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## Research Paper

# Four Decades of Publications in English for Specific Purposes: Mapping the Trajectory of Empirical Research

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## Abstract

The current review mapped the trajectory of empirical research in English for Specific Purposes (ESP) journal since its inception (1980) until 2020, overall and across four time periods. In doing so, we analyzed 617 empirical articles with respect to the main themes of authors, context, and research foci, together with pedagogical implications offered in the studies. Each of these broad themes had more specific subthemes. Our review suggested that empirical articles in this journal were typified by single-authorship and contributions by an increasing number of female writers. The empirical publications in this journal addressed almost exclusively English as a focal language. There was also substantial, yet disproportionate, focus on writing while speaking garnered only modest attention. A majority of the empirical studies included pedagogical implications either short or extended. Along with these research trends, we also provided a detailed picture of the changes across and within the time spans. This review of the research trend and discussion of the findings, we believe, offer the story of the journal from within, helping both experienced and novice researchers to gain an overview of the field and identify the mainstay publishing domains in a flagship journal of ESP.

**Keywords:** English for Specific Purposes; ESP Empirical Articles; ESP Research Focus; ESP Pedagogical Implications.

## 1. Introduction

English for Specific Purposes journal (ESPj) was first established and edited in 1980 by “Grace Mancill of the English Language Institute at the American University in Washington, D.C” (Swales, 2020, p. 4). Having been published for around half a century (43 years), as the first specialist peer-reviewed international journal, ESPj is now deemed by ESP community to be a flagship journal (Hyland, 2022) leading in the field (Master, 2005) with the highest readership and greatest relevance and impact (see Gollin-Kies, 2014; Hyland & Jiang, 2021a), thereby propelling ESP research. As indicated on the journal’s Website, ESPj has published articles on a wide variety of topics pertaining “to the teaching and learning of discourse for specific communities: academic, vocational, or otherwise specialized” (Journal of English for Specific Purposes, n.d.). Research on issues, ranging from discourse analysis to teaching and testing techniques and curriculum development and evaluation, are also encouraged, provided that it concerns English for specific purposes (ESP).

As can be seen on the journal’s Webpage, ESPj has an impact factor of 2.8 in 2020, a rising 5-year impact factor of 3.8, and enjoys a high and praiseworthy ranking in the 2020 Journal Citation Report ranking 23<sup>rd</sup> among 193 journals in Linguistics and Language. ESPj is ranked Q1 in both Education and Linguistics and Language. This dual top ranking suggests that *ESPj* addresses and engages scholarship and readerships from both areas. It is deemed that this consolidation and expansion is completely inevitable given that many students and professionals from a wide range of disciplines and professions need English for their specific and professional purposes. As well, we concur with Hyland (2022) that this vast scope benefits ESP by providing recourse to functional, successful, and pertinent ideas and insights from other theories and practices likely to be integrated into “a coherent approach to language education” (p. 2). Of note is that its



impact score (IS) 2020 was 3.39 in 2020, increasing by 0.26 (8.31%) in comparison to its IS in 2019, suggesting a rising trajectory (Resurchify, n.d.). As IS is indicative of the annual mean number of citations that articles in a journal have received, this rising trend in ESPj manifests its growing import in the field. In addition, with respect to the h-index, an index of productivity and citation impact of publications, ESPj now has a commendable h-index of 72. These indexes clearly highlight ESPj as a leading and high-ranking journal in the field.

Swales (1988) points out that one of the effective ways to depict a scholarly journal's evolution is through an account of its history. Such an account of leading and defining journals of a field reflects the research interests and concerns of the scholarly community prevalent at different times and over its course of publication from within. Given the growing popularity, relevance, readership, and impact of ESPj on ESP researchers and practitioners, as well as a more than a 40-year record of publication, it is both timely and of utmost significance to conduct a review on the published articles in its lifespan. Because of the long publication period, the review entails one of the most comprehensive reviews done in relation to ESPj and ESP, in general. Such a review and analysis is hoped to portray a vivid picture of the growing ESP research across 4 past decades as well as to provide insights for different stakeholders in advancing ESP. What is more, this review is intended to assist future researchers to take stock of former research and ESP development, to understand the current trends and to develop more informed research agendas and directions. Given the current status of ESP in applied linguistics (AL) theory, which has resulted from a wide range of research foci it targeted (e.g., needs analysis, identity, genre studies, the use of English as a lingua franca, classroom-based research, ethnography, critical ethnography) and the significant role it has played in driving research and pedagogy in AL as well as the significant contributions made to ESPj, one may find it revealing to have a lucid and recent picture of the trends of research in this field as published by this flagship journal of ESP. This will certainly assist both early- and late-career researchers to see the big picture and identify the gaps.

This study can also be viewed as a “meta-disciplinary inquiry” or “historical inquiry” (Matsuda, 2005, p. 71), having examined historical developments of a wide range of themes in ESP as an interdisciplinary area. It can also be considered a “narrative inquiry” (Casanave, 2005) as we sought to shed light on ESP research trajectory in order to be able to tell the story of ESP research developments from within, as manifested in ESPj. Hence, in order to achieve this goal, the below two overarching research questions have been formulated:

1. What is the status quo of ESP research in the lifespan of ESPj, as the flagship journal in the field, in terms of authorship, contexts, and research foci?
2. To what extent have pedagogical implications been focused in ESPj articles in its lifespan?

## 2. Review of the Related Literature

In comparison to other areas of ELT, the history of teaching for specific purposes is more difficult to track down given that only a small amount of it is on public display for example in the form of courses and publications (Howatt & Smith, 2014). The early ESP research studies were devoted to communication across different languages in different areas like finance and information technology (Benesch, 2001; Johns, 2013; Starfield, 2013). Later, however, a wide range of areas such as English for academic purposes (EAP), English for occupational purposes (EOP), and English for vocational purposes (EVP) were also embraced (see Belcher, 2009 for a full list).

