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# ESP Research from 2000 to 2021: A Content Analysis of Articles in TR Dizin

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**Abstract:** This paper conducts a descriptive content analysis of the articles written on English for Specific Purposes (ESP) and published in TR Dizin from 2000 to 2021. A total of 23 ESP articles have been analyzed. Analyzing the articles written on ESP provides a fruitful opportunity for the researchers studying ESP. This study fulfills this gap by analyzing the ESP article published in TR Dizin from 2000 to 2021 as a replication of the research conducted by Gül and Sözbilir (2016). According to the findings, the majority of ESP research papers were written by one author, handled by Turkish affiliations, published in the International Online Journal of Education and Teaching (IOJET), written in English, done with the Faculty of Medicine, used descriptive and survey research designs, Likert scale as a tool, done with undergraduate students with a sample size of 31 to 100, and displayed in frequency and percentage tables. Finally, the results of the paper were analyzed by showing the findings with frequency and percentage tables via SPSS Statistics 21.0.

**Keywords:** ESP, research paper, descriptive content analysis, research methods and techniques

## 2000'den 2021'e ESP Araştırmalarının incelenmesi: TR Dizin'deki Makalelerin İçerik Analizi

**Özet:** Bu makale, 2000'den 2021'e kadar TR Dizin'de yayınlanan ve Özel Amaçlı İngilizce (ESP) üzerine yazılan makalelerin betimsel içerik analizini yapmaktadır. Toplam 23 ESP makalesi analiz edilmiştir. ESP ile ilgili yazılan makalelerin incelenmesi, ESP ile ilgilenen araştırmacılar için verimli bir fırsat sunmaktadır. Bu çalışma, Gül ve Sözbilir (2016) tarafından yürütülen araştırmanın bir kopyası olarak 2000'den 2021'e kadar TR Dizin'de yayınlanan ESP makalesini inceleyerek bu boşluğu doldurmaktadır. Elde edilen bulgulara göre, ESP araştırma makalelerinin çoğunluğu tek yazarlı, Türk yazarlar tarafından ele alınmış, International Online Journal of Education and Teaching'de (IOJET) yayınlanmış, İngilizce yazılmış, Tıp Fakültelerinde yapılmış, betimleyici ve tarama araştırma desenleri, bir araç olarak Likert ölçeği, örneklem büyüklüğü 31 ile 100 arasında değişen lisans öğrencileri ile yapılmış ve frekans ve yüzde tablolarında gösterilmiştir. Son olarak çalışmanın sonuçları SPSS 21.0 istatistik programı ile frekans ve yüzde tabloları ile birlikte verilerek analiz edilmiştir.

**Anahtar Sözcükler:** ESP, araştırma makalesi, tanımlayıcı içerik analizi, araştırma yöntemleri ve teknikleri

## 1. Introduction

English for Specific Purposes (ESP) aims to teach English for any sort of area with academic or occupational purposes. In fact, addressing learners' specific goals to use English in a specific area is what distinguishes ESP from English for General Purposes teaching (Hyland, 2002, as cited in Işık-Taş and Kenny, 2020). It is inevitable to claim that ESP is one of the core centers for almost all fields. According to Mackay and Mountford (1978, as cited in Gökçe & Batman, 2015), English for Special Purposes, also called English for Needs, is an international language with professional needs such as telephone operators, language learning purposes for civilian airline pilots, or language learning purposes for professional studies

such as engineering, medicine, and law. It is a language teaching approach defined in relation to academic needs. In this manner, it is obvious that English is a lingua franca, helping people communicate with each other for any purpose. It is becoming increasingly important in a globalizing world, and English teaching is becoming increasingly important in any country. ESP improves the learners' English proficiency in any domain they are studying or working in. For this reason, when a person applies for a job, it is one of the basic expectations of the employer to hire him or her. Therefore, most departments of the universities, such as logistics, tourism, bank insurance, archeology began to provide ESP lessons in order to prepare students to use the target language throughout their lives. With this decision, students have been learning both ESP and English for General Purposes (EGP), which provides English knowledge in their business and daily lives. For an appropriate ESP lesson, the lesson design must be proficient. A needs analysis was performed in order to develop an appropriate lesson plan. Long (1996), as cited in Basturkmen (2006), indicated that learners are routinely asked about their need perceptions, but they may not be reliable sources of information about their own needs, especially if they are not familiar with the field they are supposed to investigate. When analyzing articles on ESP, it assists researchers in determining which departments have conducted what types of studies.

