) and *Rachmawati (2020) viewed student voice as a means for teachers to foster a collaborative learning environment that encourages active participation and meaningful interactions. Students stressed the necessity for effective lecturer-student communication in the negotiation of activities, materials, and schedules so as to foster a comfortable learning environment and adequate learning facilities (*Abduh & Dunakhir, 2020; *Mauludin, 2021; *Mauludin et al., 2023; *Rajasa, 2018). Moreover, teaching strategies to support understanding specific linguistic expressions in professional fields appear essential for effective communication (*Arifuddin et al., 2020).

2. Incorporating specialised content: Bridging language and context. Beyond linguistic and psychological challenges, ESP students experience difficulties integrating specialised content into their language learning journey. The interaction between language and context creates difficulties for students engaging with specialised content. A study by *Hasanah and Mufidatunnisa (2019) examined the integration of Islamic science into teaching English as a foreign language, confirming how contextual meaning and cultural sensitivity play an integral role in language learning. Further, *Arifuddin et al. (2020) underline the significance of mastering idiomatic expressions in the hospitality and tourism sector professional settings.

For ESP students, understanding specialised content beyond vocabulary acquisition requires understanding the cultural and contextual foundations that

shape discourse. *Irham (2023) explored how students need to recognise the importance of the English language in a multilingual environment and the concept of linguistic diversity. Similarly, *Yaniafari et al. (2021) and *Nugroho (2020) investigated the implementation of Content and Language Integrated Learning (CLIL) materials to bridge the gap between language and content skills. These findings highlight the need for ESP instruction to account for cultural and contextual factors in order to support more comprehensive learning experiences.

4.2.3. Theme 3. Innovations in enhancing ESP learning

Over the last decade, ESP instruction has significantly transformed, mainly due to new methodologies and technologies to enrich students' experiences. Research in ESP instruction has focused on the transformative potential of various approaches and technologies to improve the effectiveness of ESP instruction and meet students' needs in specialised settings.

1. Innovative methodologies: Engaging ESP students. As ESP teaching evolves, teachers continue to innovate and adapt their strategies to meet students' ever-changing needs and demands across diverse industries and disciplines. Several studies have examined innovative teaching approaches in ESP, noting the role of teacher creativity in fostering engagement. *Arifani and Suryanti (2019) examined the use of multimedia and real-life scenarios to enhance ESP learning experiences. Additionally, *Mauludin (2018) showcased the effectiveness of dynamic assessment, particularly in improving writing skills. Dynamic assessment fosters continuous improvement and a growth mindset among students by providing tailored feedback and support.

*Hartono et al. (2023) conducted an in-depth study on developing English presentation self-efficacy among Indonesian ESP students, emphasising the nuanced interplay between individual and group presentation tasks in shaping students' beliefs. On the other hand, *Betaubun (2021) demonstrated the effectiveness of the flipped classroom model in promoting active learning and student engagement. This model facilitates self-directed learning in a face-to-face course and allows for more interactive and collaborative activities. In addition to the importance of teacher-led participation, *Budianto and Masson (2022) showed the importance of autonomous learning features in ESP classrooms. Self-directed learning empowers students by granting them control over their educational journey, fostering self-regulation and intrinsic motivation, and encouraging active engagement in their academic development.

Technology has noticeably influenced ESP teaching, incorporating multimedia resources, enhancing learning experiences and facilitating communication practice (*Muhammad, 2020; *Mulyadi et al., 2021, 2023). Teachers can also enhance collaborative learning and creative expression in ESP contexts by integrating innovative teaching methods such as think-pair-share and mind mapping (*Mu'in et al., 2020; *Pratiwi et al., 2023). These approaches facilitate language learning while

simultaneously developing critical thinking and communication skills necessary through authentic technology-facilitated work for success in a professional environment.

Many studies also have shown that ESP teachers employ various teaching strategies to address the specialised needs of students. Among these approaches, Project-Based Learning (PBL) has gained much traction. The purpose of PBL is to allow students to engage in real-world projects related to their specific fields of study or professions (*Hidayati et al., 2023; *Kultsum et al., 2021). It also allows them to develop problem-solving skills and better understand the subject. Finally, PBL allows teachers to assess student performance more holistically.

These findings show that ESP teaching in Indonesia has employed a range of methods to support student engagement, motivation, and language development. The approaches demonstrate how teachers have responded to varied student needs and worked to make instruction relevant to both educational and occupational settings. Although the extent and form of implementation differ, the studies highlight different approaches to ESP teaching.

