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CONTENT

Multilingualism and Beyond: Implications for Education

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ABSTRACT

Introduction: The JLE editors explore multilingual perspectives in language learning, education, and society, as compared with mono- and bilingual perspectives. The notion of a separate language system turned out to be far from today's multilingual communications. The approaches to multiple language learning have dramatically changed towards multilingualism. The editorial review aims to consider the potential of the field for the JLE.

Basic Terminology and Definitions: the JLE editors dwell upon the key terms applicable to the field of multilingualism, including multilingualism on its own, plurilingualism, bilingualism, multilinguality, polylingualism, metrolingualism, heteroglossia, and linguistic repertoire.

Research on Multilingualism and Beyond: in this section, the JLE readers can find a short review of the research publications on multilingualism, bilingualism, plurilingualism, and linguistic repertoire indexed in the Scopus database.

Conclusion: multilingualism as a research field has a perspective for the Journal of Language and Education. Multilingualism is a many-faceted field, developing rather fast. Research on multilingualism may enrich the scope of the JLE and attract new readers.

INTRODUCTION

Increasing international communications and mass migration lead to a need for individual multilingualism (Cenoz & Genesee, 1998). Professionals and students need to be competent in languages. Acquiring second and additional languages has become an integral part of any high-quality education.

Multilingualism emerged as a turn in the field of third language acquisition (TLA). The first event that became the turning point dates back to 1999 when the First International Conference on Third Language Acquisition and Multilingualism was held in Austria.

Previously, there was no difference in approaches to the acquisition of a second language and "multiple acquisition" (Cenoz & Genesee, 1998). It gave rise to what is now called "multilingualism". Though, some authors believed that it is mono-lingualism that was a norm. In the 1990s, the new multilingual norm was put forward as an alternative. Monolingualism from this perspective "means missing out on the benefits which L2 knowledge and use can confer through growing up bilingual or through formal learning of an L2" (Ellis, 2008, p. 316). The notion of a language system as a separate set of features proved to be insufficient in the environment where people acquire and use two or more languages. Moreover, not all bilingual methods are adaptable for multiple language learners (Aronin & Singleton, 2012).

Multilingualism can be defined as the acquisition and use of more than two languages. Bilingualism is often included in the concept of multilingualism as a specific case. This stand is shared by some prominent researchers of the field. Larissa Aronin and Britta Hufeisen maintain that multilingualism subsumes bilingualism (Aronin & Hufeisen, 2009).

The field is rather dynamic. Multilingualism is considered to be a complex phenomenon (Vetter & Jessner, 2019) based on various theoretical backgrounds. They as well as ideologies behind multilingualism lead to heated discussions (Aronin, 2018). Summing up the theoretical backgrounds that multilingualism is based on, we may boil them down to sociolinguistics, applied linguistics, psycholinguistics, pragmalinguistics, teaching and learning languages.

In addition, a string of terms is closely linked to multilingualism, including bilingualism, plurilingualism, polylingualism, metrolingualism, heteroglossia, language or linguistic repertoire, monolingualism, and others. Multilingualism is treated as "an umbrella term for linguistic diversity" (Vetter & Jessner, 2019, p.2).

Basic Terminology and Definitions

Bilingualism as a subset of multilingualism describes a proficiency in two languages. Bilinguals are able to productively use both languages.

Plurilingualism. Some time ago, Francophone research publications introduced one more term defining an individual attribute describing proficiency in several languages. It is synonymous to multilinguality.

Linguistic Repertoire. The linguistic repertoire is a sociolinguistic term defining, first, all linguistic varieties in a speech community, and second, linguistic identities and linguistic resources or means of speaking used by an individual in diverse communicative situations. The Council of Europe differentiates between language repertoire or otherwise defined as plurilingualism (an individual competence of those who can use more than one language) and multilingualism describing several languages applied within one territory[1].

The Council of Europe pays much attention to issues of reorganizing repertoires of migrants within their linguistic integration[2]. In addition, the language teaching at large aims to enhance individual language repertoires, including the languages individuals already have in their repertoires.

Multilinguality is a biotic model possesses inextricability and interdependability (Aronin & Singleton, 2012).

Polylingualism is a variation of multilingualism. In most contexts, polylinguals speak five or more languages. We may define polylingualism is a special case of multilingualism.

Metrolingualism as a field is not established, with only 38 search results in the Scopus database. Metrolingualism came into being from multilingualism, defining the ways people of mixed identities express them through languages. The focus is "not so much on language systems as on languages as emergent from contexts of interaction" (Otsuji & Pennycook, 2010, p.240).

Heteroglossia defines the coexistence of distinct varieties within a single language. The term was coined be the Russian literary theorist M.Bahktin in 1934.

*Monolingualism (*also *monoglottism* or *unilingualism)* describes the condition of being able to speak one language. In some contexts, monolingualism refers to an educational policy of enforcing one national or official language.

Research on Multilingualism and beyond

To estimate the scope of the field in question, we searched the Scopus database, using the terminology given above. The results substantially overlapped, as many documents denote a few of the above terms as their keywords.

The keyword "multilingualism" was found in the titles, abstracts, or keywords of 12,806 documents as of June 19, 2023 (see Fig.1). The earliest publication indexed in the Scopus database came out in 1946. The spread of the documents ranges from 1 to 13 in the period between 1946-1995, then the number of publications rose from 31 to 94 from 1996 to 2002. In 2003, the number exceeded 100 publications (n=111), in 2005 it hit 207. From 2012 there were over 500 documents annually indexed in the Scopus database.

8,339 and 6,889 documents are attributed to Social Sciences and Arts & Humanities respectively. 2,772 publications came from psychology. 1,966, 1,459 and 1,334 documents were published in journals on medicine, neuroscience, and health professions respectively. The subject areas also cover nursing (n=548), computer science (n=514), and others.

The most prolific authors writing on multilingualism are Ellen Balistok (77 publications), Albert Costa (61 publications), Tamar H. Gollan (52 publications), Jubin Abutalebi (46 publications), Jasone Ceboz (40 publications), and Jean Marc Dewaele (40 documents). