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## ESP Teacher Education: Why, What and How

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### Abstract

English for Specific Purposes (ESP) teaching requires specialized pedagogical expertise; however, many educators enter the field without targeted training. This study conducts a narrative literature review of research on ESP teacher education to determine the major trends in its development, challenges, and future directions. By analysing theoretical frameworks, empirical studies, and reflective practitioner reports in Scopus, ERIC, Web of Science, and SpringerLink databases, the review addresses three research questions: Why is ESP teacher training needed? What competencies define effective ESP educators? And how are programs worldwide addressing these needs? The findings suggest a demand for interdisciplinary collaboration as ESP teachers increasingly work alongside subject-matter experts, pointing to training in teamwork and in domain-specific discourse analysis. The review also indicates that a pedagogical shift from generic and traditional materials to contextualized, needs-based design that involves corpora and digital tools is widely recommended in the literature. Key findings also indicate that ESP instructors face professional identity tensions. As for the trends in the field, fragmented training models are observed. While some universities try to integrate ESP into ELT / TESOL programs, others rely on ad hoc workshops, signalling a gap in standardized curricula. This present study concludes that it is urgent to systematize ESP teacher education through policy alignment, competency frameworks, and blended learning models.

**Keywords:** English for specific purposes (ESP), teacher education, narrative literature review, pedagogical trends, ESP teacher competencies

### Özel Amaçlı İngilizce Öğretmen Eğitimi: Neden, Ne ve Nasıl

#### Özet

Özel Amaçlı İngilizce (ESP) öğretimi, uzmanlaşmış pedagojik bilgi birikimi gerektirir; ancak birçok eğitimci, bu alana hedef odaklı bir eğitim almadan girer. Bu çalışma, ESP öğretmen eğitiminin gelişimindeki başlıca eğilimleri, zorlukları ve gelecekteki yönelimlerini belirlemek amacıyla, bu alandaki araştırmalara ilişkin anlatsal bir literatür taraması yürütmektedir. Scopus, ERIC, Web of Science ve SpringerLink veritabanlarındaki teorik çerçeveleri, ampirik çalışmaları ve yansıtıcı uygulama raporlarını analiz ederek, bu tarama üç araştırma sorusunu ele almaktadır: ESP öğretmen eğitimi neden gereklidir? Etkili ESP eğitimcilerini tanımlayan yetkinlikler nelerdir? Ve dünya çapındaki programlar bu ihtiyaçları nasıl karşılamaktadır? Bulgular, ESP öğretmenlerinin giderek daha fazla konu uzmanlarıyla birlikte çalışması nedeniyle disiplinlerarası işbirliğine olan talebi ortaya koymakta ve bu da takım çalışması ve alana özgü söylem analizi konusunda eğitime ihtiyaç duyulduğunu göstermektedir. Ayrıca, genel ve geleneksel materyallerden, metin derlemeleri ve dijital araçları içeren bağlamsal, ihtiyaç temelli tasarıma doğru pedagojik bir geçişin şiddetle tavsiye edildiği açıktır. Önemli bulgular, ESP öğretmenlerinin mesleki kimlik konusunda gerilimler yaşadığını da göstermektedir. Alandaki eğilimlere gelince, birbirinden kopuk eğitim modelleri gözlemlenmektedir.

**Anahtar Sözcükler:** Özel amaçlı İngilizce (ESP), öğretmen eğitimi, anlatsal literatür taraması, pedagojik eğilimler, Özel amaçlı İngilizce öğretmeni yetkinlikleri

## 1. Introduction

English for Specific Purposes (ESP) has undergone significant expansion since the 1960s, largely propelled by the forces of globalization, the internationalization of higher education, and the increasing demand for professionals who can communicate effectively in English within their respective domains (Hutchinson & Waters, 1987; Dudley-Evans & St John, 1998). What distinguishes ESP from English for General Purposes (EGP) is its orientation toward learners' specific communicative needs in a given academic, occupational, or professional context. As Hutchinson and Waters (1987, p. 19) put it, "ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning." Dudley-Evans and St John (1998) later sharpened this definition by proposing a set of absolute and variable characteristics, noting that ESP is designed to meet specific learner needs, draws on the underlying methodology of the discipline it serves, and is typically intended for adult learners at tertiary or professional levels.

Despite this growth, the preparation of teachers who are expected to deliver ESP instruction has received surprisingly little scholarly attention. The ESP literature has, for decades, placed learners' needs at the forefront while treating teachers' own learning and knowledge needs as secondary concerns (Basturkmen, 2019). This imbalance is hard to justify when one considers the breadth of the ESP teacher's role. Belcher (2006, p. 135) captured this breadth by describing ESP teachers as specialists who are "often need analysts first and foremost, then designers and implementers of specialised curricula." In practical terms, experienced ESP practitioners report performing tasks that range from classroom instruction and assessment to course development, learner needs identification, specialist discourse investigation, corpus-based language analysis, and the production of subject-specific materials, since commercially published resources are rarely adequate for the particular class in question (Basturkmen, 2019). It is worth asking, then, how many of these skills are actually addressed in conventional teacher education programs. The short answer, as the literature reviewed here suggests, is very few.

