

ANALYSIS OF THE ERRORS IN THE ENGLISH ARTICLE ABSTRACTS OF NONNATIVE TURKISH WRITERS

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ÖZ

ABSTRACT

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Özet, akademik makalenin tüm temel bileşenlerini yansıtan bir 'mini çalışma' işlevi görür. Bu bağlamda Türkçe makalelerin İngilizce özetlerinin dilsel doğruluğu büyük önem taşımaktadır. Bu nedenle bu çalışma, spor bilimleri alanında Türk yazarlar tarafından yazılan bilimsel makalelerin İngilizce özetlerinin ne kadar hatasız olduğunu araştırmayı amaçlamaktadır. Nitel bir derlem analizi çalışması olan bu çalışma, 18 dergide yayınlanan 109 bilimsel makale özetini betimsel olarak analiz etmiştir. Dilbilgisel, sözdizimsel, mekanik, sözcüksel ve anlamsal hatalar olmak üzere beş ana kategoride toplam 188 hata tespit edilmiştir. Dilbilgisi ve sözdizimi hataları önde gelen kategoriler olurken, mekanik hatalar da yüksek oranda bulunmuştur. Dilsel hataların genellikle anadil etkisinden kaynaklandığı, dil içi hataların da derlemde sıkça mevcut olduğu sonucuna varılmıştır. Uluslararası akademik dünyada makalenin tamamını yansıttığı ve temsil ettiği için bilimsel dergiler ve atf indeksleri ile yazarların İngilizce özetlerin dilsel doğruluğuna dikkat etmeleri gerektiği değerlendirilmiştir.

An abstract serves as a 'mini-paper' reflecting all the essential components of the academic paper. Thus, linguistic correctness of the English abstracts of the Turkish articles is of vital importance. The study, therefore, aims to explore how error-free the English abstracts of the scientific articles written by Turkish authors in the field of sports sciences are. As a qualitative corpus analysis study, the present study descriptively analyzed 109 scientific article abstracts published in 18 journals. A total of 188 errors in five main categories as grammatical, syntactic, mechanics, lexical, and semantic errors were identified. Grammar and syntax errors were the leading categories while mechanics errors were also detected at a high rate. It was concluded that the linguistic errors often stemmed from L1 interference while intralingual errors were also evident in the corpus. Scientific journals and the citation indexes, as well as the authors, need to pay attention to linguistic correctness of the English abstracts since they reflect and represent the entire paper in the international academic world.

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Introduction

Transfer and spread of scientific knowledge are carried out mainly in the forms of written academic genres such as academic papers, reports, articles, theses, dissertations, and books. According to Richards and Renandya (2002), “academic writing is a sophisticated language skill that requires a high level of mastery in the specific type of genre” (p. 303). However, expertise in scientific research genres does not necessarily bring about perfection of the work without using the academic language correctly and appropriately.

Abstracts of the scientific texts have become indispensable components of academic work especially with the advent of digital databases where the scientific knowledge is available to millions from various linguistic backgrounds (Busch-Lauer, 2012). In those databases, while many full text papers require payment, abstracts of all the scientific papers are free to access (Hailman & Strier, 2006). Besides, a researcher resorts to an abstract while searching an academic topic since it also summarizes the whole paper including its aim, scope, method, outstanding results, and major conclusions (Campbell, 2007). Moreover, due to their positioning at the beginning of any academic genre, a reader is highly likely to see and read abstracts before moving on with the actual paper (Swales & Feak, 2009). For all these reasons, abstracts possess a crucial role in presenting and conveying scientific knowledge in the academic world.

The prominence of abstracts in scientific writing stems from their location in a scientific paper, their intensive content, and above all, their communicative role for the nonnative speakers of the original language. To be more precise, regardless of the language of any scientific paper or academic work, an abstract in English as the lingua franca of the academic world is provided following the original text language. For many writers, this makes the already complex process of academic writing an even more challenging one. Indeed, as Dudley-Evans and St. John (1998) state, many higher education programs all around the world require and reinforce students to improve their English language skills and write abstracts, reviews and papers in English, but many writers fail to fulfill this requirement.

Although the words ‘summary’ and ‘abstract’ are frequently used interchangeably in the daily language, an abstract is much more comprehensive as a fundamental academic genre. Murray and Beglar (2009) name abstracts as “miniature papers” and specify the essential qualities of good academic abstracts as providing a satisfactory overview, introducing the research problem, revealing the purpose, method, major findings and concluding with a brief discussion (p. 143). Although there is no scientific or linguistic rule stating the contents and the flow of an abstract, there seems to be a commonly accepted approach among the academic writers who generally adopt four stages of flow as “purpose, methods, findings, and conclusions” (Gillett et al., 2009, p. 232). In short, an abstract is the readers guide to lead them through the academic work and to help them decide whether they need to read the entire text or not.

As in any type of academic and scientific writing, abstract writing also requires a good command of the target language (Richards & Renandya, 2002). In the context of writing abstracts in English for international readers, translation from any language into English as the target language becomes the central focus of attention. In an early paper, Catford (1969) emphasizes equivalence of meaning between the source and the target language while House (2015) simply defines translation as “recontextualizing a text in another language through as linguistic-textual operation” (p. 2). Based on these assumptions, Anna et al. (2018) argue that translation errors are likely to come out if the utterances are not transferred from one language into another equivalently. In a similar perspective, Nord (1997) describes a translation error as “the failure to deliver the original ideas or meaning in the source text into the translated product” (p. 76). Thus, it can be concluded that abstract translation is a process requiring both academic and linguistic expertise as well as a good command of the source and the target languages (Pym, 1992). Any inadequacy in the use of language properly or lack of knowledge of academic genres may easily result in errors in abstracts. In addition to human related reasons for translation errors in academic abstracts, modern technologies have also introduced another common source of errors as machine translation. As a contemporary form of machine translation, Google Translate has been employed by many writers in both academic and non-academic writing tasks and it does not always come up with perfect target language products (Napitupulu, 2017). Since nonnative writers of English abstracts fail to recognize such machine errors, some academic work could be published along with a faulty abstract.