A remarkable turn in the history of ELT has certainly been the ESP movement. With a long history since the late 1960s, through the 1970s, the specific use of English has been a major concern for the ELT academia (Johns, 2013; Swales, 2020) until it has moved “from periphery of applied linguistics to a serious force on the world stage” (Hyland & Jiang, 2021b, p.13). What invariably has characterized ESP is its persistent concerns with “identifying the target situation and then careful analysis of the linguistic features of that situation” (Hutchinson & Waters, 1987, p. 12) with respect to the target communities of practice and discipline (Basturkmen, 2010) to attain the best practical outcomes (Dudley-Evans & St John, 1998). Reviewing the related literature above, we can see that three movements contributed to the initiation of the new ESP:

- a. The exigencies of a “brave new” world after WWII with advancements in various dimensions, and English becoming the international language of financial and technological transactions

- b. The great movements in linguistics focusing on language use in real-life situations and tailored to specific demands
- c. the shift of attention to the learners with specific, yet different, language needs and interests

Basturkmen (2010) depicts the pervasive presence of ESP in all aspects of language teaching and learning: English for academic, professional, and occupational purposes (see Table 1). A cursory look at Figure 1 (Anthony, 2018) reveals that under each branch there is a distinction between general and specific purposes (i.e., EGAP and ESAP), for instance. Moreover, the emergence and publication of journals like ESPj, “the first peer-reviewed international journal in the field” (Swales, 2020, p. 4), Journal of English for Academic Purposes (JEAP), The Asian ESP Journal, English for Specific Purposes World (ESP World), and ESP Today as well as international ESP conferences attest to the advancement of ESP as an independent discipline.

Table 1. *Areas of ESP Teaching*

Branch	Subbranches	Examples
English for Academic Purposes (EAP)	English for General Academic Purposes (EGAP)	English for academic Writing
	English for Specific Academic Purposes (ESAP)	English for law studies
English for Professional Purposes (EPP)	English for General Professional Purposes (EGPP)	English for the healthcare sector
	English for Specific Professional Purposes (ESPP)	English for nursing
English for Occupational Purposes (EOP)	English for General Occupational Purposes (EGOP)	English for the hospitality industry
	English for Specific Occupational Purposes (ESOP)	English for hotel receptionist

It is common to look back at accumulated knowledge and evidence about issues in a given domain across primary studies (Norris & Ortega, 2007). Integrating available research evidence and secondary research in the form of systematic reviews can benefit the field of AL by facilitating dialogues between subfields, providing clear and reliable summaries in a given domain (Chong & Plonsky, 2023), so that patterns, gaps, and inconsistencies in findings and methodology may be uncovered with more precision (Norris & Ortega, 2006).

As predicted by Norris and Ortega (2007), the many beneficial potentials of research synthesis have made it thrive in AL. Research synthesis has been approached in AL mainly quantitatively through bibliometric and scientometric analyses (e.g., CheshmehSohrabi & Mashhadi, 2023; Hyland & Jiang, 2021a; Hyland & Jiang, 2021b; Liu & Hu, 2021) and qualitatively through more narrative accounts and systematic reviews (e.g. Canagarajah, 2016; Ghanbar & Rezvani, 2023a, 2023b; Gollin-Kies, 2014; Riazi et al., 2018; Riazi et al., 2020; Slomp, 2019; Stapleton & Shao, 2018). Moreover, there have been some scholars who showed interest in doing comparative studies across various journals (e.g., Gao, Li, & Lu, 2001; Gollins-Kies, 2014; Liu & Hu 2021), whilst others opted to characterize the trend within the same journal (e.g., Ghanbar & Rezvani, 2024; Hewings, 2002; Riazi et al., 2018; Riazi, Ghanbar & Rezvani, 2024; Slomp, 2019; Swales & Leeder, 2012).

In the field of ESP, many reviews have sought to map its historical development as well as key areas and issues of interest in various eras and stages of its evolution. Most of these attempts were made by ESP luminaries and reviewers who reflected on ESP research and practice by drawing on their expertise and experience in the field (e.g., Belcher, 2009; Dudley-Evans & St John, 1998; Hutchinson & Waters, 1987; Paltridge & Starfield, 2011; Swales, 1985, 2019). Basturkmen (2021, p. 5), for example, examined ESP research strands from her “perspective of working over twenty

years as an academic specialising in ESP and EAP.” The review identified mainstay topics characterizing ESP research and emerging topics along with those worth more attention. Apart from these largely narrative reviews, there have been systematic reviews mainly focusing on published research in key ESP and EAP journals (e.g., Cheng, 2019; Ghanbar & Rezvani, 2024; Gollin-Kies, 2014; Hewings, 2002; Hyland & Jiang, 2021a & 2021b; Johns, 2013; Liu & Hu 2021; Master, 2005; Riazi et al., 2020; Swales & Leeder, 2012).

On the 21<sup>st</sup> anniversary of the ESPj, Hewings (2002), employing a bibliometric approach, analyzed the studies to trace the development of the contributions encompassing four 5-year eras, with the objective of predicting future lines of research. With respect to topics, he observed a decrease in ESP in general and a growth more in EAP than EOP. The study reported the geographical origin of the papers, the foci of them, and the literature they referred to. In a similar vein, Gollin-Kies (2014) aimed at discovering the predominant research methodologies used in ESP and EAP journals from 2003 to 2012. The research methods employed in the journals, as indicated in the study, were “overwhelmingly qualitative, with an emphasis on analysis of written discourse” (Gollin-Kies, 2014, p. 27). To have a deeper grasp of student needs, she suggested, ESP practitioners may resort to quantitative methods as well. This study, nonetheless, just investigated a limited period, and, hence, more comprehensive studies with a wider time span were needed to draw firm conclusions. Riazi et al., (2020), in line with Riazi et al. (2018), also conducted a similar study scrutinizing 416 empirical articles in JEAP, comprising more themes such as gender, communication skills, and pedagogical implications. Addressing Riazi and his colleagues’ (2018) call and emulating Riazi et al., (2020), this time in the ESP, we hope our study will add to the existing literature by covering the widest time span of 40 years of ESPj and the broadest set of themes.

Working on a pool of 1,092 papers in ESPj and JEAP between 1980 and 2018, Liu and Hu (2021), used bibliometric methods to examine the cocitation patterns and unique references in an attempt to identify the main areas of research in three phases of conceptualizing (1970s-1990s), focused on needs analysis; maturing (1990s-2000s) characterized by major methodological approaches; and flourishing (2000s-), featuring the growth of diverse research interests. They came up with 11 clusters representing these research areas. In a similar vein, Hyland and Jiang (2021a) used bibliometric techniques to explore a wider corpus of 12,600 EAP articles from 40 Social Science Citation Indexed (SSCI) journals to explore the trends and changes in EAP research over 4 decades of EAP research. More specifically, they explored mainstay topics along with the most influential publications, authors, and source countries. They revealed that topics related to teaching, learning, and classroom practices were consistently popular with an increasing interest in contexts and discourses from 2001. They also found that topics concerning identity, genre and interaction received considerable attention. The most cited authors and publications also indicated a significant shift of interest to social interaction and academic literacy.