This study handles 23 articles written on ESP and published in TR Dizin between the years 2000 and 2021. When the papers are reviewed, almost each of them is conducted by the authors from different departments. For that reason, the papers differentiated from each other in terms of their contents. For example, Saygılı (2015) examined the speaking skills of third-year students of Physiotherapy and Nutrition Dietetics taking ESP lessons. Keshtiarast, and Salesi (2020) studied employing information communication technology for ESP learning by Iranian EFL students' participation. Gündüz (2016) carried out a study on the scope of ESP usage in Turkey and foreign countries. Safia and Ghania (2020) investigated the reading skills of the students studying at National Higher School for Hydraulics. Bayram and Canaran (2020) identified the perceived professional development needs of English for specific purposes (ESP) teachers while Syaiful et al. (2019) researched science education students' perception of using ESP digitally. To find out what the learning needs are, the opinions of the students of the architecture department about the ESP course contents were taken Ulum (2020). Canaran et al. (2020) also carried out research investigating the design of higher-quality ESP programs in the future by collecting data from three faculties as Business, Aviation Management, and Engineering English. Akın (2011) investigated ESP teaching at the Turkish National Police Academy to promote a more effective ESP program for the students at this academy. Özüdoğru (2019) conducted a study to find out if there is a relationship between academic achievement, perceived competence, perceived instructor autonomy-support, and classroom engagement in English for ESP students.

Aslan et al. (2019) inclined ESP students' emotions to improve themselves while Kazar and Mede (2015) researched students' and instructors' perceptions of the target needs in an ESP program. Bercuci and Chitez (2019) analyzed argumentative essays written by students of Political Science and International Relations in an English for Social Sciences (ESP-adapted) course taught at the West University of Timisoara in Romania. Kural (2019) did research on the improvement of ongoing ESP programs developed for undergraduate fine arts students at a private university in Istanbul. Aimoldina and Zharkynbekova (2014) are research based on the rhetorical and pragma linguistic features of Kazakh students who wrote their business letters in business English courses. Winn and Beck (2018) carried out research on ESP usage by engineering and computer science students from France and Germany. Ulum (2017) surveyed police officers in the national police forces to assess their needs when using English on the job. Akbulut (2016) handled the needs analysis of Turkish ESP students at the School of Economics and Administrative Sciences, Arts and Sciences, and Engineering. Aktaş and Doyran (2017) investigated the English language needs of 10th-grade students at a Vocational High School and evaluated the program by changing the syllabus, materials, and teaching activities to meet their needs for ESP. Rudy et al. (2019) had a study based on medical vocabulary teaching at Malayahati University. Şahinkarakaş and Arifi (2007)' research was about the importance of CEFR on ESP Students. Dinçay's (2010) study aimed to design a learner-centered ESP course for adults by considering the perspectives of the students. Elkılıç et al. (2003) researched the role of needs assessment in developing ESP courses.

When these articles are reviewed, it is evitable that there is various research done for improving ESP lessons. Analyzing the articles written on ESP provides a fruitful opportunity for the researchers studying ESP. This study fulfills this gap by analyzing the ESP article published in TR Dizin from 2000 to 2021 as a replication of the research conducted by Gul and Sozibilir (2016).