The urgency of this issue has only grown in recent years. The expansion of English Medium Instruction (EMI) across non-Anglophone universities, the rise of English for Academic Purposes (EAP) as a major branch of ESP, and the accelerating integration of digital technologies into language learning all place new and compounding demands on ESP practitioners (Yan, 2025). However, studies from Algeria (Amel, 2017), Sudan (Ibrahim, 2010), Spain (Bocanegra-Valle & Basturkmen, 2019), and numerous other contexts confirm that the majority of ESP teachers enter the field without any targeted preparation and are left to figure things out on their own. Belcher (2013, p. 544) perhaps stated the problem most directly when she observed that the "community that ESP professionals know least about is their own."

This study takes up that observation as its starting point. Drawing on sources identified across four academic databases (Scopus, ERIC, Web of Science, and SpringerLink), it examines the current state of ESP teacher education through three research questions:

RQ1: Why is ESP teacher training needed?

RQ2: What competencies define effective ESP educators?

RQ3: How are programs worldwide addressing these needs?

The review aims not merely to catalogue what exists but to identify where the field's understanding is robust, where it remains thin, and what practical steps might close the gap between ESP teaching demands and teacher readiness.

## 2. Method

### 2.1. Research Design

This study adopts a narrative literature review as its research methodology. A narrative review provides an interpretive and critical synthesis of the existing literature on a given topic, identifying patterns, themes, and gaps across a body of scholarship (Snyder, 2019). Unlike systematic reviews, which employ exhaustive and replicable search protocols to answer narrowly defined research questions, narrative reviews are characterized by their flexibility, broader scope, and capacity for integrative analysis (Ferrari,

2015; Grant & Booth, 2009). As Snyder (2019) notes, narrative reviews are particularly valuable when the purpose is to provide an overview of a fragmented research area, to map the conceptual landscape, or to lay a foundation for future inquiry. Green et al. (2006) further argue that narrative reviews serve a crucial function in synthesizing diverse bodies of literature, identifying conceptual linkages, and proposing new directions for research and practice.

The narrative approach was selected for three reasons. First, ESP teacher education is inherently interdisciplinary, spanning applied linguistics, teacher education, curriculum studies, and professional development, a breadth that benefits from integrative synthesis rather than the narrow search protocols typical of systematic reviews. Second, the relevant literature is dispersed across journal articles, book chapters, conference proceedings, and practitioner reports, many of which would be excluded by strict systematic inclusion criteria. Third, the research questions guiding this review are conceptual rather than interventional, making narrative synthesis more appropriate than an aggregation of effect sizes or experimental outcomes (Snyder, 2019).

## **2.2. Data Sources and Search Strategy**

Sources were identified through searches across four major academic databases: Scopus, ERIC, Web of Science, and SpringerLink. These databases were selected to ensure broad coverage of the ESP and applied linguistics literature. Scopus and Web of Science index high-impact, peer-reviewed journals across the social sciences and humanities; ERIC is the primary database for educational research with substantial holdings in language teaching; and SpringerLink provides access to edited volumes and book chapters that form an important part of the ESP literature.

The search was guided by the core constructs of the review, using keyword combinations such as “ESP teacher” or “English for specific purposes teacher” combined with “training,” “education,” “professional development,” “competencies,” or “identity.” In addition to database searches, a snowball sampling strategy was employed: reference lists of key sources were examined to identify additional relevant publications, particularly foundational works that may not have appeared in the initial database searches. This recursive process continued until newly identified sources no longer introduced substantially new themes or perspectives.

## **2.3. Inclusion and Exclusion Criteria**

To be included, sources had to meet three criteria: (a) primary focus on ESP teachers, their preparation, competencies, professional development, challenges, or identity; (b) publication in a peer-reviewed journal, as a chapter in an edited academic volume, or as a substantial conference paper; and (c) written in English. No strict date range was imposed, allowing foundational works alongside contemporary research, though particular emphasis was given to publications from the last decade (2014 to 2025). Sources were excluded if they (a) dealt exclusively with ESP learner needs analysis or linguistic description without reference to teacher-related dimensions, (b) addressed general English language teaching without engaging with the ESP context, or (c) consisted of book reviews, editorials, or opinion pieces without empirical or theoretical grounding. Application of these criteria reduced the initial corpus to about 30 sources. A couple of further sources were added through snowball sampling, resulting in a final corpus of 33 sources.