Errors in language have often been explored through the lens of Error Analysis Theory which was first introduced by Corder (1973) as a reaction to Contrastive Analysis which contrasts the first language (L1) and

the second/foreign language (L2/FL) utterances in order to understand linguistic errors made by nonnative learners. According to Error Analysis, second language users' errors can result from both interlingual and intralingual reasons. In other words, comparing and contrasting L1 and L2 may not alone reveal the sources of errors in L2, rather, L2 itself may also act as a source. For instance, overgeneralization of rules and uses within L2 is a source of errors (Brown, 2000). According to Brown (2000), on the other hand, interlingual transfer, intralingual transfer, context of learning the language and communication strategies constitute four basic sources of errors. In another recent paper, Lee (2007) states that errors cannot be attributed to a single source and there can be different sources to be added to existing ones.

The importance of analyzing errors in second or foreign language stems from their role in understanding how proficient the speaker or writer is in a second or foreign language (Richards et al., 1992). It is also an effective method of identifying weaknesses in a language (Khodabandeh, 2007). However, absence of errors in L2 production does not always signal perfection in that language. Instead, it may be a sign of avoidance (James, 1998; Schachter, 1976) which simply means that the individual avoids using L2 structures that are difficult to use correctly and prefers simpler ones for a perfect L2 production. Error analysis can be carried out in several steps such as collecting data, identifying, classifying and quantifying errors, analyzing the sources, and remediating for errors (Gass & Selinker, 2008).

As for categorizing linguistic errors in written works produced in English, Darus and Ching's (2009) identification of error categories has often been used in the related literature. The present study, likewise, utilizes the same model since it is a recent and comprehensive model for labelling the linguistic errors in the research article abstracts. In the model, 18 types of errors are categorized under five main sections as grammatical errors, syntactic errors, lexical errors, semantic errors, and mechanics. In the educational research and linguistics literature, there have been a number of attempts to analyze foreign language writers' errors using various taxonomies.

In a qualitative study with seven adult Turkish participants who were registered to an intensive English language learning course, Ayar (2020) investigated grammatical and lexical errors in the written works of the learners. Her findings suggested that EFL learners mostly made verb related errors. Preposition and article errors were also common among the participants while subject-verb agreement errors were the least common findings. However, as the study had a limited scope of error analysis, she did not report any semantic or syntactic errors. Similarly, Taşçı and Aksu Ataç (2018) examined written grammatical errors of 2nd year Turkish students majoring in English Language Teaching. The study reported that preposition errors were the most common grammatical errors among Turkish learners of English followed by respectively verb errors, article errors, word class errors, pronoun errors and others

As commonly encountered types of academic texts, thesis proposals of the graduate students studying linguistics, literature, and advertising were analyzed by Pescante-Malimas and Samson (2017) in terms of linguistics errors. The researchers collected data from 32 nonnative English writers who were pursuing their degrees in the mentioned departments. The findings showed that grammatical, syntactic and mechanics errors were the leading domains with higher error frequencies. While disagreement errors ($n=185$) were the most common grammatical error type ($N=389$) in 32 papers, verb tense errors ($n=77$) appeared as the second common type. Fragments ($n=43$) were quite common in the syntactic errors category ($N=98$) which also included instances of run-on statements ($n=27$). Lastly, punctuation ($n=48$) and capitalization ($n=33$) errors had the highest frequencies in the mechanics category ($N=110$).

Scholarly journals and papers written by nonnative English writers have also been explored by the error analysis researchers such as Salehi and Bahrami (2018). Salehi and Bahrami investigated 40 articles submitted by master's and doctorate degree students to an Iranian state university journal. The authors of the papers were from differing majors and no contrastive analysis was conducted in terms of the major variable. The most common errors in the scientific papers were found as word use, articles, prepositions, connectors, and tenses. The researchers concluded that the errors detected in higher frequencies mostly resulted from the L1 interference or structural similarities and differences between Persian and English languages.

As for machine translation errors, which commonly exist in the written works of nonnative English speakers, Napitupulu's (2017) work contributed much to the existing literature by investigating the translation errors made by Indonesian nonnative English writers using Google Translate platform. The participants of the study were

final year university students writing their graduation theses in different faculties. In a corpus of 10 abstracts, the researcher identified lexicosemantic errors, word order errors, and tense errors as the most pervasive translation error types. He also concluded that machine translation is not reliable without human verification and interlingual differences may affect the occurrence of errors in translated texts.

A study by Atthaporn et al. (2019) on the errors of Thai veterinary medicine students' abstracts in English yielded similar results. Out of 26 English abstracts, every single paper contained errors in either syntactic or lexical dimensions. Capitalization errors, punctuation errors, agreement errors, run-ons, and fragments constituted the most prominent error types regarding the sentential level flaws. As for the lexical dimension, word choice errors were found to be the most prevalent error type. Eminent errors in the study were discussed to have resulted from linguistic incompetence of the writers.

Lee (2007) reviewed medical research abstracts of 26 Korean researchers with the purpose of analyzing errors and the use of hedging in those texts. The participants were all nonnative writers of English from different fields of study. Most common errors appeared as wrong word choice, prepositions, and articles. These were followed by run-on sentences, verb tenses and subject-verb agreement. Most of the errors detected were due to the L1 interference and thus, classified as interlingual errors.

As abstracts serve as “mini-papers” reflecting the whole work (Murray & Beglar, 2009), they need to be linguistically flawless in order to convey the scientific knowledge flawlessly regardless of the academic field of study or discipline. With this regard, the abstracts written in English by nonnative English writers from different L1 backgrounds tend to contain different errors depending on the writers' mother tongue interference or foreign language learning background. Yet, there is not sufficient body of research investigating the nature of English language errors in such texts from various L1 backgrounds and different countries. Moreover, there have been no studies on the errors in English abstracts of the articles published in the field of sports sciences. Therefore, this study stands as a major attempt to identify the linguistic errors, their types, and sources using a comprehensive data from a specific field of study. In order to fill in the gap in the literature, the present study aims to answer three major research questions:

- 1) How linguistically error-free are the English article abstracts written by Turkish researchers in the field of sports sciences?
- 2) What are the most common errors in the English article abstracts written by Turkish researchers in the field of sports sciences?
- 3) What are the major sources of errors in the English article abstracts written by Turkish researchers in the field of sports sciences?

Method

Research Design

With the aim of exploring the English language errors made by Turkish researchers while writing article abstracts in the field of sports sciences, the present study employs a document analysis method which consists of qualitative linguistic data. Descriptive analysis of the article abstracts corpus is used to interpret the data by detecting predetermined error categories by coding the errors (Yıldırım & Şimşek, 2016). In this regard, the study presents both the descriptive statistical data of the errors detected in the article abstracts and the samples of errors under various categories.