Following their former research and adopting again a bibliometric method, the same writers (Hyland & Jiang, 2021b) systematically reviewed the ESP literature as well over 30 years (1990-2020) to trace the evolution of research in ESP-related papers from SSCI journals. They analyzed the most prevalent topics and most influential publications, journals, authors, and countries during this recent period. The review results indicated “that classroom practices remain central to the discipline, and that there has been a consistent interest in specialised texts, particularly written texts, and also in higher education and business English, with a massive increase in the attention devoted to identity and academic and workplace discourses” (Hyland, 2022, p. 204).

Building upon the aforementioned reviewed studies and drawing on Riazi et al. (2020), Ghanbar and Rezvani (2024), as well as Riazi et al. (2018), our study seeks to advance this line of research by mapping ESP empirical research trajectory (see Gough & Thomas, 2016, 2017) as represented in the empirical articles (EAs) of the leading ESPj in its lifespan. We explored themes of interest including authors, context, and research foci along with pedagogical implications offered, which have not yet been fully and recently targeted in the pertinent literature, as we reviewed. We hope that analyzing this broad set of themes and the wide time span of four decades of ESPj publication will add to the existing ESP literature and portray a representative, clear, and multidimensional picture of ESP research. The current review and analysis can complement other ESP-specific and relevant reviews and make its significant contributions by providing accounts of research trends in different time periods in ESP research as proposed in Johns (2013, p. 7): “The Recent Past (198-1990), The Modern Era (1990-2011), and The Future (2011 plus).” In what follows, we will expound upon the procedures utilized to develop a corpus of EAs as well as our coding scheme and coding stages.

### 3. Methodology

Researchers' perspectives of their fields and themselves need to be contextualized within a grasp of the complexities of past practices and knowledge development (Casanave, 2005). In a similar vein, our review aims to connect individual articles to create larger "meta-disciplinary narratives" or "the stories of the field" (Casanave, 2005, p. 19). Essentially, we conducted a "historical inquiry" (see Matsuda et al., 2003) to map the empirical research trajectory (Newman & Gough, 2020) of the field of ESP focusing on certain themes and as reflected in the published scholarship in ESPj.

#### 3.1. Corpus and Corpus Compilation

Our original pool comprised 1,465 files that were downloaded from the journal's Website. It encompassed a wide range of publications such as editorials, announcements, book reviews, short communications, discussions and research notes, and full-length research articles in the journal's lifespan. We meticulously examined these files and sorted them into two folders: (a) full-length research articles ( $n = 764$ ) and (b) others ( $n = 701$ ). Having examined the abstracts and method descriptions of the full-length research articles, we excluded those that were considered nonempirical and not primary-led ( $n = 147$ ) (e.g., critical reviews, historical reviews, research syntheses, state-of-the-art articles, bibliometric studies). This step yielded a total of 617 EAs, spanning four decades of ESPj's publication up to the end of volume 60, October 2020 (1980 to 2020). It should be noted that this sample of EAs included full-length articles that involved first-hand data (quantitative, qualitative, or mixed-methods) and analyses. Moreover, those EAs with no participants, such as corpus-based studies, were also included provided that they collected and analyzed first-hand data. First-hand data were conceptualized here as data specifically collected and analyzed by researchers in the research reported. Accordingly, and to reiterate, other papers such as book reviews, review articles, theoretical articles, and editorials were excluded from our review.

#### 3.2. Coding and Coding Procedures

We aimed to complement what other systematic and comprehensive reviews of ESP and ESPj achieved. This study was specifically informed by Riazi et al., (2018), Gollin-Kies (2014), and Riazi et al. (2020). Accordingly, this systematic mapping (Newman & Gough, 2020) looked into three broad-based themes, including (1) authors, context, and research foci, and (2) pedagogical implications.

The coding of the EAs was conducted over a period of 6 months. Initially, we created an Excel file that included all the 617 EAs, along with their details of author(s), years of publication, titles, volumes, and issue numbers. Subsequently, we annotated and coded the studies based on the main themes or coding categories. The first coding category, "authors, context, and research foci", encompassed the following subthemes:

- Authorship (the number of authors and first author's gender). In coding "gender" we considered the gender of the first author as the main contributor and representative of the other contributors (see Bu et al., 2020)
- Collaboration (patterns of collaboration of authors, that is, collaborations were within the same unit, across units, across institutions, across countries, or no collaboration)
- Language addressed in the EAs (whether the ESP researchers focused merely on English or another language or a combination of different languages)
- Academic disciplines and contexts (whether EAs targeted one academic discipline, multiple disciplines (EAP), EAP/ESP programs, schools, or others outside these contexts, for example, EPP and EOP)
- Communication skills (whether EAs focused on one communication skill, for example, writing, or a combination of skills, for instance, reading and listening, or no communication skill was targeted in case of needs analysis or academic program evaluation).

The last coding category was "pedagogical implications (PIs)," where articles were coded with regard to whether they offered any PIs, and if so, whether of limited or extended length, explicit or implicit, and irrespective of whether or not there was an explicit heading. We designated PIs exceeding 125 words as the maximum paragraph length in technical writing (Covey, 2012) as extended and those with fewer words led us to code them as short.



Apart from examining the overall patterns, we also analyzed themes across four time spans: 1980-1989 ( $n = 49$ ), 1990-1999 ( $n = 114$  articles), 2000-2009 ( $n = 187$  articles), and 2010-2020 ( $n = 267$  articles). The rationale behind having this analytical and periodical analysis is to make comparisons over different time spans in order to better clarify the developments and changes in terms of our three targeted themes. It should be noted that in the interest of ensuring coding consistency (Riazi, Rezvani, & Ghanbar, 2023), 25 EAs were randomly selected and coded by both authors before the main coding stage. In this initial phase, among a total of 300 cells, we identified 19 instances of disagreements (6.3%). We, then, discussed these challenges and inconsistencies in a series of meetings and resolved them, resulting in some refinements in our coding scheme. In the second round of investigating the intercoder agreement, we randomly selected 62 articles (approximately 10% of the data) and coded them independently. Having coded the articles, we assessed the coding reliability this time by calculating the Kappa coefficient. The intercoder reliability was 0.94 (for the first theme) and 0.96 (for PIs). Having examined and resolved the disagreements, both authors commenced the main coding stage and conducted coding EAs. The next section presents the results of the main coding phase.