## 1.1. Literature Review

In ESP, research has always been significant, and the quality and quantity of empirical study in the subject are increasing (Belcher, 2006, as cited in Gollin-Kies, 2014). Currently, there are numerous studies on ESP published in several journals; however, they do not center on the research methods and techniques of the papers. Hewings (2002) reviewed publications published in the (English for Specific Purposes Journal) ESPJ between 1980 and 2001. This survey, on the other hand, was more interested in the diversity of research topics that were published than the research methodologies used. While Hewings (2002) did not examine the frequency or percentage of various methodologies, he did notice that text and discourse analysis had progressively expanded over time. He attributed this trend to the emerging recognition that in order to give compelling and successful ESP lessons or resources, one must know a significant bit about target scenarios (as cited in Gollin-Kies, 2014). According to Master (2005), experimental findings focused on inferential statistics may begin to be published in this field. While it is difficult to quantify the effects of syllabi and techniques, controlled experiments in which non-nutritive suckers (NNS) in a science department are taught skills with field-specific material and their performance is compared to that of a similar group having non-field-specific material might be conducted. Belcher et al. (2011) highlighted that the primary themes in this book are that ESP scholars must use all the instruments at their disposal to carefully examine learners' needs, identities, and challenges, as well as the language and debates of their contexts—as much as the researchers' own "frameworks."

According to the study done by Lazaraton (2000), the revelation that only 24 of the 332 overall articles analyzed were qualitative and the qualitative research was only published nine times in the other journals. (Studies in Second Language Acquisition and The Modern Language Journal are defended, and he pointed out that both have published special issues in recent years devoted to largely qualitative research, including solicited contributions on topics like sociocultural theory and discourse creation). Furthermore, Gollin-Kies (2014) investigated the papers published on ESP, and she stated that encouraging ESP researchers to consider adopting additional quantitative methodologies that could provide "harder" evidence of educational success (ESPJ and JEAP would be good places to look for this type of work) would be beneficial. At the same time, the publication of these types of studies may boost the readership of ESP and raise its standing in language learning and teaching circles. Additionally, Akbaş (2021) undertook a systematic review to identify master's and doctoral dissertations completed in Turkey between 1987 and 2019 and preserved at the National Thesis Center of the Council of Higher Education. A similar study was done by Gul and Sozbilir (2015); however, this study includes the articles published in the biology department. For this reason, there is a gap in the literature; therefore, this study analyzed the studies on ESP published in TR Dizin to fill this gap.

## 1.2 Research Questions

The purpose of this paper is to investigate the papers written on ESP in TR Dizin from 2000 to 2021. These 24 articles are collected from TR Dizin, and they are analyzed according to categories in the Paper Classification Form (PCF) used in the study done by Gul and Sozbilir (2016) and originally developed by Sozbilir et al. (2012), such as method, sample, collection tool, etc. of the research. Therefore, this study notably seeks answers to the research questions below:

1. What fields in ESP are frequently investigated by the researcher(s)?
2. What research designs and methods in ESP are frequently used by the researcher(s)?
3. What data collection tools in ESP are frequently used by the researcher(s)?
4. What samples and sample sizes in ESP are frequently used by the researcher(s)?
5. What data analysis methods in ESP are frequently used by the researcher(s)?

## 2. Methodology

### 2.1. Research Design

This study aims to be a descriptive content analysis study. The content analysis can be done by analyzing the articles written on ESP, and they are categorized as "meta-analysis, meta-synthesis (thematic content analysis), and descriptive content analysis" (Gul & Sozbilir, 2016). Similar research has been handled by Gul and Sozbilir (2016), and it can be claimed that this study is a sort of replication of that research.

**2.2. Data Collection and analysis**

In this research, to categorize the articles according to the way they are done, it is essential to classify their features by using a checklist; therefore, a paper classification form (PCF) was utilized in this study prepared by Sozbilir et al. (2012). However, in this form, some modifications were made since it was developed for studies in biology education, and these parts were integrated into ESP.

PCF includes seven sections composed of descriptive information about papers, the subject of the paper, research methods and designs, data collection tools, samples, and data analysis (Appendix 1). First, all 23 articles gathered from TR Dizin were examined with the given tool. Thereby, all the papers were downloaded and separated based on content analysis. By using PCF, all the relevant articles were analyzed and categorized according to the sections in the tool.