## **2.4. Corpus and Geographical Coverage**

The final corpus comprises empirical qualitative and quantitative studies, systematic literature reviews, theoretical frameworks, book chapters, and reflective practitioner reports. The determination of this corpus was based on thematic saturation: when newly located sources no longer offered novel findings, competency categories, or preparation models beyond those already identified, the review ceased adding materials. The reviewed sources represent scholarship from Türkiye (Kırkgöz, 2019), Spain (Bocanegra-Valle & Basturkmen, 2019), New Zealand (Basturkmen, 2019), China (Tao & Gao, 2018; Qi et al., 2021; Chi, 2021), Indonesia (Mahendra, 2020), India (Venkatraman & Prema, 2013), Algeria (Amel, 2017), Sudan (Ibrahim, 2010), Argentina (Moyetta et al., 2024), Serbia (Pirsl & Popovska, 2016; Kniazian & Khromchenko, 2019), South Korea (Kim, 2023), Iran (Khanahmadi, 2025), Poland (Ammari, 2025), and Thailand (Supunya, 2023), among others. This geographical breadth helps ensure that the findings reflect global tendencies rather than the particularities of any single national setting.

**2.5. Analytical Procedure**

The analysis unfolded in three stages. First, each source was read in full and a structured summary was prepared, recording its research context, methodology, key findings, and implications for ESP teacher education. Second, the summaries were organized thematically around the three research questions: (a) the rationale for ESP teacher education, (b) the competencies required of ESP practitioners, and (c) the models and mechanisms of teacher preparation. Recurring themes that cut across multiple sources, including professional identity tensions, interdisciplinary collaboration, and the role of digital technologies, were tracked through the corpus. Third, the thematic findings were woven into an integrative narrative, drawing connections across sources, noting convergences and disagreements, and flagging under-explored areas. Throughout the process, attention was paid to whether sources treated ESP teacher education as a distinct professional concern or as a peripheral topic within broader ESP discussions. It should be acknowledged that, as Ferrari (2015) observes, narrative reviews inherently reflect the authors' interpretive engagement with the literature. Different reviewers working with the same corpus might foreground different themes.

**3. Findings and Discussion**

In this section, the results are presented and discussed, with Figure 1 illustrating a summary of the key findings.

ESP TEACHER EDUCATION		
WHY	WHAT	HOW
<ul style="list-style-type: none"> <li>• The Structural Distinctiveness of ESP Teaching</li> <li>• Consequences of Inadequate Preparation</li> <li>• Growing Global Demand</li> </ul>	<ul style="list-style-type: none"> <li>• Needs Analysis</li> <li>• Discourse and Genre Analysis</li> <li>• Materials Development and Adaptation</li> <li>• Subject-Matter Familiarity</li> <li>• Technology and Digital Literacy</li> <li>• Assessment and Evaluation</li> <li>• Competency Frameworks</li> </ul>	<ul style="list-style-type: none"> <li>• Three Models of ESP Teacher Preparation</li> <li>• Professional Development Practices</li> <li>• The Professional Identity Dimension</li> </ul>

**Figure 1.** Conceptual framework of ESP teacher education: rationale (Why), competencies (What), and programmatic models (How)

*Note.* This figure summarizes why there is a need for ESP teacher education, what competencies should ESP teachers be equipped with, and how programs worldwide address those needs.

**3.1. Why is ESP Teacher Training Needed?**

One finding emerges with striking consistency across the reviewed literature: ESP teacher training is both urgently needed and globally inadequate. Studies conducted in settings as varied as Algeria, Sudan, Türkiye, Indonesia, China, and India arrive at essentially the same conclusion: practitioners are placed into ESP roles without dedicated preparation and must learn by doing. Here are three main reasons for ESP teacher training.

*3.1.1. The Structural Distinctiveness of ESP Teaching*

The need for dedicated training is rooted in a straightforward observation: ESP teaching is qualitatively different from general English teaching. It requires practitioners to carry out needs analysis before designing courses, to gain familiarity with specialist discourse communities they did not encounter during their own education, to locate or produce authentic materials, and to evaluate programs in context-specific ways (Basturkmen, 2019; Dudley-Evans & St John, 1998). Conventional TESOL preparation, which

centres on general pedagogic methodology and second language acquisition theory, does not equip teachers for these tasks (Hall, 2013).

Basturkmen's (2019) research with experienced ESP teachers in New Zealand and Spain illustrates the point. The teachers in her study reported performing a wide range of tasks: not only classroom instruction and assessment but also course development, learner needs identification, investigation of specialist discourse, corpus and genre analysis, and the creation of bespoke instructional materials. What is notable about these findings is that they describe the work of highly experienced practitioners, the very individuals who might be expected to manage without formal training. The fact that even expert practitioners describe their work as involving constant autonomous learning underscores how demanding the field is for newcomers who receive no induction at all. A closer look at the specific skills involved reveals why generic teacher education falls short. ESP course development, for example, requires the teacher to operate at the interface of three distinct knowledge domains: knowledge of teaching, knowledge of language analysis, and knowledge of the target discourse community (Basturkmen, 2019). A teacher preparing an English course for medical professionals needs not only pedagogical skill and linguistic awareness but also sufficient understanding of the medical context to identify relevant communicative events, select authentic materials, and design tasks that simulate real professional interactions. This tripartite demand has no clear parallel in general English teaching.