Sample

A corpus of a total of 30,468 tokens in 109 English research article abstracts published in 18 scientific journals written by Turkish scholars in the field of sports sciences was used as the research sample of the study (Table 1). With the purpose of compiling a representative sample of the articles published in sport sciences, journals with individual ($n=6$), institutional ($n=8$) and non-governmental organization (NGO) ($n=4$) ownership were selected through purposive sampling. Besides, journals indexed in TRIndex ($n=6$), the leading national scientific citation index in Turkey, and journals which are indexed in other indices ($n=12$) were included in the research

data. The selected articles were all published in Turkish, and they all had an “abstract” section in English along with the abstract in Turkish.

Table 1. General profile of the corpus data and the sources

Journal ID	Ownership	Indexing	Language Editor	#Articles	#Tokens
J1	Individual	TRIndex	Yes	16	4706
J2	Individual	Others	Yes (PhD in Sports Sci.)	5	1514
J3	Individual	Others	No	8	2121
J4	Individual	Others	Yes (PhD in Sports Sci.)	4	1267
J5	Individual	Others	No	4	969
J6	NGO	Others	No	2	383
J7	NGO	Others	No	2	562
J8	University	TRIndex	Yes (PhD in Sports Sci.)	12	3337
J9	University	TRIndex	No	9	2519
J10	University	TRIndex	Yes (PhD in Sports Sci.)	4	1019
J11	University	TRIndex	Yes (No PhD)	4	1214
J12	University	TRIndex	No	12	3816
J13	Individual	Others	Yes (No PhD)	5	1404
J14	University	Others	No	4	991
J15	University	Others	Yes (No PhD)	5	1283
J16	University	Others	No	7	1808
J17	NGO	Others	No	3	777
J18	NGO	Others	Yes (No PhD)	3	778
Total				109	30,468

Data Collection and Analysis

18 journals and 109 English abstracts serve as the data for the present study. In this regard, first, the latest issues of the sport sciences journals were downloaded from the DergiPark Academic platform which hosts journals meeting certain institutional criteria. All the selected journals were open-access and freely available to readers. A total of 109 article abstracts in 18 journals were compiled in an English corpus of sports sciences article abstracts. Steps of identifying written linguistic errors suggested by Gass and Selinker (2008) were adopted and followed while collecting and analyzing data in the study (Figure 1).

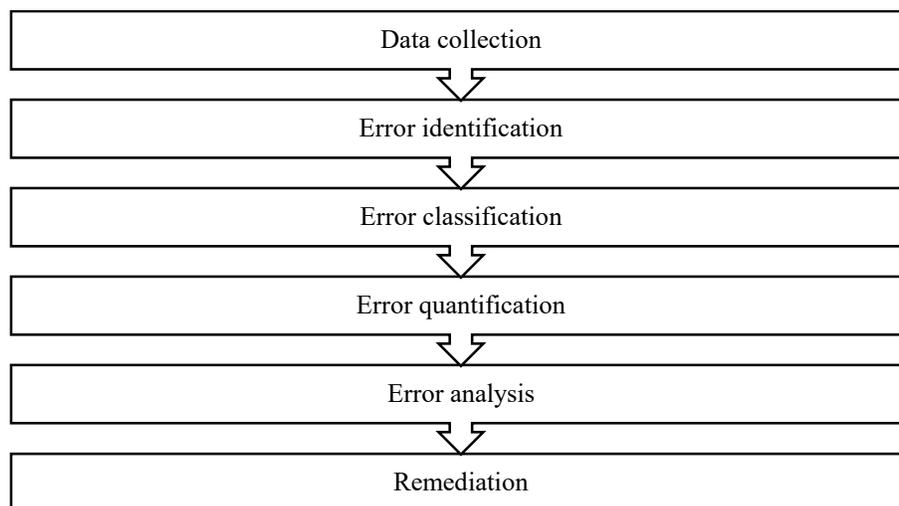


Figure 1. Steps of linguistic error analysis (Gass & Selinker, 2008)

After collecting the data, the English abstracts corpus was carefully examined and coded through ATLAS.ti qualitative data analysis software in order to identify the linguistic errors present in the abstracts. In the second round of the data analysis, the errors detected in English abstracts were compared and contrasted with the original abstracts in Turkish, and then put into categories identified by Darus and Ching (2009) to make a proper classification. Upon presenting statistical data regarding the linguistic error profiles detected in the selected abstracts, qualitative error samples were provided to gain a deeper insight into the type, source, and nature of the errors in sports sciences article abstracts in English. Lastly, in the light of the comprehensive analysis of the errors, proper remediation was suggested in the discussion and conclusion section of the paper.

Results

The results indicated that the linguistic errors detected in English abstracts of scientific articles written by Turkish scholars ranged from the grammatical domain to the mechanics (see Table 2). The most frequent error type was found to be the grammatical errors ($n=65$, 34.6%) with predominantly verb form errors ($n=20$, 10.6%). Likewise, misuse of prepositions and prepositional phrases ($n=15$, 8%), singular/plural nouns ($n=8$, 4.3%), articles ($n=8$, 4.3%), and passive constructions ($n=7$, 3.7%) were also among the errors tagged under the grammatical errors category. Under the same category, relative clause errors ($n=4$, 2.1%) and wrong use of gerund and infinitive forms ($n=3$, 1.6%) emerged as the least frequent types of grammatical errors.

As presented in Table 2, syntactic errors ($n=42$, 22.3%) appeared as the second most frequent category of errors found in the research data. The errors were mostly related to sentence structure ($n=36$, 19.1%) while six statements (3.2%) lacked an element that is supposed to exist in a proper English sentence.

Table 2. Overall frequencies and percentages of errors detected

Error Type	f	%
Grammatical errors	65	34.6
Verb form	20	10.6
Preposition	15	8.0
Passive	7	3.7
Singular-plural	8	4.3
Article	8	4.3
Relative	4	2.1
Gerund-infinitive	3	1.6
Syntactic errors	42	22.3
Sentence structure	36	19.1
Missing element	6	3.2
Lexical errors	27	14.4
Word choice	27	14.4
Semantic errors	15	8.0
Literal translation	15	8.0
Mechanics	39	20.7
Capitalization	20	10.6
Punctuation	12	6.4
Spelling	7	3.7
Total	188	100.0

Thirty-nine errors (20.7%) regarding the mechanics of written academic English comprised another leading category with 20 capitalization errors (10.6%), 12 punctuation errors (6.4%), and 7 spelling (3.7%) errors. Though lower in frequency and percentage, lexical errors ($n=27$, 14.4%) and semantic errors ($n=15$, 8%) were

also among the types of error categories identified. Wrong word choice of the authors was the sole cause of lexical errors whereas literal translation led to semantic errors (see Figure 2).