#### 4. Results

In what follows, the results are presented based on the themes and their categories. The results are reported in frequency and percentage:

##### 4.1. Authors, Contexts, and Research Foci

The first finding, which, to an extent, could be foreseeable, was that the number of EAs published in ESPJ exponentially rose from 49 EAs in the first period across the middle decades (114 and 187 EAs) to 267 EAs in the last decade. The first theme of interest concerned authorship, gender of the first author, collaboration patterns, language addressed, communication skills, and academic disciplines and contexts. Regarding authorship, single authorship enjoyed the largest frequency in all the four periods, that is, 63.3% ( $n = 31$ ), 77.2% ( $n = 88$ ), 65.8% ( $n = 123$ ), 49.8% ( $n = 133$ ), respectively, across the four decades, and overall (60.8%,  $n=375$ ). Notably, co-authorship was observed to have increased from 1990 ( $n = 22$ , 19.3%) to 2020 ( $n = 93$ , 34.8%). The multiple authorship also more than doubled during the 40 years increasing from 6.1% ( $n = 3$ ) in the first decade to 15.4% ( $n = 41$ ) in the last decade. Interestingly enough, authors working in pairs outnumbered multiple authors overall (28.5% vs. 10.7%) and across the four-time spans (30.6% vs. 6.1%, 19.3% vs. 3.5%, 24.6% vs. 9.6% and 34.8% vs. 15.4%).

Table 2. Collaboration Patterns Across the Four Periods and Overall

Collaboration	1980-1989	1990-1999	2000-2009	2010-2020	Total
No Collaboration	31 (63.3%)	88 (77.2%)	123 (65.8%)	133 (49.8%)	375 (60.8%)
Within the Same Unit	10 (20.4%)	5 (4.4%)	12 (6.4%)	28 (10.5%)	55 (8.9%)
Across Units	2 (4.1%)	4 (3.5%)	11 (5.9%)	17 (6.4%)	34 (5.5%)
Across Institutions	1 (2%)	3 (2.6%)	15 (8%)	36 (13.5%)	55 (8.9%)
Across Countries	4 (8.2%)	11 (9.7%)	18 (9.6%)	51 (19.1%)	84 (13.6%)
Not Specified	1 (2%)	3 (2.6%)	8 (4.3%)	2 (0.7%)	14 (2.3%)
Total	49 (100%)	114 (100%)	187 (100%)	267 (100%)	617 (100%)

The distribution of author collaboration is displayed in Table 2. As with collaboration among researchers, overall, collaboration across countries (13.6%,  $n = 84$ ) was noticeably the largest involving also a consistent increase across the four periods. Similarly, collaboration across institutions consistently increased from 2% in the first decade to 13.6% in the last decade. Research coauthorship and collaboration among scholars, as suggested by our corpus, was larger in “within” (8.9%) than “across departments” (5.5%), and in both settings they were on the rise in more recent decades after a sharp drop in the case of “within units” after the first decade. There was also a negligible number of ( $n = 14$ , 2.35) articles whose co-authorship was not traceable.

Pertaining to the gender of the first author, the overall female contribution (61.9%,  $n = 382$ ) substantially outnumbered the male contribution 37% ( $n = 228$ ). This predominance was observed across the four time spans, with a peak of 65.5% ( $n = 175$ ) in the 2010s.

The languages addressed are summarised in Table 3. As expected, English was predominantly the language of interest of 90% of studies, overall and across the four decades. Only one single study (0.2%) addressed solely Spanish,

French, and Dutch separately. There were also studies (4.4%, n=27) that focused on English and another language in combination:

Table 3. *Language Addressed Patterns Across the Four Periods and Overall*

Language Addressed	1980-1989	1990-1999	2000-2009	2010-2020	Total
English	47 (95.9%)	102 (89.5%)	173 (92.5%)	255 (95.5%)	577 (93.5%)
Spanish	0 (0%)	1 (0.9 %)	0 (0 %)	0 (0%)	1 (0.2 %)
English and Spanish	0 (0%)	3 (2.6%)	4 (2.1%)	4 (1.5 %)	11 (1.8 %)
English and another language, Other Than Spanish <sup>a</sup>	1 (2.0 %)	5 (4.4 %)	7 (3.7 %)	8 (3.0 %)	21 (3.4 %)
English and Other languages, Other Than Spanish <sup>b</sup>	0 (0 %)	3 (2.6 %)	3 (1.6 %)	0 (0%)	6 (1.0 %)
French and Dutch	1 (2.0 %)	0 (0 %)	0 (0 %)	0 (0%)	1 (0.2 %)
Total	49 (100%)	114 (100%)	187(100%)	267(100%)	617 (100%)

Notes. <sup>a</sup>This is an amalgamation of English and another language except for Spanish (see Sadeghi & Alinasab, 2020 for an example).

<sup>b</sup>This is an amalgamation of English and other languages which did not include Spanish (see Bensoussan, 1990 for an example)

Concerning the targeted communicative skills in ESPj's articles, we found that the vast majority of studies (54.3%, n = 335) focused on writing followed by speaking (15.2%, n = 94), a combination of skills (5.2%, n = 32), reading (3.6%, n = 22), and listening (1.3%, n = 8). It should be indicated that 20.4 % (n = 126) of studies did not consider any communication skills as they investigated issues such as textbook evaluation, curriculum development, needs analysis, and so forth without reference to any particular skill. The periodical patterns were also roughly the same as the overall pattern. In the first period, writing was the most frequently studied skill (44.9%, n = 22), followed by no communication skill (22.6%, n = 11), speaking (16.3%, n = 8), and a combination of skills (12.2%, n = 6). In the second period, resembling the previous period, writing (55.3%, n = 63) and no communication skills (17.5%, n = 20) were the most predominant studies. In contrast, reading and listening were the least focused ones (6.1%, n = 7 and 2.6%, n = 3, respectively). In the third period, likewise, writing (55.1%, n = 103) kept its dominance, with no communication skills and speaking being the next categories of studies (18.1%, n = 34, and 14.4%, n = 27, respectively). Further to mention is the finding that reading and listening slightly lost their popularity in this time span (4.3%, n = 8 and 1.1%, n = 2, respectively) as opposed to the previous period (6.1%, n = 7 and 2.6%, n = 3, respectively). In the most recent period, writing (55.1%, n = 147), again, was the most recurrent skill followed by no communication skill (22.9%, n = 61) and speaking (16.5%, n = 44). It should also be pointed out that reading (2.2%, n = 6) and listening (0.7%, n = 2) continued their falling trend in this period recording the lowest frequently targeted skills. It is worth noting again that through the decades the productive skills of writing and speaking were devoted to the focus of attention in ESPj's empirical research.