### *3.1.2. Consequences of Inadequate Preparation*

The consequences of sending teachers into ESP classrooms without preparation are not merely theoretical. Amel (2017), investigating English instruction in economics classes at the University of M'sila, Algeria, found that what the institution labelled "ESP" was, in practice, general English teaching with an overlay of economics vocabulary. The teacher, who held a degree in economics and taught English part-time, focused primarily on translating short texts into Arabic and teaching terminology. No needs analysis had been conducted; the course content was based entirely on the teacher's personal judgment. The teacher openly acknowledged a "felt need for a specific teacher training" (Amel, 2017, p. 214). Student satisfaction was correspondingly low: 77.56% expressed dissatisfaction with the course content. It is worth noting, however, that Amel's study relied on a single teacher participant and 49 students at one university, which limits the generalizability of the specific satisfaction figures, even if the broader pattern is consistent with findings elsewhere.

Ibrahim (2010) reported comparable conditions in Sudanese universities, where ESP was a compulsory subject but was delivered as general English, with teachers emphasizing content over communicative skills and students fixated on passing examinations rather than developing language competence. Kırkgöz (2019), working in a Turkish university context, observed that many ESP teachers were recruited from general English teaching backgrounds, given minimal orientation, and left to teach highly specialized content to large undergraduate classes. These cases, drawn from different continents and educational traditions, point to a structural rather than incidental problem.

### *3.1.3. Growing Global Demand*

The mismatch between demand and preparation is widening. Yan (2025), in a systematic review of 149 SSCI-indexed ESP studies published between 2014 and 2023, documented substantial growth in the volume of ESP research, with Asia, particularly China, now contributing the largest share of empirical studies. Nonetheless, teacher education and teacher development remain relatively under-investigated compared to their practical significance. Learner-focused studies still far outnumber teacher-focused ones. Supunya (2023), reviewing Scopus-indexed ESP teacher research from 2010 to 2022, confirmed this imbalance and identified ESP teacher research as being "still in its infancy" (p. 291). The growing demand for ESP teaching is being met, in many contexts, by a workforce that lacks both formal preparation and ongoing professional support.

The first research question asked why ESP teacher training is needed. The evidence presented in this review leaves little room for ambiguity on this point. ESP teaching is structurally distinct from general English teaching. It requires practitioners to operate at the intersection of language pedagogy, discourse analysis, and disciplinary knowledge, a tripartite demand that Basturkmen (2019) documented empirically and that no conventional TESOL program adequately addresses. The consequences of neglecting this distinction are visible in classrooms where ESP courses reduce to vocabulary translation exercises (Amel,

2017), where teachers lack the confidence to engage with disciplinary texts (Qi et al., 2021), and where students leave university without the communicative competencies their professions demand (Ibrahim, 2010). These are not isolated cases but recurring patterns across continents and educational traditions, suggesting a systemic rather than incidental problem.

### **3.2. What Competencies Define Effective ESP Educators?**

The literature converges on a recognizable set of core competencies, though the emphasis placed on each varies across institutional contexts and research traditions.

#### *3.2.1. Needs Analysis*

Needs analysis stands out as the single most foundational competency. It appears in virtually every source reviewed and encompasses target situation analysis (what learners need to do with English in professional or academic settings), present situation analysis, and learning situation analysis (Dudley-Evans & St John, 1998; Hutchinson & Waters, 1987). What makes needs analysis so central to ESP, and so distinct from general English teaching, is that it must precede course design. An ESP course developed without prior needs analysis risks becoming precisely the kind of general English instruction described in the studies by Amel (2017) and Ibrahim (2010). Vidaković et al. (2022), examining how tertiary-level ESP teachers evaluate their courses, found that those who carried out more systematic needs assessment had a clearer picture of whether their courses actually served learners' purposes. Liu and Zhang (2020) provided a concrete example of needs analysis in action through their case study of a short training course for bank tellers in China, demonstrating how structured needs data can anchor ESP course design. However, it should be noted that Liu and Zhang's study, like many needs analysis case studies, was context-specific and did not test the long-term impact of the resulting course design on learner outcomes.