2. Hybrid and blended learning: Revolutionising ESP instruction. Recent studies indicate that online and blended learning methods have reshaped ESP teaching practices. In response to the evolving hybrid learning, *Kristianingrum and Widyantoro (2020) explored integrating blended learning techniques in the English language arts curriculum, emphasising online multimedia resources and interactive activities to enhance student engagement and learning outcomes. Moreover, *Adi (2023) studied blended learning for ESP in agriculture, confirming the importance of integrating face-to-face and online elements. *Adi's (2023) research resonates with the findings of *Idris et al. (2019), which demonstrate the efficacy of blending traditional classroom instruction with online activities, leading to notable improvements in language proficiency and academic performance within Islamic education settings. These studies report students' favourable attitudes towards blended learning, noting its flexibility and potential to foster language skills and subject-specific knowledge.

Several studies also discussed the integration of online learning into ESP instruction, often in response to broader changes in teaching conditions during the period reviewed. *Asih and Alief (2022) examined students' experiences and learning objectives in online learning environments. The research results suggest transitioning towards blended learning methods to enhance student engagement and interaction. Additionally, addressing students' time management concerns in online learning is essential. This finding reinforces the views of *Habibi et al. (2022), who conducted an in-depth study of the determinants of learning outcomes in online PBL of ESP. The study contends that the critical role of teacher performance and technological resources greatly impacts students' learning experiences and outcomes in ESP courses.

3. Digital literacy: Empowering ESP students. Digital tools and platforms have transformed the teaching of ESP by providing diverse and practical resources to

support students from diverse backgrounds. Integrating digital resources and interactive activities can support the creation of engaging learning environments that encourage student independence and participation (*Pratiwi & Ubaedillah, 2021; *Susilawati, 2023). *Muharom and Nugroho (2022) investigated how students utilised digital devices for intentional learning aimed at enhancing coursework and incidental learning to broaden access to the target language. Their study revealed that students predominantly utilised digital devices for personalised language rather than prioritising authenticity and connectivity. Similarly, *Budianto et al. (2022) conducted an in-depth study on ESP students' digital literacy, showing how they use digital technology and applications to improve their language learning experiences.

Another notable study on digital literacy in ESP teaching was undertaken by *Surani et al. (2023), who integrated digital literacy through e-law modules. This approach provides students with tailored digital resources and equips them with the necessary skills for their field of study. Similarly, *Lestari and Nirmala (2020) demonstrate digital storytelling in teaching ESP to improve students' language skills and confidence in the Technology of Agricultural Product study program. On the other hand, *Syaiful et al. (2019) provided in-depth insights into how students perceived using Social Networking Services (SNSs), expanding the exploration of interactive and engaging ESP learning experiences. Taken together, these studies indicate that integrating digital literacy can enhance language skills and help prepare students with competencies needed for professional contexts.

5. DISCUSSION

This section addresses the three research questions, situating the findings within the broader ESP literature as both oriented towards students' needs and responsive to disciplinary and institutional contexts (Belcher, 2009; Hyland, 2022). ESP has developed as a distinctive area of applied linguistics, with growing attention to how English supports academic and professional goals. In Indonesia, studies have expanded rapidly over the past decade, reflecting increasing recognition of ESP across different disciplines. The reviewed studies employed diverse methodologies, including surveys, interviews, and classroom-based research, which provide varied insights into how ESP is understood and implemented.

ESP research in Indonesia is characterised by several key focuses, with a strong emphasis on needs analysis across a range of academic fields such as health, engineering, economics, and religious education (e.g., *Aeni et al., 2018; *Araminta & Halimi, 2015; *Bandu et al., 2021; *Dewi & Indriani, 2021; *Gusmuliana et al., 2023; *Nimasari, 2018; *Nuraeningsih, 2019; *Sujana et al., 2020). In addition, research has examined the implementation of ESP programmes and pedagogical practices, highlighting classroom strategies, students' perceptions, and the challenges that arise in aligning instruction with disciplinary goals (*Bandu et al.,

2021; *Budianto & Masson, 2022; *Mauludin, 2021). A further strand addresses the role of technology in ESP learning, including digital tools and online platforms used to enhance writing, collaborative learning, and out-of-class engagement (*Muharom & Nugroho, 2022; *Pratiwi et al., 2023; *Susilawati, 2023; *Syaiful et al., 2019). These patterns indicate Indonesian ESP research largely remains focused on needs analysis and pedagogy (Basturkmen, 2021), while at the same time showing a growing attention to the use of technology in learning. This development resonates with international ESP scholarship, which maintains its disciplinary relevance by engaging with student contexts and professional practices (Hyland & Jiang, 2021).