With regard to disciplines, the majority of coded studies (66%, n = 407) focused on academic disciplines (see Table 4). The context of EAP/ESP programs encompassed merely 14.4% (n = 89) of all the published research in ESPj. Not surprisingly, only a few studies (1.3%, n = 8) were implemented at schools, which is quite expected, given the typical nature of ESP research. Less than one-fifth of the articles (18.3%, n = 113) either did not specify the research site or were conducted outside the aforementioned academic contexts. It should be noted that a considerable number of such studies (77%, n = 87) were conducted in workplace settings (for more details see Figures 2 & 3):

Table 4. *Targeted Disciplines Across the Four Periods and Overall*

Discipline	1980-1989	1990-1999	2000-2009	2010-2020	Total
Single Discipline	19 (38.8%)	46 (40.4%)	74 (39.6%)	106 (39.7%)	245 (39.7%)
Multiple Disciplines	12 (24.5%)	24 (21.1%)	45 (24.1%)	81 (30.3%)	162 (26.3%)
EAP/ESP Programs	10 (20.4%)	25 (21.9%)	31 (16.6%)	23 (8.6%)	89 (14.4%)
Schools	0 (0%)	1 (0.9%)	1 (0.5%)	6 (2.2%)	8 (1.3%)
Outside of These Contexts or Not Specified	8 (16.3%)	18 (15.8%)	36 (19.3%)	51 (19.1%)	113 (18.3%)
Total	49 (100%)	114 (100%)	187 (100%)	267 (100%)	617 (100%)

The data suggests that research in academic disciplines remained consistently popular across the periods, showing an approximate 6-fold growth from the first to the last period. However, research in EAP/ESP programs indicated a gradual decrease over time. In the first and second periods, research in the context of EAP/ESP programs

accounted for almost one-fifth of studies (20.4%,  $n = 10$  and 21.9%,  $n = 25$ ); however, this proportion dropped in the third and fourth periods (16.6%,  $n = 31$  and 8.6%,  $n = 23$ , respectively).

We also presented the breakdown of studies investigating academic disciplines. Among these studies ( $n = 407$ ), 39.8% ( $n = 162$ ) targeted more than one academic discipline, while less than two-thirds of these studies (60.2%,  $n = 245$ ) were conducted in a single discipline. Of the 245 articles focusing on a single discipline, 27.8% ( $n = 68$ ) were in sciences and engineering. Following that, over a fifth of studies (22.4%,  $n = 55$ ) were done in business and economics. It was also observed that 18% of studies ( $n = 44$ ) were conducted in medicine and health-related fields, 13.1% ( $n = 32$ ) in language education and AL, 6.5% ( $n = 16$ ) in arts and humanities, and the rest spread across other disciplines, including law (6.1%,  $n = 15$ ) and mathematics (2%,  $n = 5$ ).

Eventually in this section, in order to have a clearer and richer perspective on those 87 studies conducted in professional (workplace) settings, we further explored them to see whether they were conducted in EPP or EOP areas (see Basturkmen, 2010 for a related framework and definitions). We witnessed that EPP, overall, outnumbered EOP in ESPj, with 52% of studies implemented in this area ( $n = 45$ ). EOP studies were also identified in 43% of EAs ( $n = 37$ ). Interestingly, in the last period, we found five studies conducted in both EPP and EOP areas (5%). From the historical perspective, as can be seen in Figure 1 and Figure 2, in the first and the second periods both EPP and EOP EAs appeared with similar frequencies. Yet, in the third period, EOP surpassed EPP, with 55% ( $n = 17$ ) of studies conducted in this area, as against 45% share of EPP ( $n = 14$ ). In the most recent period in ESPj, however, a new pattern emerged, with the dominance of EPP (59%,  $n = 24$ ) and mixing EPP and EOP areas in a number of articles (12%,  $n = 5$ ). Another pattern worth noting is the consistent growth of EPP EAs through the four periods of ESPj, with 5% of EPP articles identified in the first period, as against 53% of them found in the last period. Periodically, a similar pattern was also seen in EOP EAs, except for a drop from the third (46%) to the last period (32%; see Figure 1):