#### *3.2.2. Discourse and Genre Analysis*

The capacity to analyse the communicative structure of texts and genres within target professional or academic communities, and to translate that analysis into course and materials design, emerges as a second core competency (Basturkmen, 2019; Yan, 2025). Basturkmen (2019) characterized ESP teachers as intermediaries who must navigate among three knowledge domains: teaching, language analysis, and the target discourse community. This framing is useful, but it also highlights a tension: very few teacher education programs currently offer training in discourse or genre analysis applied to disciplinary texts. Most ESP teachers acquire whatever analytical skills they possess through self-study, a finding that recurs in sources from Spain (Bocanegra-Valle & Basturkmen, 2019), China (Tao & Gao, 2018), and Indonesia (Mahendra, 2020).

#### *3.2.3. Materials Development and Adaptation*

A third competency that surfaces repeatedly is the ability to select, evaluate, adapt, and, when necessary, create instructional materials grounded in authentic disciplinary discourse (Basturkmen, 2019; Bocanegra-Valle & Basturkmen, 2019; Kirkgöz, 2019). Bocanegra-Valle and Basturkmen (2019), investigating experienced ESP teachers in two Spanish universities, found that materials development consumed a major share of teachers' working time, but almost none of them had received formal training in it. Teachers learned to develop materials by observing more experienced colleagues, studying published ESP textbooks, and picking up ideas at conferences. One teacher captured this self-taught reality succinctly: "I am good at preparing (rather than) designing material. I don't design a lot" (Basturkmen, 2019, p. 10). The distinction between "preparing" and "designing" is revealing: it suggests that many ESP teachers see themselves as adapters rather than creators of materials, which may limit the degree to which their courses genuinely respond to local learner needs. It should also be noted that the teachers in this study had between 13 and 40 years of ESP teaching experience (Bocanegra-Valle & Basturkmen, 2019), raising the question of whether less experienced practitioners face even greater difficulties.

#### *3.2.4. Subject-Matter Familiarity*

How much subject knowledge does an ESP teacher need? This question has generated sporadic but recurring discussion in the literature. Ferguson (1997) drew a useful distinction between "specialist

knowledge,” defined as knowledge of the content of students’ discipline, and “specialised knowledge,” which encompasses knowledge of disciplinary cultures and values, the epistemological basis of disciplines, and awareness of genres and discourse. Ferguson argued that ESP teachers need the latter rather than the former, and this position finds broad support in the reviewed literature (Basturkmen, 2019; Moyetta et al., 2024; Hall, 2013). Bocanegra-Valle and Basturkmen (2019) found that their Spanish participants viewed subject content knowledge as essential and reported acquiring it through internet sources, television programmes about professional settings, consultation with friends in relevant fields, and reading about specific industries. One teacher recommended that new ESP teachers of civil engineering should watch “videos about civil engineers because in that way you can see how civil engineers work, how they think” (Basturkmen, 2019, p. 11). These informal learning strategies are pragmatic but unsystematic. The reviewed literature does not yet provide evidence about which strategies are most effective or how they compare to more structured approaches.

### *3.2.5. Technology and Digital Literacy*

Technology competency has emerged as a newer but increasingly important requirement. Khanahmadi (2025), investigating Technological Pedagogical Content Knowledge (TPACK) in ESP classrooms in Iran, found that effective technology use in ESP classrooms requires more than technical skills; it demands the ability to align digital tools with both content knowledge and pedagogical goals. Kniazian and Khromchenko (2019) identified self-development competence, including digital literacy, as central for ESP lecturers in higher education. Ammari (2025) proposed a structured training framework for Data-Driven Learning (DDL) in ESP, arguing that the limited use of corpora in ESP classrooms is directly traceable to gaps in teacher training. The finding that technology integration depends on teacher preparation, rather than merely on the availability of tools, is consistent across these studies. However, it should be acknowledged that the rapid pace of technological change, particularly the emergence of AI-assisted writing tools, makes competency requirements in this area a moving target. Research published as recently as two or three years ago may not capture the full scope of what ESP teachers now need to know.

### *3.2.6. Assessment and Evaluation*

The ability to design assessments that mirror real-world communicative demands and to evaluate course effectiveness remains an area where ESP teachers report feeling least confident. Vidaković et al. (2022) found that while most ESP teachers engage in some form of informal evaluation, formal, systematic program evaluation is rare. Time constraints and institutional pressures were the main obstacles. Bocanegra-Valle and Basturkmen (2019) reported similar findings from Spain, where teachers expressed interest in improving their assessment practices but felt uncertain about how to measure learning outcomes in ESP contexts. This is a competency area that deserves more attention in future teacher education programming.

### *3.2.7. Competency Frameworks*

The most granular empirical work on ESP teacher competencies comes from Venkatraman and Prema (2013), who identified and validated 65 competencies for teachers of English in Indian engineering colleges through a three-phase research design involving content analysis, expert validation, and field testing with 150 practising teachers across 83 institutions. The resulting competencies were organized into 17 general items and 48 subject-specific items grouped under seven domains, with 30 classroom-observable competencies forming the basis of a validated assessment scale. While this study provides an impressively detailed framework, its focus on engineering colleges in a single Indian state raises questions about how readily the competencies transfer to other ESP contexts, such as business English in European universities or medical English in East Asian settings. Chen (2013) proposed a training mode design for ESP teachers in Chinese science and engineering universities, offering a complementary but less empirically grounded perspective.