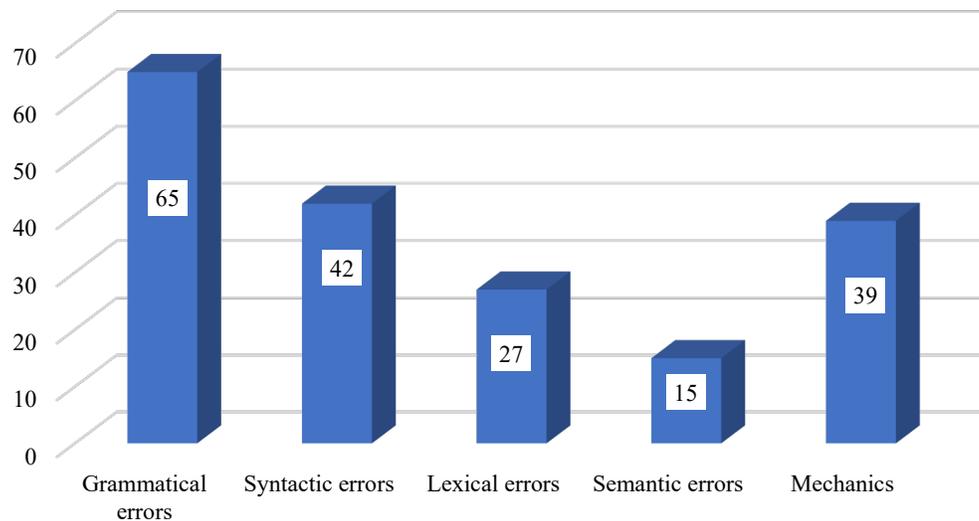


Figure 2. Frequencies of errors in the main linguistic categories

Rather than presenting research findings quantitatively to portray a general picture of the linguistic errors in research article abstract in English, it is also essential to present some instances of errors in context to gain a deeper understanding of the nature, reasons, and sources of these errors. Therefore, along with the descriptive statistical analysis of the results, contextual error samples are also extracted from the research data. While presenting erroneous statements qualitatively, sentences are intentionally modified in order not to reveal the identity of the journal or the author. However, minor alternations were to the extent that will represent the original error sample.

Grammatical Errors

Grammatical errors in the English abstracts ranged from verb tenses to gerund/infinitives which are briefly illustrated in Figure 3. Further analysis of the data is presented along with some instances from the abstract corpus.

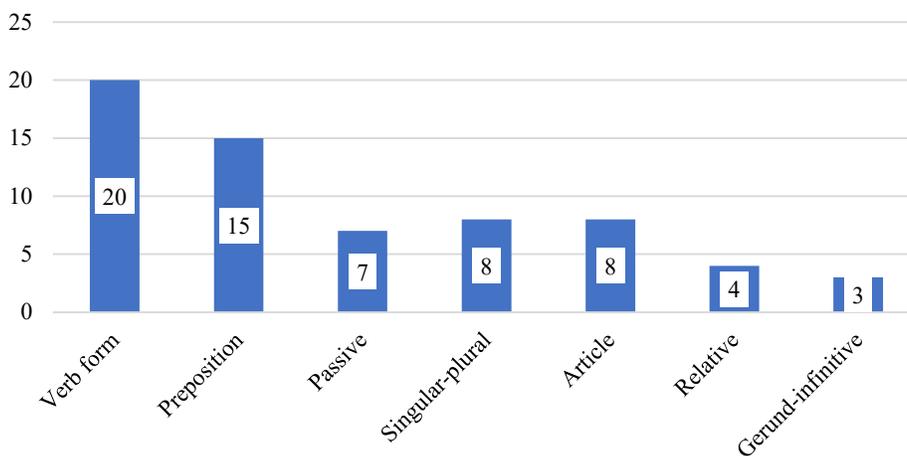


Figure 3. Grammatical errors

As the leading category of linguistic errors found in the current study, grammatical errors included a variety of erroneous language use as follows:

*“Fifty female volunteers between the ages of 20 and 25 (27,16±2,46), **who regularly attending meetings** three days a week, participated in the study.” (J8#A5)*

In the example above, verb tense is not used correctly, and this leads to a grammatical error. Journal 8 (J8) is a state university publication with a language editor on duty. However, he does not hold a degree in a language related department.

In another example from Journal 1 with an individual ownership and with a language editor who has an undergraduate degree in English Language and Literature, the rule of present simple verb inflection after a plural subject is violated.

*“**Analyzes shows** there is positive significant relationship between...” (J1#A16)*

Similarly, in the following statement, the author forms the present perfect tense using a wrong verb form.

*“As a result, **researchers has detected** 41 metaphors for elite athletes.” (J9#A7)*

Journal 9 is also published by a Turkish state university and it is indexed in TRIndex. However, it employs no language editors or linguistic proofreaders in the editorial team.

As another example of grammatical errors, misplacement of relative clause is illustrated in the following extract from Journal 14 which does not have a language editor among the publishing team members. Moreover, the journal is not indexed in TRIndex or any other international field indices.

*“A total of 88 sedentary males aged 18-65 voluntarily took part in this study, **who did not follow any diet program at least a week.**” (J14#A1)*

Failure to use passive sentence structures is another emerging error category and it is exemplified in the extract from Journal 2, Article 5 below. A language editor takes part in the publication process of the journal but she has a PhD degree in sports sciences instead of an English language related discipline.

*“The purpose of this research is to create a way that **can be met** the requirements, needs and aims of the students...” (J2#A5)*

The grammatical errors found in the abstract corpus of the present study clearly indicate that the publishing boards of the journals fail to detect some basic errors such as verb form inflections in English tenses. Moreover, similar mistakes are seen in both journals with an English language editor and without one.