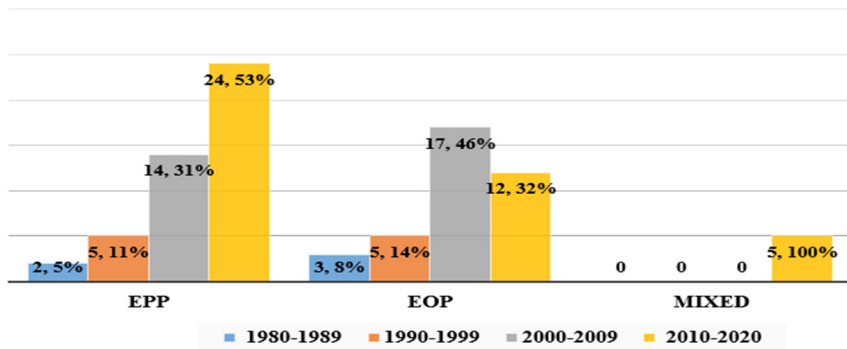


Figure 1. ESPj's Lifespan in Terms of EPP and EOP

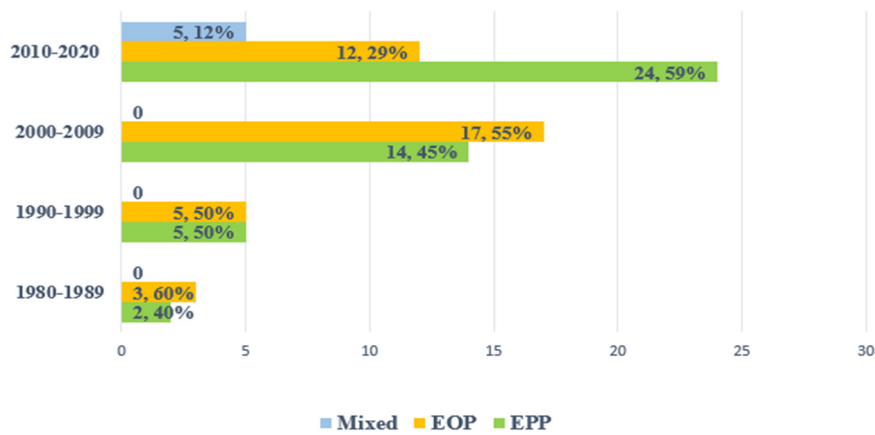


Figure 2. EPP and EOP Studies Across Time Periods in ESPj



## 4.2. Pedagogical Implications

In this study, an attempt was also made to examine the PIs in the ESPj's EAs and the findings are summarized in Table 5. In aggregate, a large number of EAs (93%,  $n = 576$ ) provided PIs. This preponderance was also evidently observed to have grown across four periods, that is, 84% ( $n = 41$ ), 89% ( $n = 102$ ), 93% ( $n = 174$ ), and 97% ( $n = 259$ ), in order (see Table 5). Regarding the length of pedagogical implications, approximately similar frequencies of short (49%,  $n = 305$ ) and extended (44%,  $n = 271$ ) PIs were observed. A comparatively diverse picture is painted across the four time spans, though. The PIs of the majority of studies in the first two decades were of short length (69%,  $n = 34$ ; 55%,  $n = 63$ , respectively) compared to their extended counterparts 14% ( $n = 7$ ) and 34% ( $n = 39$ ). In a similar vein, mixed results were found in the last two decades. In the third decade, the frequency of short PIs (41%,  $n = 77$ ) was smaller than that of the extended length (52%,  $n = 97$ ). For the last time period, however, this distribution was rather balanced including 49% ( $n = 131$ ) short and 48% ( $n = 128$ ) extended PIs (see Table 6):

Table 5. *Pedagogical Implications Pattern Across the Four Periods and Overall*

Pedagogical Implications	1980-1989	1990-1999	2000-2009	2010-2020	Total
Some Implications	41 (84%)	102 (89%)	174 (93%)	259 (97%)	576 (93%)
No Implications	8 (16%)	12 (11%)	13 (7%)	8 (3%)	41 (7%)
Total	49 (100%)	114 (100%)	187 (100%)	267 (100%)	617 (100%)

Table 6. *Length of Pedagogical Implications Pattern Across the Four Periods and Overall*

Length of PIs	1980-1989	1990-1999	2000-2009	2010-2020	Total
None	8 (16%)	12 (11%)	13 (7%)	8 (3%)	41 (7%)
Limited	34 (69%)	63 (55%)	77 (41%)	131 (49%)	305 (49%)
Extended	7 (14%)	39 (34%)	97 (52%)	128 (48%)	271 (44%)
Total	49 (100%)	114 (100%)	187 (100%)	267 (100%)	617 (100%)

## 5. Discussion

### 5.1. Authors, Context, and Research Foci

The current study sought initially to provide a detailed picture of EAs published in ESPj during its 40-year lifespan with regard to authorship, collaboration, first author gender, language addressed, academic discipline, and communication skills. By examining the authorship, it was found that, overall, more than 50% of studies had a single author. Similar patterns also emerged in earlier research findings (Lei & Liu, 2019a, 2019b; Riazi et al., 2018; Riazi et al., 2020). Given the general tendency in the social sciences to divide the workload in terms of coauthorship (Fanelli & Lariviere, 2016) and also the characteristic feature of ESP bringing together different specialisation areas, the pattern could have been different. We also acknowledge that the frequency of single-authored papers is also dependent on the journal and specific area of research apart from the broader field of science (Abt, 2007). In the articles we analysed, only in the last period the number of single-authored papers dropped from around two-thirds to a half. Apart from the above arguments and expectations, it might be speculated that the tendency to boost one's citation and publication might have provoked researchers to take cooperative research projects.

The burgeoning growth in the number of EAs from a total of 49 to 114, 187, and 267 in the four respective time periods should give us a pause. The increasing number of issues from two to three and, most recently, four, annually, suggests the significance of knowledge dissemination and visibility in academia, which, according to Fanelli and Lariviere (2016), has been manifesting the impact of publish or perish philosophy. Hyland (2016a, p. 58) refers to this proliferation in scholarly publishing as an "enormous industry that dominates the professional lives of academics across the globe." In fact, recruitment, tenure, promotion and funding are pegged to quality articles published in peer-reviewed journals (Amutuhaire, 2022) like ESPj and other publications. This can account for the steady growth in articles published in ESPj.

Gender inequity in scholarly publications was previously reported in the literature. The picture is highly complex involving variables such as generation age, disciplinary differences, and geographical locations (Nygaard & Bahgat, 2018). Our interest was hence piqued to the point that we decided to check out the publishing practices of women in ESPj's published history. Female contributions well exceeded their male counterparts, and more so in the recent decades, despite the view that women "are less likely to be in senior author positions"—opposite to what we found as we included

the first author's gender. Women's papers "are more likely to be rejected and spend longer in review than those authored by men" resulting in "a lower rate of publishing leaving them on a slower trajectory of prominence in academic fields (Uptegrove et al., 2021, p. 80). It seems that in the case of ESPj, the picture can be painted differently and men should strive to emulate women authors.

Looking at gender differences across disciplines, a discrepancy existed between the present study and prior research findings (e.g., Nygaard & Bahgat, 2018). Arguably, their results illustrated the status quo in disciplines other than AL. Our findings corroborate Hewings (2001) who found a steady increase in females' contributions compared to the earlier volumes. It is worth noting that the findings of a more recent study in AL, as well, are in line with ours. Riazi et al. (2020), examining the first author gender in the EAs of the JEAP, came up with a similar pattern that women as first authors contributed twice as men did. This differential participation of women and men in research publication in ESPj might be accounted for variously, for example, by the higher commitment of academic women to professional development (see Jensen, 1982; Johnston, 1998) given that our study indicated (see also Riazi et al., 2020) that most EAs were concerned with EAP contexts where academics have a stronger voice and better opportunity to publish research (see discussion on EAs in workplace settings). However, we acknowledge that any explanation beyond stereotypical understanding should rest on further empirical data including the pattern of gender distribution of academics in ESP-related higher education in the first place.

With respect to the languages addressed, our analysis of the ESPj's EAs indicated that empirical scholarship published in ESPj was linguistically homogenous and almost exclusively addressed English as a focal language. Previous research has also confirmed that English enjoys a dominant status in published research (Riazi et al., 2018; Riazi et al., 2020; Riazi, Ghanbar, Marefat, & Fazel, 2023; Sadeghi & Alinasab, 2020). This English dominance partly stems from the spread of English as a lingua franca across the world (Anthony, 2018; Canagarajah, 1996; Crystal, 2012).