After content analysis, the data were created in Microsoft Excel for checking which sections the papers belong to. When all the corrections were done, the data was analyzed via SPSS 21.0. The findings were presented in frequencies, percentage tables, and charts descriptively.

**3. Findings**

Table 1 presents that the articles on ESP are mostly written by one author (39%,  $f= 9$ ) and two authors (39%,  $f=9$ ). It can be said that the authors generally did not prefer to work in a group with more than two members.

**Table 1.**

Frequency of Number of Authors per Article

Number of Authors	<i>f</i>	%
1	9	39
2	9	39
3	3	13
4	1	4.3
6	1	4.3
<b>Total</b>	<b>23</b>	<b>100</b>

As can be seen in Table 2, the frequency distribution of nation of affiliation, Turkey (65.2%,  $f= 15$ ) comes first. The following article was written by the authors affiliated with Indonesia (8.6%,  $f= 2$ ) and the other 6 articles (4.3%,  $f=1$ ) were written by the other affiliations seen in the table.

**Table 2.**

Frequency of the Nations of Affiliation

Nations of Affiliation	<i>f</i>	%
Turkey	15	65.2
Indonesia	2	8.6
Algeria	1	4.3
America	1	4.3
Iran	1	4.3
Kazakhstan	1	4.3
Romania	1	4.3
Macedonia	1	4.3
<b>Total</b>	<b>23</b>	<b>100</b>

According to Table 3, IOJET was the most frequently published journal related to ESP from 2000 to 2021. After IOJET, the next most-published journals were Çukurova University Faculty of Education Journal and Elementary Education Online (8.3%,  $f= 2$ ). Other 15 journals were published with a 4.1 percent ( $f= 1$ ).

**Table 3.**

Frequency Distribution of Journals

<b>Names of Journals</b>	<b><i>f</i></b>	<b>%</b>
IOJET	5	21.7
Çukurova University Faculty of Education Journal	2	8.6
Elementary Education Online	2	8.6
Turkish Journal of Police Studies	1	4.3
Abant İzzet Baysal University Journal of Faculty of Education	1	4.3
Başkent University Journal of Education (BUJE)	1	4.3
Language Journal	1	4.3
Kastamonu University, Kastamonu Education Journal	1	4.3
Gazi University, Gazi Education Journal	1	4.3
Gumushane University e- Journal of Faculty of Communication	1	4.3
Hacettepe University Journal of Education	1	4.3
Istanbul Gelisim University Journal of Social Sciences	1	4.3
Journal of Language and Linguistics Studies	1	4.3
Mustafa Kemal University Journal of Graduate School of Social Sciences	1	4.3
RumeliDE Journal of Language and Literature Studies	1	4.3
Turkish Journal of Social Research	1	4.3
International Journal of Curriculum and Instructional Studies (IJCIS)	1	4.3
<b>Total</b>	<b>23</b>	<b>100</b>

It is clear from Table 4 that 18 out of 24 articles were written in English (75%,  $f = 6$ ). It can be inferred from the table that the majority of the authors preferred to write their papers in English to make them understandable for readers from any countries.

**Table 4.**

Frequency of the Language used in the Articles

<b>Language</b>	<b><i>f</i></b>	<b>%</b>
English	19	82.2
Turkish	5	21.4
<b>Total</b>	<b>23</b>	<b>100</b>

When Table 5 is analyzed, it is obvious that from 2000 to 2021, most research related to the departments or faculties having ESP lessons was done about the Faculty of Medicine (13%,  $f = 3$ ). The Faculty of Fine Arts and the School of Foreign Languages is the second most researched ones (8.6%,  $f = 2$ ). Other departments or faculties and unmentioned papers involved 4.3% ( $f = 1$ ) of the research when compared with the other departments.