Needs analysis studies in Indonesia show that students consistently identify discipline-specific requirements as central, such as acquiring technical vocabulary, reading professional texts, and developing communicative competence for use in clinical, legal, or social science contexts (e.g., *Basri et al., 2020; *Hidayati & Meisani, 2023; *Rumalessin & Farah, 2021; *Sujana et al., 2020). At the same time, broader investigations indicate that these needs extend beyond linguistic knowledge to include the capacity to participate in academic practices and meet the expectations of lecturers, institutions, and professional stakeholders (*Poedjiastutie & Oliver, 2017; *Yaniafari et al., 2021). These findings demonstrate that ESP courses in Indonesia should respond not only to specialised language demands but also to the broader expectations of academic and professional communities. International research similarly shows that students' needs involve participation in disciplinary practices and engagement with institutional contexts, not just language proficiency (Hyland, 2022; Paltridge, 2016).

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Research on ESP in Indonesian higher education shows a strong foundation in needs analysis, with studies mapping discipline-specific requirements in fields such as health, economics, and communication (*Dewi & Indriani, 2021; *Dewi et al., 2023; *Nurindah et al., 2019; *Pradana et al., 2022; *Rachmawati, 2020; *Sujana et al., 2019). These studies have supported curriculum planning, but gaps remain between analysis and classroom practice, including persistent challenges in writing proficiency (*Wahyuni & Darmansyah, 2021) and self-confidence (*Ayuningtyas et al., 2022; *Rajasa, 2018). Some approaches have been used to support learning, such as think-pair-share and group presentations that encourage active participation (*Hartono et al., 2023; *Mu'in et al., 2020). However, the practices are not widely embedded in teaching or policy. In addition, sociocultural aspects such as perceptions of English and willingness to communicate have received less attention. Students' views of English in multilingual contexts (*Irham, 2022) and their willingness to communicate in ESP classrooms (*Sjaifullah & Laksmi, 2022) indicate that engagement is shaped by ideology, identity, and attitudes as well as linguistic needs.

Indonesian ESP studies reveal a persistent gap between analysis and practice. These studies have mainly addressed student-centred goals and disciplinary needs, particularly through needs analysis across different fields. While some studies address language use in academic or professional contexts, this has generally not

been the main focus, with greater attention given to immediate and functional needs. These priorities reflect national educational agendas and, in MIC settings like Indonesia, are further conditioned by unequal access to resources and institutional policies. At the same time, broader influences, including social and cultural factors, institutional contexts, and disciplinary practices, have received limited attention. Addressing these dimensions is important for developing a more comprehensive understanding of ESP implementation and ensuring that policy and practice respond effectively to local contexts (Basturkmen, 2021; Hyland, 2022).

6. CONCLUSION AND IMPLICATIONS

ESP studies in Indonesia provide insight into how a MIC addresses the demands of English language teaching and learning across different domains. With its diverse cultural and linguistic background and rapidly growing economy, Indonesia faces similarly diverse and complex educational needs, as reflected in the body of ESP research. As Indonesia continues to integrate into the global economy, the demand for English language experts in specific fields has increased, leading to extensive research on ESP courses.

Findings from studies on ESP in Indonesian higher education have primarily focused on needs analysis, identifying discipline-specific skills, and guiding curriculum design. Some studies have also examined classroom practices, technology use, and local resources, indicating initial initiatives to extend beyond needs analysis. However, these topics have not yet been fully integrated into systematic ESP implementation. This highlights the challenge of aligning identified needs with classroom realities shaped by institutional policies, sociocultural factors, and resource availability.

The results of this systematic literature review highlight the importance of ongoing collaboration and professional development for ESP researchers, practitioners, and stakeholders. For academic studies, there is scope to examine curriculum and pedagogy that engage more closely with varied students' needs and institutional realities. For practitioners, ongoing training and support are important for effectively adapting methods and using technological tools to support participation. For policy makers and industry representatives, the challenge is to align ESP curricula with employment expectations while also recognising the wider educational role of English. These issues are visible in Indonesia but also resonate in other contexts where immediate priorities often outweigh broader institutional and cultural considerations.

Following the discussion of ESP implementation and its implications, the Indonesian context provides an example of how ELT can be oriented to meet specific academic and professional requirements. Although the findings are based on the Indonesian context, certain aspects, such as practical pedagogy and technology use, may be relevant to other MICs. While not intended for generalisation, the findings

can inform broader reflections on ESP development in comparable contexts. They also provide a basis for future policy and practice considerations in settings facing similar challenges.

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Appendix

The supplementary file containing the list of reviewed articles related to this study can be accessed in the online version at <https://doi.org/10.26180/29998729>