Although the journal is entitled English for Specific Purposes, suggesting that it is concerned with only English, there is no indication in the journal's aims and scope restricting research in this area to only English. ESPj, as described on its website, broadly welcomes and encourages research on language teaching and learning in relation to specific discourse communities. This reminds us of the lingering discrepancy between the common ESP being at the forefront of research and the more inclusive language for specific purposes (LSP) celebrating any language (Cotos, 2017). In the ESP literature which abounds with various acronyms (Dudley-Evans, 2001; Harding, 2007; Hyland, 2022), ESP and LSP are interchangeably used (e.g., Basturkmen & Elder, 2004; Hyland, 2018; Lockwood, 2015; Tardy, 2018; Upton, 2012) and are not intended to refer to different fields unless otherwise indicated. In effect, as warned by Pelaez-Morales (2017) about the Journal of Second Language Writing, the perception that the journal publishes research in and on English might prompt researchers to do research on only English or find another journal for their research. The consequence, then, would be a limited understanding about other languages for specific purposes.

Given that a substantial percentage of studies (79.6%) in ESPj concerned communication skills, it would be noteworthy that there was a predominant yet disproportionate focus on writing both within and across the four time periods and speaking received only some modest attention from ESP researchers, including less than one-fifth of all the articles. Put it differently, for ESP researchers, communication skills figured significantly, yet writing was privileged in their research which was in a way foreseeable given this point that genre analysis is one of the most important aspects of ESP (Anthony, 2018, Hyland, 2018). This finding is in line with the result of an analogues review of JEAP by Riazi et al. (2020). They also came up with a skewed focus on writing. Given that knowledge is generated and circulated largely through writing (Hyland, 2006) and students are also supposed to acquire and demonstrate their knowledge mainly through this modality, an emphasis on writing is a characteristic feature of EAP (Hirvela, 2016). Because ESP and its flagship journal, that is ESPj, are inclusive of EAP, this emphasis on writing could be partially upheld, but not to the expense of a paucity of studies on other skills or their combination. We here echo Hyland's (2022) call for more ethnographic research in ESP (the paucity of ethnography was evident in EAs as a research methodology as well) to investigate students' and teachers' thoughts and viewpoints not only about the writing of the texts but also about the reading of them. We also reiterate what was recommended by Feak (2013), almost 10 years ago, to do further research on teaching ESP speaking given that our results manifested that a few studies have targeted speaking.

It is noted that ESP research on writing historically has taken precedence over research on other communication skills (Paltridge & Starfield, 2013). Part of this imbalance in research focus could also be attributed to the challenges in

collecting, transcribing, and analyzing oral data (see also Ghanbar & Riazi, 2024). However, over the years, the spread of technologies and the common use of digital devices facilitated speech data collection and transcription even for less researched languages (Hughes et al., 2010). On the other hand, there has been a growing availability of corpora of authentic discourses, for example British Academic Spoken English corpus, which can be readily mined for analysis and research (Dang & Webb, 2014). Such advances and the relative ease of doing speech research, in comparison to the past decades, were seen to be changing the ESP research landscape (Feak, 2013). Our findings, however, indicated that over even most recent decade research on oral skills was disproportionately more limited than writing research and not different from the overall pattern of research foci during the lifespan of ESPj. It seems that ESP research has been heading the same direction with a main focus on written discourse. As such, there is remaining hope, as voiced by Antony (2018), that increasing availability of multimodal and spoken corpora help ESP research to move away from written genres and look at other genres.

Additionally, our findings revealed that about two-thirds of the reviewed research was done in academic disciplinary settings. Moreover, and remarkably, we found that research in the context of EAP/ESP programs only comprised 14.4% of the studies, which somewhat differs from Riazi et al. (2020), which reported that research in EAP programs made up almost a quarter of the total research. This illustrated that ESP researchers tended to be discipline-specific, focusing more on the academic discourse conventions or sociocultural issues surrounding academic discourse in different disciplines. This correlates, as expected, with a paucity of ESP research investigating ESP programs or ESP at schools. This result also resembles a recent study (Riazi et al., 2020) revealing that only a small share of research was conducted about school contexts.

In terms of the breakdown of academic disciplines, we found that close to half of the studies (48%) were conducted in STEM (science, technology, engineering, and mathematics) disciplines—sciences and engineering (27.8%), medicine and health (18%) and math (2%), in contrast to the 13.1% of EAs focusing on language education and AL. These findings notably differ from another review in EAP (Riazi et al., 2020), which reported that a quarter of their analyzed EAP studies were done in AL or TESOL disciplines, whereas STEM disciplines constituted only around a quarter of the EAs. Apart from the status quo and the former publications signaling researchers which journal to target for their prospective ESP papers, this differing distribution of focused academic disciplines can also be attributed to the aims and scope of these two closely associated journals. No explicit indication can be found in ESPj's aims and scope description to attract more STEM articles. Nonetheless, what is understood from JEAP's aims and scope of interest appears to favor "a wide range of linguistic, applied linguistic and educational topics" from the perspective of EAP (Journal of English for Academic Purposes, n.d.) resulting in more AL papers received and ultimately published.

In this study, a follow-up analysis was carried out on the 87 EAs in workplace settings in order to see which studies were EPP and EOP and to trace the pattern of their appearance in ESPj. What motivated us to do this further analysis not planned from the beginning was that such research domains stand out in ESPj and ESP research given the pervasive presence of EAP in both (i.e., in ESPj and ESP). Such research and their publications can also distinguish ESPj from JEAP which are both dominated by EAP either considerably, as our study suggested in regard to the former, or exclusively with respect to the JEAP (see Riazi et al., 2020). In a follow-up analysis, we noted that alongside the more mainstream EAP, there was a growing interest in both EPP and EOP research in ESPj with only a small drop of EOP EAs in the last period which pleas more research. Despite this growing interest in research in and on workplace or professional settings, these research areas are on the periphery in comparison to the influential EAP force (Anthony, 2018). The considerable attention given to EAP in ESP and in ESPj is not surprising because many ESP researchers work in academic institutions (Anthony, 2018) and, in comparison to ESP practitioners, are more likely to do research in EAP (Flowerdew, 2013). The results of this study call for more research in EPP and EOP particularly if undertaken by ESP practitioners who better know the concerns and features of their workplace (Lockwood, 2013) and are supposed to take the role of a researcher (Dudley-Evans & St John, 1998) as well their other pedagogical roles.