Syntactic Errors

Errors tagged under this category correspond to faulty construction of English sentences such as the violation of the word order in English, missing elements in sentences, fragments or run-on sentences. To exemplify, Journal 8 contains an instance of missing subject error as follows:

*“The pandemic is one of the most important issues affecting human psychology today **and trying to find a cure.**” (J8#A6)*

In this context, after the coordinate conjunction ‘and’ subject of the second sentence is missing and this results in ambiguity in the statement. When the original Turkish abstract is checked for correspondence, it is seen that the same ambiguity of meaning also exists in the native lines. Therefore, it should be considered that linguistic errors in written academic work are not confined to English or any other foreign language. Rather, they can be frequently noticed in the native language of the writers, as well.

In the following extract, while explaining the purpose of the article, the author fails to make a complete sentence and ends up with a fragment that is identified as a syntactic error.

“To examine the shooting performance of the athletes training in basketball school in terms of their ages and shooting techniques.”
(J12#A2)

In the given statement, the use of a purpose infinitive structure at the beginning of the sentence does not necessarily compensate for the absence of an overt subject. It is also important to note that syntactic errors are found most frequently ($n=11$) in Journal 12 which does not have an English language editor although it is indexed in the most prestigious national citation index in Turkey.

Erroneous language use in syntax influences the overall comprehensibility of the arguments in a text since the mistakes are made at the sentential level. However, it is found in the present study that syntactic errors are among the leading error categories regardless of the profiles of the journals and the editorial boards.

Mechanics Errors

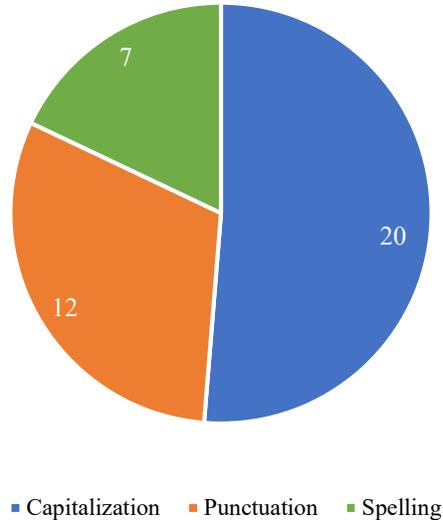


Figure 4. Mechanic errors

The linguistic errors in this category are tagged under capitalization, punctuation, and spelling. Since most of the authors of the selected papers possess or pursue a graduate degree in the related field, frequent violations of mechanics ($n=39$) in scientific journal abstracts can be considered as an important finding (Figure 4). It should be also noted that the occurrence of punctuation errors ($n=20$, 10.6%) in the present study is relatively high and needs to be discussed thoroughly.

*“As a result; **Folk dances**, which are a local and cultural activity, have also been a means of entertainment...”* (J13#A4)

As seen in the excerpt from Article 4 of the Journal 13, the use of semicolon is a problematic issue among the nonnative English academic writers of sports sciences research. They, somehow, tend to use it instead of a comma and begin the next word with a capital letter. Since there is no similar rule or usage in Turkish language either, this error is not likely to be an interlingual error. The frequency of similar errors in different journal articles may stem from fossilization of faulty learning due to the lack of corrective feedback.

*“It was found that **63,1 %** of the university students had low level of first aid knowledge, and **99,7 %** had low level of basic life support knowledge...”* (J16#A3)

In the second sample above, it can be seen that the authors misuse the punctuation marks. In the extract, comma is preferred instead of point while presenting the percentage of the participants. This faulty use of punctuation marks seems to be the result of L1 interference since comma replaces point in Turkish in the same illustration of percentages. Similarly, in the following example, a spelling error is illustrated on the word “demonstrated”.

*“Analysis **demonstrated** that scale structure consisted of 24 items under 3 dimensions...”* (J1#A10)

As for the possible sources of the mechanics related errors in the present study, it is concluded that there is little interference of L1 (Turkish) since especially capitalization and punctuation rules are remarkably similar in Turkish and English languages. Therefore, it can be suggested that intralingual factors such as overgeneralization of rules in the foreign language or inadequate learning (Touchie, 1986) may have acted as the sources of existing errors.

What is more important about the mechanics errors identified in the present corpus of article abstracts is that most of them are easily avoidable. In other words, a final check or proofreading could help eliminate the exemplified spelling error even without any editorial interference.

Lexical Errors

Lexical errors coded in the entire data are brought together under the category of word choice ($n=27$, 14.4%). Wrong choice of vocabulary items is exemplified in a number of instances stemming from various underlying reasons. For instance, the words “appropriate” and “convenient” have similar meanings in Turkish (*uygun*). However, in the scientific research and academic publication settings, they cannot be used interchangeably while referring to certain research methods terminology such as “convenience sampling method”.

*“The participants of the present study were determined by **appropriate sampling method**.”* (J2#A3)

Similarly, “easily accessible sampling method” is not the proper terminology to express the way of determining the research sample by accessing the easiest and the most convenient participants or sources of data.

*“**Easily accessible sampling method** was utilized to find the participants for the present study.”* (J16#A5)

When the Turkish and English abstracts of the same article are compared, it is evident that the author intends to translate the term “*kolaydaki örnekleme yöntemi*” but does not make use of right lexical items in her translation. In another error example in article 3 of the journal 18, the author fails to use the correct quantitative research terminology by using the adjective “important” instead of “significant” while reporting the statistically significant findings of the study.

*“According to the results, there is a statistically **important** difference between motivation and attitude scores.”* (J18#A3)

It is seen in the Turkish abstract of the same paper that the author attempts to translate “*önemli*” into English literally without considering the domain-specific use of the vocabulary items.

It can be argued that the word choice errors categorized under the present heading are mostly interlingual errors stemming from the interference of the mother tongue of the writers (Touchie, 1986).

Semantic Errors

Semantic errors regarding the overall meaning of the propositions in the selected article abstracts are identified with literal translation of Turkish statements into English as the target language. Literal translation in the present analysis refers to the translation of the whole chunks or entire sentences rather than the faulty choice of lexical items. Thus, such errors lead to serious levels of ambiguity in sentences or result in totally meaningless statements.

For instance, in the following extract from journal 6, which is published biannually by a non-governmental organization (NGO), the phrase “to wear uniforms” is used to state that all the participants are currently playing in basketball clubs as professionals. “to wear a uniform (*forma giymek*)” in Turkish has a figurative meaning of performing a sport professionally in a club or team. When the Turkish version of the abstract is examined, it is seen that literal translation of the entire sentence causes a semantic error.