**Table 5.**

The Distribution of the Departments/ Faculties Examined in the Articles

<b>Departments/ Faculties</b>	<b><i>f</i></b>	<b>%</b>
Faculty of Medicine	3	13
Faculty of Fine Arts	2	8.6
The School of Foreign Languages	2	8.6
Turkish National Police Academy	1	4.3
Architecture	1	4.3
Accounting Information System	1	4.3
Computer Sciences	1	4.3
Faculty of Communication	1	4.3
Foreign Languages	1	4.3
Health Science	1	4.3
Human Resources	1	4.3
National Higher School for Hydraulics (engineering)	1	4.3
Physician Assistant Education Association	1	4.3

Political Science And International Relations	1	4.3
Preparatory School	1	4.3
Faculty of Science	1	4.3
Vocational High school	1	4.3
Not mentioned	1	4.3
<b>Total</b>	<b>23</b>	<b>100</b>

As it can be understood from Table 6, both research methods and research designs (N =17) have a significant percentage (46.1 %,  $f = 17$ ); however, qualitative papers ( $n = 8$ , 28.3%,  $f = 8$ ) and mixed-type studies ( $n = 7$ , 25%,  $f = 7$ ) have been used in ESP research papers in a lesser way. The interpretations of these three research designs are presented below.

**Table 6.**

**Most frequently preferred Research Designs/Methods**

Research Methods	<i>f</i>	%
<i>Experimental (Research Design)</i>		
True- experimental	2	7.1
<i>Non-experimental (Research design)</i>		
Descriptive	4	14.2
Survey	4	14.2
Comparative	2	7.1
Correlational	1	3.5
<b>Total (n)</b>	<b>17</b>	<b>46.1</b>
<i>Interactive (Research Design)</i>		
Case Study	2	7.1
Phenomenology	1	3.5
Descriptive	1	3.5
<i>Non- interactive (Research Design)</i>		
Review	1	3.5
Other	3	10.7
<b>Total (n)</b>	<b>8</b>	<b>28.3</b>
Explanatory	3	10.7
Exploratory	3	10.7
Triangulation	1	3.5
<b>Total (n)</b>	<b>7</b>	<b>25</b>
<b>Total (N)</b>	<b>28</b>	<b>100</b>

When the research designs of the papers are analyzed, there are two designs under the quantitative method. There are two studies conducted as true experiments in the experimental category, with a 7.1% ( $f = 2$ ) effect size. Under non-experimental research design, there are descriptive (14.2%,  $f = 4$ ), and comparative (7.1%,  $f = 1$ ) research designs. It can be deduced that, among the 17 quantitative research papers, descriptive analysis and survey are the most used, while comparative and correlational studies are the least used. In the qualitative method part, Table 6 shows the studies that included interactive and non-interactive research designs. As interactive research design, case study (7.1%,  $f = 2$ ), phenomenology, and descriptive have the same percentage (3.5%,  $f = 1$ ). Non- interactive research designs were divided into two review papers and the other both having 3.5% ( $f = 1$ ). With this interpretation, the authors mostly preferred case studies in their research.

Mixed research was distributed as explanatory, exploratory, and triangulation. The most preferred ones are explanatory and exploratory designs with the same frequency (10.7%,  $f = 1$ ). Explanatory and exploratory designs are determined to be the most used designs among the papers done using the mixed method.

**Table 7.**

The Most Commonly Used Data Collection Tools

Data Collection Tools	<i>f</i>	%
Likert Scale	8	28.6
Alternative Assessment Tools	4	14
Open- ended Questionnaire	3	10.3
Multiple Choices	3	10.3
Observation	2	6.8
Documents	2	6.8
Interview	2	6.8
Achievement Test	1	3.4
Semi-structured Interview	1	3.4
Other	1	3.4
<b>Total</b>	<b>29</b>	<b>100</b>

Table 7 shows that the Likert scale (28.6%,  $f = 8$ ) is the most preferred data collection tool. Alternative Assessment Tools are the second preferred one for the researchers (14%,  $f=4$ ). Open-ended questionnaires (10.3%,  $f=3$ ), and multiple-choice scale (10.3%,  $f=3$ ) were used more than observation (6.8%,  $f=2$ ), documents (6.8%,  $f=2$ ), and interviews (6.8%,  $f=2$ ). Finally, the least preferred tools are the achievement test (3.4%,  $f= 1$ ), semi-structured interview (3.4%,  $f=1$ ), and others (3.4%,  $f=1$ ).