## 5.2. Pedagogical Implications

Another theme of interest in the present study was whether or not PIs of the findings are offered in the articles. Two findings were noteworthy about PIs. First, the results pointed to a big majority (93%) of studies with PIs. Intriguingly, the percentage was on the rise consistently from the first decade (83%) to the last one (97%), illustrating that PIs are becoming an essential move in the research reports. Our analysis, generally suggests that ESP scholars publishing in the

journal are particularly concerned about the impact their study might have on ESP practice. For a practice-oriented field (Dudley-Evans & St John 1998; Liu & Hu, 2021) and for its leading journal, it is of particular importance and value that the great majority of the empirical research offer PIs, helping *ESPj* accomplish one of its missions. The finding also indicates that although ESP deals with various topics and issues relevant to specific disciplines, learners, and contexts, it “has always retained its emphasis on practical outcomes” (Dudley-Evans & St John, 1998, p. 1) and committed itself to developing pedagogical design and support (Hyland, 2013). Therefore, ESP, as an essentially applied field, remained committed to the understanding of language use, classroom practice, and research-informed language instruction (Hyland, 2022) as evidenced by our review.

It should be reiterated here that *ESPj* is a journal dedicated to publishing research related to “the teaching and learning of discourse for specific communities: academic, vocational, or otherwise specialized” (Journal of English for Specific Purposes, n.d.). Consequently, it inclusively encompasses EAP research. Part of this consistent attention to and incorporation of PIs arises from *ESPj*’s inclusion of EAP research which was shown in Hyland and Jiang (2021a, p. 22) to be consistently interested “in topics related to teaching, learning and classroom practices.” It may be fallacious to expect to see PI in any research articles (Han, 2007), nonetheless, when it comes to ESP; given the dominant pedagogical point of view in the field, its concerns are viewed in relation to teaching materials and teaching methods rather than as research topics per se (Fiorito, 2019; Whyte & Sarré, 2017). This also accounts for the *ESPj* researchers’ tendency to keep an eye on the PIs of their works for the ESP pedagogy.

The second finding worth further discussion was that around half of the EAs had a short PIs section. We are mindful of the arguments that some PIs might be pretentious rather than genuine (Han, 2007) and that not every topic can have direct bearing on or link to language teaching (Ellis, 2003). Further, single empirical research studies can not necessarily have PIs to be readily translated into ESP practice and pedagogy. However, ESP research deals, in all likelihood, with languages for specific purposes as practiced or learned in specific contexts. Thus, in light of how ESP is viewed as an area in AL with the most immediate connection to language use and education, we tend to encourage prospective researchers to offer PIs, if they can be adequately grounded in their empirical data and theoretically predicated on the relevant literature. In addition, given that almost half of the corpus of EAs provided less elaborated and expounded upon PIs, we also recommend sufficient extension and elaboration of PIs (see Markee, 1997), so that they do not seem to be just an add-on section, and, more importantly, such that misunderstanding or misapplication on the part of less familiar ESP practitioners from AL and beyond is avoided.

## 6. Conclusion and Further Directions

It was well evidenced in our results that the single authorship in *ESPj* tended to be the most predominant one, signifying that ESP researchers were more inclined to work individually rather than in cooperation with others, as multiple authorship was the least preferred type of authorship in *ESPj*. We recommend more teamwork and cooperation in future research on ESP, both with regard to authorship and collaboration given that the collaboration pattern in our results also manifested inadequate national and international collaboration. More interdisciplinary and multidisciplinary research will enrich ESP (Hyland, 2015) and when it involves more researchers from non-European countries it will boost internationalization of ESP (Hyland & Jang, 2021a, 2021b).

Pertaining to languages addressed, we observed a sheer focus on English. Although it is inevitable and, in a way, natural to see English as the primary language to be examined in *ESPj*, as its name suggests, prospective research is encouraged to take into account other languages. Most researchers publishing in prestigious journals are recently nonnative speakers of English (Hyland, 2015). Accordingly, in the context of ESP research, they can fruitfully address ESP issues in their native language as well. This can widen the scope of studies and enrich ESP in general through illuminating issues of concern in other languages (see also Morea & Ghanbar, 2024).

As with communication skills, our findings showed that the focus of attention was on writing. In fact, little attention has been paid to other communicative modalities such as speaking, reading, and listening or their combination. Future ESP research needs to focus more on other modalities apart from writing, especially receptive modalities such as listening and reading and a combination thereof. As such, ESP researchers may better represent and cater for local and global communicative needs and lacks of ESP learners in the age of multimodal communication.

As regards academic disciplines, our results revealed that the majority of the articles focused on a single discipline. Of note here is that just one-third of studies targeted multiple disciplines which illustrates that there is a need for more future research concerned with and bringing together interdisciplinary and multidisciplinary foci in ESP. Our results further highlighted a need for future ESP research on ESP programs and schools. Our findings regarding STEM disciplines also highlighted differing publication preferences in the two significant and associated journals of ESPj and JEAP. Being cognizant of their preferences and priorities may better guide future researchers in selecting an appropriate publication venue for their works or identifying research gaps as well as underexplored disciplines.

ESP has its origin in work in workplace settings (Anthony, 2018) and EOP in its broad sense, together with its various permutations in ESP, has been considered as a subdivision of ESP from the early days of ESP research and practice (see for example, Basturkmen, 2010; Belcher, 2006; Brown, 2016; Dudley-Evans & St John, 1998; Jordan, 2002; Kennedy & Bolitho, 1984; Robinson, 1991; Widdowson, 1983). Nonetheless, in this study, we witnessed that workplace research has not been given due attention in ESPj. Because there are not prestigious journals devoted to EOP research, it is recommended that more opportunities and space be allocated to such research and in particular to researchers and practitioners working in non-EAP settings in the leading ESPj.

As regards PIs, the findings indicated that the majority of studies provided them, but half of them just sketched or touched upon them in extents less than a paragraph. Hence, we suggest that future ESP researchers expound more upon the implications of their works so that their published articles turn out to be more fruitful for prospective ESP researchers and practitioners.

Ultimately, this review is not devoid of limitations which can be used as ideas for further research. Firstly, this study did not investigate the specific types of participants in EAs, so future systematic reviews may analyze *ESPj*'s articles to see which types of participants have been more targeted (e.g., undergraduate students, graduate students, university lecturers, ESP instructors) in *ESPj*. In addition, we merely considered gender of the first author in our analysis; therefore, future studies may scrutinize gender distribution by considering the gender of all authors given that there has been a dearth of empirical data about the pattern of gender distribution of academics in ESP. Last but by no means the least we need to acknowledge that our analyses and results encompassed solely EAs of *ESPj*, the flagship journal of ESP, and not other scholarly venues in ESP. In order to complement our study and capture a bigger picture of developmental and research trajectories of ESP, we suggest that prospective studies may conduct a similar review on other ESP journals like The Asian ESP Journal, English for Specific Purposes World (ESP World), and ESP Today or other types ESP related publications (e.g., dissertations).

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