*“The research sample consisted of 13 athletes who continue **to wear uniforms** in basketball clubs.”* (J6#A2)

Likewise, the expression “access was provided to” is used in the English abstract of the first article in journal 9 in order to convey the exact meaning of the phrase “*erişim sağlandı*” in the Turkish abstract.

*“..., **access was provided to** a total of 50 theses registered in the national scientific database of Hungary.”* (J9#A1)

Literal translation errors in the semantic domain often stem from cross-linguistic differences between Turkish and English. Hence, they can be labelled as interlingual errors since they are often the results of the authors’ search for one-to-one correspondence between the two languages.

Discussion, Conclusion and Recommendations

Abstracts are extrusive scientific texts (Busch-Lauer, 2012) which help the reader decide whether to read the entire work or focus on a particular section. For the English as a foreign or second language speakers and writers, abstracts mean more than this. To be more precise, they need to reflect the whole piece of scientific work by presenting basics with an accurate and concise language, which makes it an even more challenging task (Busch-Lauer, 2014). From this point of view, with the purpose of analyzing English as a foreign language writers’ linguistic errors in the abstract section of the scientific journal articles published in the field of sport sciences in Turkey, the present study presents a comprehensive insight into the frequencies, types, and sources of errors. Since there have been scarce studies conducted with a similar perspective and scope, findings of the research in the educational literature, in the foreign language learning literature, and linguistics literature are consulted while discussing the results of the present study.

To begin with, the findings clearly depicted that grammatical errors predominated other error categories as in several other studies in the literature (Ayar, 2020; Pescante-Malimas & Samson, 2017; Taşçı & Aksu Ataç, 2018). Ayar (2020) analyzed foreign language learner corpus obtained from private language learning center student writings in terms of grammatical and lexical errors; and the verb form, preposition and article errors emerged as the leading types of erroneous usages. In the present study, verb form and preposition errors also appeared

as the most frequent error occurrences while the use of articles was another problematic domain in the academic corpus analyzed. Indeed, these findings are not surprising as prepositions and articles have been problematic areas of English language for the nonnative speakers, and even for the natives (Park, 2005). In the study of Taşçı and Aksu Ataç (2018) preposition errors and verb errors were the most frequent error types in the writings of Turkish university students. In a similar vein, in their study on graduate thesis proposals as types of the scientific genre, Pescante-Malimas and Samson (2017) came up with agreement, verb tense and fragment (syntactic) errors the most. It can be inferred from the findings that nonnative writers of English, either academic writers (university students, language course attendees) or scientific writers (researchers, scholars), tend to fail in using correct grammatical forms such as verb forms, tenses, prepositions, and articles. Lack of grammatical accuracy in scientific texts is a non-negligible issue since such texts address a huge range of readers from all around the world (Paltridge & Starfield, 2007). Similarly, Blaxter et al. (2006) note that grammatical correctness has a direct and strong influence on the readers' impression of the scientific work. Therefore, Turkish scholars publishing in the field of sport sciences may have difficulty in establishing a good international impression due to their failure in grammatical accuracy.

Syntax of the English language emerged as another challenging category for the authors of the papers analyzed in the current research. Syntactic errors made up of 22.3 % of all the errors found in 109 abstracts. Although they are merged under the category of "sentence structure", codes like fragment, run-on sentence, missing subject or missing object are frequently observed in the analysis of the corpus. The findings are in line with those of Pescante-Malimas and Samson's (2017) study which presents fragments and run-ons as pervasive errors made by nonnative abstract writers. Likewise, Napitupulu (2017) also points to the frequency of word order errors at the syntactic level in the machine translated abstracts of graduation theses. Both studies highlight the effect of the writers' native language as the source of errors, which should also be considered for the present study. In-depth analysis of the syntactic errors in the present corpus indicates that the length of original sentences from the Turkish abstracts clearly affected the errors made in English. While translating too long Turkish sentences into English, authors may sometimes end up with run-on sentences. In some cases, they try to divide these long statements into meaningful units and form new sentences but if they fail to do so, they eventually end up with fragments. It can be inferred from the instances of syntactic errors that both intralingual and interlingual factors may have served as sources of errors in the present study.

As for the syntactic errors, it is also important to note that Google Translate online translation platform is commonly used by Turkish scientific article writers, and the platform is known to make undeniably frequent fragment and run-on sentence errors (Tongpoon-Patanasorn & Griffith, 2020).

Another prevalent category of errors identified in this study is mechanics, which is characterized by the misuse of capitalization, punctuation, and spelling rules in English. These findings clearly contradict with the findings of Salehi and Bahrami (2018) who found few instances of mechanics errors in Iranian scientific writers' article abstracts. Likewise, Lee (2007) did not report capitalization, punctuation, and spelling errors as frequent occurrences in his corpus. In the light of the previous research, it can be concluded that mother tongue (L1) interference does not play a determining role in nonnative English writers' use of mechanics in their written work. Studies in the L1 Persian (Salehi & Bahrami, 2018) and L1 Korean (Lee, 2007) settings clearly prove such an argument since both languages have different alphabets and rules of mechanics from those of the English language. Furthermore, Turkish language employs similar capitalization and punctuation rules with the English language, so the writers were not under the influence of L1 rules and forms while making those errors in their English abstracts. As the errors in the mechanics category are not likely to be labelled as interlingual errors, they may be the result of overgeneralization or incorrect learning experiences. Besides, similar mechanics errors also exist in their Turkish abstracts although they are not reported within the scope of the present study. It is probable that researchers in the field of sport sciences tend to neglect the importance of mechanics in scientific writing, and the editors of the journals in the field similarly ignore (or simply miss) the erroneous usages in this category. However, according to Raimes (2004), for instance, punctuation holds a fundamental role in conveying the meaning in any written form, and it is an indispensable aspect of academic and scientific writing. Likewise, spelling errors could easily be corrected by proofreading the text with a dictionary or thesaurus. Those seemingly simple conventions of English language may also be violated by the nonnative sport sciences scholars due to their inexperience in academic English writing (Raimes, 2004).

As another prominent category of errors detected in 109 abstracts explored, lexical errors also stand as important findings of the present research. As Jung (2006) also states, the authors' incompetence in scientific vocabulary seems to result in the wrong word choice. In other words, those scientific research authors cannot distinguish the use of specific scientific vocabulary items such as "significant" while reporting statistical meaningfulness or importance of their measurements. The use "important" instead of "significant" and the use of "makes no sense" while reporting non-significant statistical results are clear examples of this situation. In the present study, it is seen that word choice errors basically originated from limited knowledge of ESP (English for Specific Purposes) vocabulary, failure to recognize the parts of speech, misuse of the derivations of a word root or simply making use of the very first correspondence of a Turkish word in a dictionary by ignoring its content and use.