**Table 8.**

Frequently Studied Sample Types

Samples	<i>f</i>	%
Undergraduate Students??	16	72.7
Documents of what??	3	13.6
Other (employed participants)	3	13.6
<b>Total (Overlapping within 22 original research articles)</b>	<b>22</b>	<b>100</b>

There are a total 22 original research papers among 23 papers and from Table 8, it can be inferred that with 72.7% ( $f = 16$ ), undergraduate students are the most commonly chosen sample type for ESP research from 2000 to 2021. Secondary sources for these studies include documents (13.6%,  $f = 3$ ) and other types of sampling (13.6%,  $f = 3$ ) such as employed people.

**Table 9.**

Frequency Distribution of Sample Size

Sample Size	<i>f</i>	%
Between 31 to 100	8	36.3
Between 101 to 300	6	27.2
Between 11 to 30	3	13.6
Between 301 to 1000	3	13.6
Between 1 to 10	2	9.09
<b>Total (Overlapping within 22 original research articles)</b>	<b>22</b>	<b>100</b>

It is seen in Table 9 that the authors did their research most commonly with a sample size between 31 to 100 (36.3%,  $f = 8$ ). Between 101 to 300 (27.2%,  $f= 6$ ) sample size is the second most commonly used one. Between 11 to 30 (13.6%,  $f = 3$ ) and between 301 and 1000 (13.6%,  $f = 3$ ).

**Table 10.**

Frequently Used Data Analysis Methods and Techniques

Analysis Methods and Techniques	<i>f</i>	%
<b>Quantitative Descriptive Analysis</b>		
Frequency/ Percentage Tables	13	40.5

Charts	2	6.2
<b>Quantitative Inferential Analysis</b>		
T-test	4	13
ANOVA	3	9.3
Correlation	2	6.2
Factor Analysis	1	3.1
<b>Qualitative Analysis</b>		
Content Analysis	2	6.2
Interview	2	6.2
Descriptive Analysis	1	3.1
Others	1	3.1
<b>Total (Overlapping within 22 original research articles)</b>	<b>32</b>	<b>100</b>

Table 10 presents that there are a total of 32 techniques used in ESP research papers from 2000 to 2021. As quantitative descriptive analysis, frequency/percentage tables (40.6%,  $f= 13$ ) were preferred more than charts (6.2%,  $f= 2$ ) and frequency/percentage tables were the most commonly used ones among all the techniques in the table. As quantitative inferential analysis, t-test (13%,  $f= 4$ ) was considerably higher than ANOVA (9.3%,  $f= 3$ ). A correlation was used with 6.2% ( $f= 2$ ) while factor analysis was the least used one with 3.1% ( $f= 1$ ). Among qualitative analysis, the most preferred techniques were content analysis (9.3%,  $f= 3$ ) and interview (6.2%,  $f= 2$ ). Other techniques in the qualitative analysis were one of the least used ones (3.1%,  $f= 1$ ).

#### 4. Discussion and Conclusion

This paper has addressed such questions; What types of research methods and techniques are used in ESP studies? In which journals is ESP research published in TR Dizin? The results of this paper showed that there are only 23 articles published from 2000 to 2021 in TR Dizin in the field of ESP, and it showed that it can be expanded to bring various results and suggestions in literature. As it can be inferred from the results section, there are various studies done; however, the total count can be increased. For that reason, it may be suggested that this gap be expanded.