The second research question concerned the competencies that define effective ESP educators. The reviewed literature converges on a recognizable core: needs analysis, discourse and genre analysis, materials development and adaptation, functional subject-matter familiarity, technology and digital literacy, assessment design, and collaborative skills. What is perhaps most striking about this list is not its content, which has remained relatively stable since the early frameworks proposed by Dudley-Evans and

St John (1998) and Hall (2013), but the persistent finding that most practitioners acquire these competencies, if they acquire them at all, through informal self-directed learning rather than structured preparation (Bocanegra-Valle & Basturkmen, 2019; Mahendra, 2020). The 65-competency framework validated by Venkatraman and Prema (2013) represents the most granular attempt to operationalize these requirements, though its applicability beyond the Indian engineering context remains an open question. A newer dimension that deserves particular attention is technology integration. As Khanahmadi (2025) and Ammari (2025) have demonstrated, the rapid evolution of digital tools, corpus-based approaches, and AI-assisted technologies is reshaping what ESP teachers need to know, creating a competency target that is itself in motion.

### 3.3. How Are Programs Worldwide Addressing These Needs?

The reviewed literature reveals enormous variation in how ESP teacher education is structured worldwide. At one end of the spectrum are comprehensive postgraduate specializations; at the other, there is no formal preparation.

#### 3.3.1. Three Models of ESP Teacher Preparation

Drawing on the patterns observed across the reviewed sources, this review proposes three broad models of ESP teacher preparation currently operating globally. These models are not drawn from a single source but represent an organizing framework that emerges from the synthesis of the literature as a whole.

The first and most prevalent is the “Conversion Model”, in which general English teachers are reassigned to ESP roles and expected to develop the necessary competence through in-service learning. This is the default approach in Algeria (Amel, 2017), Sudan (Ibrahim, 2010), Indonesia (Mahendra, 2020), Türkiye (Kırkgöz, 2019), India (Venkatraman & Prema, 2013), and China (Qi et al., 2021; Chi, 2021). Outcomes under this model vary dramatically depending on institutional support. Where structured in-service programs, mentorship, and dedicated professional development time exist, teachers can develop adequate competence over time. Where they are left alone, the results are consistently poor.

The second is the “Specialization Model”, involving dedicated ESP tracks within TESOL master's programs or standalone ESP diplomas and certificates. This model produces the most confident and capable practitioners but is available primarily in the United Kingdom, parts of Western Europe, and some East Asian contexts, reaching only a small fraction of the global ESP workforce. Supunya (2023) found that sustained programs with ESP-specific components produce stronger practitioners than generic teacher education.

The third is the “Collaborative Model”, in which ESP teachers work in ongoing partnership with subject specialists, and professional development occurs through that collaboration. Evidence from multiple contexts suggests that sustained interdisciplinary collaboration benefits both parties. Chaovanapricha and Chaturongakul (2020), investigating ESP in a Thai university context, found that collaborative planning between ESP teachers and subject specialists enhanced mutual understanding of course objectives and improved instructional coherence. Maletina et al. (2015) demonstrated that interdisciplinary team teaching in ESP settings fosters ESP teachers' domain familiarity and professional confidence. Arkhipova et al. (2015) highlighted how subject specialists, through such collaboration, gain deeper insight into the language demands of their disciplines, while ESP teachers develop greater content awareness. Stewart (2018) further argued that interdisciplinary team teaching expands possibilities for ESP practitioners by creating structured opportunities for mutual learning and reducing the isolation that many ESP teachers experience. This model, however, requires careful institutional design, including role clarity, protected planning time, and genuine administrative support, conditions that are not easily met in many university contexts.

#### 3.3.2. Professional Development Practices

Beyond initial preparation, the literature points to several features of effective ongoing professional development for ESP teachers. Effective programs tend to be sustained rather than one-off, collaborative rather than individual, practice-based rather than purely theoretical, and embedded in teachers' working contexts (Pirsl & Popovska, 2016; Bocanegra-Valle & Basturkmen, 2019). Xu et al. (2020), investigating Personal Learning Environments (PLEs) in ESP teacher training, found that technology-enhanced

professional development platforms allowed teachers to customize their learning, access context-relevant resources, and connect with communities beyond their immediate institutions. Kırkgöz (2019) demonstrated that involving teachers in needs analysis, course design, and materials development from the outset cultivated a stronger sense of ownership and more effective implementation, essentially embedding professional development within the program itself rather than bolting it on as a separate activity.