Lastly, instances of literal translation in the English article abstracts in the current analysis prove that many of the researchers publishing in the field of sport sciences lack overall competence and proficiency in the *Lingua Franca* of the academic world. It is evident from the error samples that such errors mostly result from using one-to-one correspondence of the linguistic elements and structures in a sentence or using machine translation such as Google Translate or Yandex Translate platforms. The evidence of semantic errors in the present study imply that literal translation errors may have mostly been under the influence of the authors' native language, Turkish. Thus, it can be argued that the semantic errors are predominantly interlingual rather than intralingual.

In the discussion of the findings, it is crucial to point to the general profiles of the journals published in the field of sport sciences in Turkey. A thorough examination of the bibliographical profiles of the publications in the present study reveals that half of the journals ($n=9$) lack a language editor, who is responsible for reviewing the submissions in terms of using the language and abiding by the authorial writing requirements. Moreover, only four journals have language editors with a PhD degree in sport sciences. Therefore, they also lack expertise in English language academic and scientific writing. On the other hand, the best performing journal in terms of English language errors appears to be Journal 11, which has an eight-member board of language editors. It is understood from the profile information of the journals and editors that most of the journals analyzed in the present research do not effectively reflect an international vision or do not pursue a global mission in academia since the English titles and the abstracts are the only parts of the original submissions determining their global impression. As error-free writing is key to creating a good first impression (Blaxter et al., 2006), it should be kept in mind that linguistically problematic texts may easily tarnish those publications' international image. Moreover, poorly written article abstracts in English can lead to misunderstanding of the scientific work presented since they may have deleterious influences on reading comprehension (Salager-Meyer, 1990).

In conclusion, in line with the existing evidence in the literature, the present study demonstrates relatively frequent occurrence of linguistic errors in the English abstracts of the publications analyzed. It is concluded that most of the errors done are similarly in line with those emerged in different studies with samples from various L1 backgrounds. However, linguistic error frequency in the mechanics category is worth special attention. The errors identified in this category may be attributed to the authors' and the editors' recklessness or indifference since capitalization, punctuation and spelling errors are indeed easily eradicable errors. Another important factor behind the pervasive mechanics errors may be the "publish or perish" phenomenon which has been the common view among researchers of today (Lee, 2012; Rawat & Meena, 2014). Due to this widespread view, the researchers inevitably ignore or miss seemingly unimportant but actually quite basic elements of a high-quality publication. Another conclusion drawn from the present research is that English language education in the tertiary level needs to be redesigned at the tertiary level, especially in the graduate curricula. With this regard, English academic purposes (EAP) or English for specific purposes (ESP) courses can be offered to graduate students, who are indeed authors or prospective authors of scientific publications. Moreover, citation indexes such as TRIndex or other international indexes should take stringent precautions against English language errors in international publications. Lastly, more specific implications can be made for the English language teaching curriculum of the sport sciences departments, both at the undergraduate and the graduate levels.

The study presents a clear picture of the linguistic flaws existing in the English abstracts of scientific journal articles in the specific field of sport sciences in Turkey. Though the study stands as an outstanding attempt with its scope, it also emerges as a limitation that the data were collected from the publications in a single discipline.

Further studies can, therefore, analyze data from a broader range of publications in different disciplines with a comparative manner. Likewise, since the linguistic errors may be under the influence of Turkish in some instances, scientific publications of the authors from different L1 backgrounds can be compared and contrasted for a better insight into the sources of these errors.

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GENİŞLETİLMİŞ ÖZET

Bilimsel metinlerin İngilizce özetleri, özellikle bilimsel bilginin çeşitli dil geçmişlerinden milyonlarca kişiye sunulduğu dijital veri tabanlarının ortaya çıkmasıyla, akademik çalışmaların vazgeçilmez bileşenleri haline gelmiştir (Busch-Lauer, 2012). Bu veri tabanlarında, birçok tam metin makale için ödeme yapılması gerekirken, tüm bilimsel makalelerin özetlerine erişim ücretsizdir (Hailman & Strier, 2006). Ayrıca, bir araştırmacı akademik bir konuyu araştırırken öncelikle özete başvurur, çünkü özetler esasen amacı, kapsamı, yöntemi ve öne çıkan sonuçları da dâhil olmak üzere tüm makale içeriğini yansıtır (Campbell, 2007). Ayrıca, herhangi bir akademik metnin başlangıcında konumlanmaları nedeniyle, okuyucunun asıl makaleye geçmeden önce özetleri görme ve okuma olasılığı yüksektir (Swales & Feak, 2009). Tüm bu nedenlerle, akademik dünyada bilimsel bilginin sunulması ve aktarılmasında özetler çok önemli bir role sahiptir.

Özetler, tüm çalışmayı yansıtan “mini çalışmalar” olarak işlev gösterdiğinden (Murray & Beglar, 2009), akademik çalışma alanı veya disiplin ne olursa olsun bilimsel bilgiyi kusursuz bir şekilde aktarabilmeleri için dil kullanımı bakımından kusursuz olmaları gerekir. Bu bağlamda, anadili İngilizce olmayan ve farklı anadil altyapılarından gelen araştırmacılar tarafından İngilizce olarak yazılan özetler, yazarların anadil müdahalesine veya yabancı dil öğrenme geçmişine bağlı olarak farklı hatalar içerme eğilimindedir. Ancak, çeşitli anadil arka planlarından ve farklı ülkelerden gelen bu tür metinlerdeki İngilizce dil hatalarının doğasını ve sebeplerini araştıran yeterli sayıda araştırma bulunmamaktadır. Ayrıca Türkiye’de spor bilimleri alanında yayınlanan makalelerin İngilizce özetlerindeki hatalara yönelik herhangi bir çalışmaya da rastlanmamıştır. Bu nedenle, bu çalışma, belirli bir çalışma alanından kapsamlı bir veri derlemi kullanarak dilsel hataları, türlerini ve kaynaklarını belirlemeye yönelik önemli bir girişimdir.