Upon analysis of the papers published on ESP from 2000 to 2021, some implications were inferred. The authors generally did not prefer to work in a group with more than two members. The nations of affiliation mostly belong to Turkey. The most important reason for this is that TR Dizin is a national index with numerous citations that leads to the publication of papers related to affiliations in Turkey. When the frequency distribution of journals is examined, IOJET is the journal that publishes the greatest number of ESP papers. It can result from IOJET being open to predominantly publishing papers on teaching English. Most of the articles are published in English as they are understandable for readers speaking different languages, and another possible reason is that they belong to ESP's English Language Teaching departments and the readers are from this group as well. The distribution of the departments and faculties examined in the articles was mostly conducted with participants from the Faculty of Medicine. It can be inferred from this result that ESP is noted most in the faculty of medicine. In the section on researchers' most-used research designs and methods, the studies were done using the quantitative method, and as research designs, descriptive and survey analysis belonging to non-experimental studies were mostly conducted. In a similar study, Gollin-Kies (2014) claimed that the increasing quantitative corpus analysis, which can also be classified as discourse analysis, is the only reason why quantitative research appears to have increased. In both journals English for Specific Purposes Journal (ESPj) and Journal of English for Academic Purposes (JEAP), there is a significant absence of experimental research, and there are essentially no substantial, generalizable, large-scale empirical studies. Gollin-Kies (2014) researched ESP articles published in ESPj and JEAP, and the author found that "ESPj published 35 ethnographic or qualitative multi-method publications, while JEAP published 45" (p. 31). Other non-interactive research designs, such as needs analysis, have ranked the qualitative method as the second most preferred research method. However, a mixed method is the least preferred one for the authors. Frequently used data collection tools in ESP research show that the Likert scale is the most commonly used one. It can be due to the widespread use of questionnaires used with the quantitative method. Alternative assessment tools have been determined as the second most frequently used data collection tool to investigate participants' performance in ESP. Generally, the samples in ESP articles are undergraduate students with a size between 31 and 100. This can be because most studies were done using the quantitative method by using questionnaires that involved

more participants than qualitative studies. The frequently used data analysis methods and techniques section demonstrates the frequency and percentage tables as quantitative descriptive analysis. After this data analysis method, the T-test has been the second-most preferred technique, and following the T-test, ANOVA as inferential statistics was the most preferred one for comparing findings in ESP articles.

Consequently, there are few studies, including meta-analysis or content analysis, on research methods and techniques on ESP in the literature. The papers containing this research design do not research some parts of the paper classification form (Gul & Sozbilir, 2016) used in this study. For this reason, except for the research done by Gollin-Kies in 2014, there were no related studies to which the author of this study could compare the results and note the differences and similarities in the discussion part. It demonstrates the gap in the literature in this type of study. Gollin-Kies (2014) also researched the same topic; however, the journal she analyzed was different from this paper (TR Dizin). All in all, more studies are needed with content analysis on ESP, such as this paper, which can be brought to the literature.

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#### Note on Ethical Issues

The author confirms that the study does not need ethics committee approval according to the research integrity rules in his country (Date of Confirmation: 11/11/2022).