What is largely missing from this literature, however, is rigorous comparative evidence. Few studies directly compare different professional development approaches or measure their effects on teacher practice or student outcomes over time. Most of the evidence comes from single-context case studies or cross-sectional surveys, making it difficult to draw confident conclusions about which approaches work best under which conditions.

### *3.3.3. The Professional Identity Dimension*

Professional identity has emerged as a significant theme in recent ESP teacher education research, and it introduces complexities that competency frameworks alone cannot capture. Unlike general English teachers, who can position themselves within a well-defined professional community with established norms, ESP teachers occupy a hybrid space between language teaching and disciplinary expertise, often without full membership in either community (Mahendra, 2020; Tao & Gao, 2018; Qi et al., 2021). Tao and Gao (2018), studying ESP teachers at a Chinese university through narrative inquiry, found that those who invested in learning about their students' disciplinary fields developed more stable and positive professional identities, while those who kept their distance from subject content continued to struggle with persistent feelings of illegitimacy. One teacher in Qi et al.'s (2021) study described this experience bluntly: "I constantly feel myself as an outsider. Other language teachers would consider themselves lucky if they don't have to teach ESP courses. After all, it is not an academic discipline as linguistics, literature or translation" (p. 291). This remark points to a deeper structural issue: in many institutions, ESP is not recognized as a legitimate academic discipline, which undermines the identity and status of those who teach it.

Mahendra (2020), examining four Indonesian ESP teachers' experiences in a language institute, found that identity construction occurred through a combination of subject knowledge acquisition, professional development activities, and intrinsic fulfilment in the teaching role. One participant framed this as "learning by teaching" (Mahendra, 2020, p. 236). Kim (2023), studying an individual ESP teacher's identity transformation, showed that the transition from general English to ESP involved not merely acquiring new skills but reconceiving the teacher's fundamental purpose. Bocanegra-Valle and Basturkmen (2019) uncovered an unexpected finding: teachers highlighted a social dimension of their professional lives. They needed to share experiences and discuss their ESP work with colleagues, yet they frequently worked in isolation, often as the sole ESP teacher for a particular subject area in their institution. This finding has practical implications: building professional communities, whether within institutions or across them, may be as important for ESP teacher development as any formal training programme.

The third research question addressed how programs worldwide are responding to these needs. This study has proposed three broad models of ESP teacher preparation, the conversion model, the specialization model, and the collaborative model, as an organizing framework for understanding the global landscape. Each model carries distinct advantages and limitations. The conversion model, in which general English teachers are reassigned to ESP roles, is the most widespread but produces the most uneven results, ranging from reasonable competence where institutional support exists to outright failure where teachers are abandoned to their own devices. The specialization model yields the most confident practitioners but remains accessible to only a small fraction of the global ESP workforce. The collaborative model, in which ESP teachers develop expertise through sustained partnership with subject specialists, holds considerable promise but demands institutional conditions, including role clarity, protected planning time, and genuine administrative endorsement, that many universities are not yet equipped to provide (Kırkgöz, 2019; Bocanegra-Valle & Basturkmen, 2019). What the evidence does not yet tell us is which combinations of these approaches produce the best outcomes under which conditions. This gap represents a priority for future empirical investigation, particularly through controlled comparative and longitudinal designs.

Beyond competencies and preparation models, this study has identified professional identity as a dimension of ESP teacher education that competency frameworks alone cannot capture. Teachers who feel like outsiders in the disciplines they serve (Qi et al., 2021), who work in institutional isolation without colleagues who share their professional concerns (Bocanegra-Valle & Basturkmen, 2019), or who struggle to reconcile their training as language teachers with the disciplinary demands of ESP (Kim, 2023; Tao & Gao, 2018) face challenges that no amount of technical skill can resolve. Building professional communities, securing institutional recognition for ESP as a legitimate field, and creating mentorship structures are interventions that address the affective and social dimensions of teacher development, dimensions that are increasingly recognized as inseparable from professional competence.

#### **4. Conclusion and Implications**

This study has examined ESP teacher education through three interrelated questions: why dedicated training is needed, what competencies effective ESP educators should possess, and how teacher preparation programs worldwide are currently addressing these needs. Across the diverse geographical contexts reviewed, including countries from Europe, Africa, Asia, and America, a consistent picture has emerged: the gap between what ESP teaching demands and what most practitioners are prepared to deliver remains the field's central and most persistent challenge. This gap was first noted in the foundational literature of the late 1990s (Dudley-Evans & St John, 1998; Ferguson, 1997) and, despite three decades of scholarly attention, shows little sign of closing in the mid-2020s (Yan, 2025; Supunya, 2023).

The field of ESP teacher education has accumulated a substantial body of theoretical and empirical knowledge over the past three decades. The research base is sufficient to inform the design of structured, evidence-informed preparation programs. What remains is the challenge of translating this knowledge into institutional practice at scale, an undertaking that requires coordinated effort from universities, professional associations, accrediting bodies, and the practitioners themselves. The stakes are considerable: as the global demand for specialized English communication continues to grow, the quality of ESP teaching will depend, more than ever, on whether the field can move from documenting the problem to implementing the solution.