Türk araştırmacıların spor bilimleri alanında makale özetlerini yazarken yaptıkları İngilizce dil hatalarını araştırmak amacıyla bu çalışmada, nitel dilbilimsel verilerden oluşan döküman analizi yöntemi kullanılmıştır. Makale özetlerindeki dilbilimsel hatalar önceden yapılmış derlem araştırmaları temalarına göre kategorize edilmiş ve yorumlanmıştır. Bu doğrultuda söz konusu çalışma, hem makale özetlerinde tespit edilen hataların tanımlayıcı istatistiksel verilerini hem de çeşitli kategoriler altındaki hata örneklerini sunmaktadır.

Araştırma verilerini Türk bilim insanları tarafından spor bilimleri alanında yazılmış 18 bilimsel dergide yayınlanan 109 İngilizce araştırma makalesi özetinde yer alan toplam 30.468 sözcüklük derlem oluşturmaktadır. Spor bilimlerinde yayınlanan makalelerin temsili bir örneğini derlemek amacıyla, amaçlı örnekleme yoluyla bireysel ($n=6$), kurumsal ($n=8$) ve STK ($n=4$) dergileri seçilmiştir. Ayrıca, Türkiye'nin önde gelen ulusal bilimsel atıf indeksi olan TRDizin’de indekslenen dergiler ($n=6$) ve diğer indekslerde yer alan dergiler ($n=12$) araştırma verilerine dahil edilmiştir. Seçilen makalelerin tamamı Türkçe tam metin şeklinde yayınlanmıştır ve hepsinin İngilizce ve Türkçe özet bölümü bulunmaktadır.

Bu kapsamda öncelikle spor bilimleri dergilerinin son sayıları, belirli kurumsal kriterlere uygun dergilerin yer aldığı DergiPark Akademik platformundan edinilmiştir. Araştırmada veriler toplanırken ve analiz edilirken Gass ve Selinker (2008) tarafından önerilen yazılı dil hatalarını belirleme adımları benimsenmiş ve izlenmiştir. Veriler toplandıktan sonra, İngilizce özetler derlemi dikkatlice incelenmiş ve özetlerde bulunan dilsel hataları belirlemek için ATLAS.ti nitel veri analizi yazılımı ile kodlanmıştır. Veri analizinin ikinci aşamasında, İngilizce özetlerde tespit edilen hatalar Türkçe orijinal özetlerle karşılaştırılmış ve daha sonra uygun bir sınıflandırma yapmak için Darus ve Ching (2009) tarafından belirlenen kategorilere yerleştirilmiştir. Seçilen özetlerde tespit edilen dilsel hata profillerine ilişkin istatistiksel veriler sunulduktan sonra, İngilizce spor bilimleri makale özetlerindeki hataların türü, kaynağı ve doğası hakkında daha derin bir fikir edinmek için nitel hata örnekleri incelenmiştir. Son olarak, hataların kapsamlı analizi ışığında, makalenin tartışma ve sonuç bölümünde uygun düzeltme ve iyileştirmeler önerilmiştir.

Sonuçlar, Türk bilim insanları tarafından yazılan bilimsel makalelerin İngilizce özetlerinde tespit edilen dil hatalarının dilbilgisi alanından mekanığe kadar çeşitlendiğini göstermiştir. En sık görülen hata türünün dilbilgisi hataları ($n=65$, %34,6) ve ağırlıklı olarak fiil biçimi hataları ($n=20$, %10,6) olduğu bulunmuştur. Aynı şekilde edat ve edat tamlamalarının ($n=15$, %8), tekil/çoğul isimlerin ($n=8$, %4,3), artikellerin ($n=8$, %4,3) ve edilgen yapıların ($n=7$, %3,7) yanlış kullanımı da dilbilgisi hataları kategorisi altında etiketlenen hatalar arasındadır. Aynı kategori altında, en az görülen dilbilgisi hatası türleri olarak bağıl tümce hataları ($n=4$, %2,1) ve zarf-fiil ve mastar biçimlerinin yanlış kullanımı ($n=3$, %1,6) ortaya çıkmıştır. Diğer yandan, sözdizimsel hatalar ($n=42$, %22,3)

araştırma verilerinde en sık rastlanan ikinci hata kategorisi olarak ortaya çıkmıştır. Hatalar çoğunlukla cümle yapısıyla ilgilidir ($n=36$, %19,1); örneğin, altı ifadede (%3,2) düzgün bir İngilizce cümlede olması gereken bir unsur bulunmamaktadır.

Sonuç olarak, alanyazındaki mevcut kanıtlarla uyumlu olarak, bu çalışma, analiz edilen yayınların İngilizce özetlerinde dilsel hataların sıklıkla görüldüğünü göstermektedir. Yapılan hataların çoğunun, çeşitli anadil altyapılarından örneklerle yapılan farklı çalışmalarda ortaya çıkan hatalarla benzer şekilde olduğu sonucuna varılmıştır. Bununla birlikte, mekanik kategorisindeki dilsel hata sıklığı dikkate değer niteliktedir. Bu kategoride tespit edilen hatalar, büyük harf, noktalama ve yazım hataları gibi aslında kolayca kaçınılabılır hatalar olduğundan yazarların ve editörlerin dikkatsizliğine veya ilgisizliğine bağlanabilir. Yüksek sıklıktaki mekanik hataların arkasındaki bir diğer önemli faktör, günümüz araştırmacıları arasında yaygın bir görüş olan “yayınla ya da yok ol” olgusu olabilir (Rawat ve Meena, 2014). Bu yaygın görüş nedeniyle, araştırmacılar, yüksek kaliteli bir yayının görünüşte önemsiz ama aslında oldukça temel unsurlarını görmezden gelmekte veya gözden kaçırmaktadır. Mevcut araştırmadan çıkarılan bir başka sonuç da, yükseköğretim düzeyindeki İngilizce eğitiminin, özellikle lisansüstü müfredatta, yükseköğretim düzeyinde yeniden tasarlanması gerektiğidir. Bu bağlamda, bilimsel yayınların gerçekten yazarları veya muhtemel yazarları olan lisansüstü öğrencilere akademik amaçlı İngilizce (EAP) veya özel amaçlı İngilizce (ESP) kursları sunulabilir. Ayrıca TRDizin gibi atıf dizinleri veya diğer uluslararası dizinler, uluslararası yayınlarda İngilizce dil hatalarına karşı sıkı önlemler almalıdır. Son olarak, hem lisans hem de lisansüstü düzeyde spor bilimleri bölümlerinin İngilizce öğretimi müfredatı için daha spesifik çıkarımlar yapılabilir.