Appendix

Paper Classification Form

A. INFORMATION ABOUT PAPER			
1. Title:			
2. Author/s:		3. Auth. Nation.	
4. Journal Name:		5. Language a. Eng. <input type="checkbox"/> b. Turkish <input type="checkbox"/> c. Other <input type="checkbox"/>	
a. Year:	b. Volume:	c. Issue:	d. Page:
B. MAIN DISCIPLINE THAT PAPERS BELONGED			
<input type="checkbox"/> 1. Logistics	<input type="checkbox"/> 2. Tourism	<input type="checkbox"/> 3. Genetics and biotech.	<input type="checkbox"/> 4. <input type="checkbox"/> 5.
<input type="checkbox"/> 6.	<input type="checkbox"/> 7.	<input type="checkbox"/> 8.	<input type="checkbox"/> 9. <input type="checkbox"/> 10. Other
C. ARTICLE TYPE			
1. Original Research Paper		2. Review Paper	
D. RESEARCH METHODS/DESIGNS			
<b>QUANTITATIVE</b> 1. Experimental      2. Non-Experimental 11. <input type="checkbox"/> True-experiment    21. <input type="checkbox"/> Descriptive 12. <input type="checkbox"/> Quasi-experiment <input type="checkbox"/> Longitudinal 13. <input type="checkbox"/> Pre-Experiment <input type="checkbox"/> Cross-age/sect. 14. <input type="checkbox"/> Single subject      22. <input type="checkbox"/> Comparative 23. <input type="checkbox"/> Correlational 24. <input type="checkbox"/> Survey 25. <input type="checkbox"/> Ex-postfacto 26. <input type="checkbox"/> Sec. Data analy.		<b>QUALITATIVE</b> 3. Interactive      4. Non-Interactive 31. <input type="checkbox"/> Ethnography      41. <input type="checkbox"/> Historical analy. 32. <input type="checkbox"/> Phenomenography    42. <input type="checkbox"/> Concept analy. 33. <input type="checkbox"/> Case study      43. <input type="checkbox"/> Review 34. <input type="checkbox"/> Grounded theory    44. <input type="checkbox"/> Metasynthesis 35. <input type="checkbox"/> Critical studies      45. <input type="checkbox"/> Other ..... 36. <input type="checkbox"/> Descriptive 37. <input type="checkbox"/> Other .....	
		<b>MIXED</b> 5. Mixed 51. <input type="checkbox"/> Explanatory (Quant+Qual) 52. <input type="checkbox"/> Exploratory (Qual+Quant) 53. <input type="checkbox"/> Triangulation (Quant+Qual)	
E. DATA COLLECTION TOOLS		F. SAMPLE	
1. <input type="checkbox"/> Questionnaire 1. Open-end.      2. Mulp. choice      3. Likert      4. Other 2. <input type="checkbox"/> Achievement test 5. Open-end.      6. Mulp. choice      7. Other 15. <input type="checkbox"/> Aptitude, attitude, perception, personality etc. tests Please write the title ..... 8. <input type="checkbox"/> Interview ..... 9. Structured      10. Semi-Str      11. Unstructure.      12. Focus G 5. <input type="checkbox"/> Observation 13. Participant      14. Non-participant 16. <input type="checkbox"/> Alternative assessment tools (Diagnostic tests, concept map., portfolio etc.) 17. <input type="checkbox"/> Documents 18. <input type="checkbox"/> Others (please provide title) .....		<b>a. Sample</b> 1. <input type="checkbox"/> Pre-school 2. <input type="checkbox"/> Primary (1-5) 3. <input type="checkbox"/> Primary (6-8) 4. <input type="checkbox"/> Secondary (9-12) 5. <input type="checkbox"/> Undergraduate 6. <input type="checkbox"/> Post-graduate 7. <input type="checkbox"/> Educators 8. <input type="checkbox"/> Administratives 9. <input type="checkbox"/> Parents 10. <input type="checkbox"/> documents 11. <input type="checkbox"/> Not reported 12. Other	
		<b>b. Sample Size</b> 1. <input type="checkbox"/> Between 1 to 10 2. <input type="checkbox"/> Between 11 to 30 3. <input type="checkbox"/> Between 31 to 100 4. <input type="checkbox"/> Between 101 to 300 5. <input type="checkbox"/> Between 301 to 1000 6. <input type="checkbox"/> Over 1000 7. <input type="checkbox"/> Not reported	
G. DATA ANALYSIS			
<b>QUANTITATIVE DATA ANALYSIS</b> 1. Descriptive Statistics 11. <input type="checkbox"/> Frequency/percentage tables 12. <input type="checkbox"/> Central tendency measures 13. <input type="checkbox"/> Charts 14. <input type="checkbox"/> Others.....		<b>QUALITATIVE DATA ANALYSIS</b> 3. Qualitative Analysis 31. <input type="checkbox"/> Content analysis 32. <input type="checkbox"/> Descriptive analysis 33. <input type="checkbox"/> interview 34. others.....	
2. Inferential Statistics 21. <input type="checkbox"/> t-test 22. <input type="checkbox"/> Correlation 23. <input type="checkbox"/> ANOVA/ANCOVA 24. <input type="checkbox"/> MANOVA/MANCOVA 25. <input type="checkbox"/> Factor analysis 26. <input type="checkbox"/> Regression 27. <input type="checkbox"/> Non-Parametric tests 28. <input type="checkbox"/> Others.....			
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