##### **4.1. Implications for Institutional and Systemic Planning**

The fragmented state of ESP teacher education worldwide points to a structural deficit that cannot be resolved through individual initiative alone. As the findings of this review make clear, the current landscape is characterized by deep inconsistencies: some universities embed ESP modules within ELT or TESOL master's programs, others offer short-term in-service workshops with no follow-up, and a considerable number provide no preparation at all, leaving teachers to navigate the transition from general English to ESP entirely on their own (Venkatraman & Prema, 2013; Supunya, 2023; Amel, 2017). This unevenness is not merely an administrative inconvenience; it directly affects the quality of instruction that learners receive. When an ESP teacher in Algeria designs a course based on personal intuition because no needs analysis training was ever provided (Amel, 2017), or when a Chinese ESP teacher describes feeling like “an outsider” in the discipline they are expected to teach (Qi et al., 2021, p. 291), the problem is not individual incompetence but systemic neglect.

Addressing this requires action at multiple levels. At the institutional level, universities that offer ESP courses should establish minimum preparation requirements for the teachers who deliver them. These requirements need not be uniform, but they should ensure that no teacher enters an ESP classroom without at least foundational training in needs analysis, materials adaptation, and the principles of discipline-specific discourse. Kırkgöz (2019) demonstrated that when institutions invest in structured, participatory program development, both teacher confidence and student outcomes improve measurably. At the national level, professional associations and accrediting bodies could play a catalytic role by developing competency frameworks that define the knowledge, skills, and dispositions expected of ESP practitioners. The 65-competency framework validated by Venkatraman and Prema (2013) in the Indian engineering context offers one model, though its transferability to other settings remains to be tested. Such frameworks should be flexible enough to accommodate the diversity of ESP contexts, from English for medical professionals in New Zealand to English for naval architecture in Spain (Basturkmen, 2019; Bocanegra-Valle & Basturkmen, 2019), while maintaining a core set of universally recognized standards.

A further consideration concerns the institutional positioning of ESP itself. Several studies in this review documented that ESP lacks recognized disciplinary status in many universities, which in turn undermines the professional standing of those who teach it (Qi et al., 2021; Tao & Gao, 2018). When ESP is treated as a service function rather than an academic field, teachers are less likely to receive dedicated professional development, less likely to be evaluated on ESP-specific criteria, and less likely to build the kind of professional community that sustains long-term growth. Interventions that grant ESP formal recognition within institutional structures, whether through dedicated teaching and research centres, distinct career pathways, or inclusion in promotion criteria, would signal that ESP teaching is valued as specialized professional work rather than a residual assignment for general English teachers who happen to be available.

#### **4.2. Program Design Implications**

Based on the evidence reviewed, ESP teacher education programs should incorporate the following elements:

- (a) Needs analysis practicum: supervised experience in conducting needs analyses with real learner populations.
- (b) Genre and discourse analysis training: both theoretical grounding and practical application in analyzing specialist discourse.
- (c) Materials development workshops: hands-on experience in designing, adapting, and evaluating ESP materials, with attention to the distinction between adapting existing resources and creating original, needs-responsive materials.
- (d) Disciplinary immersion: structured opportunities for ESP teachers to develop functional familiarity with target fields through workplace visits, collaboration with subject specialists, and engagement with professional communities.
- (e) Technology integration: training in corpus-based approaches, digital platform use, and emerging technologies including AI-assisted tools (Khanahmadi, 2025; Ammari, 2025), with recognition that this area requires ongoing updating as technologies evolve.
- (f) Reflective practice: structured opportunities for critical reflection, including professional journals, peer observation, and collaborative lesson study.
- (g) Identity development support: mentorship, professional community building, and advocacy skills that help ESP teachers construct positive professional identities and assert the legitimacy of their work within institutional settings.

#### **4.3. Implications for Future Research**

Several gaps in the ESP teacher education literature deserve attention. Comparative studies across national contexts remain scarce, as do longitudinal investigations of teacher development (Yan, 2025). Research on the effectiveness of different ESP teacher preparation models, particularly controlled comparisons of the conversion, specialization, and collaborative approaches described above, would be especially valuable. The impact of emerging technologies, particularly artificial intelligence, on ESP teacher roles and competency requirements represents an urgent frontier. More fundamentally, the field would benefit from more empirical studies that focus on ESP teacher learning processes rather than learner outcomes, addressing the imbalance that Supunya (2023) and Yan (2025) have both noted.

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The authors used OpenAI's for language editing, proofreading, and improving clarity and readability. The authors carefully reviewed and revised all AI-assisted outputs and take full responsibility for the content.

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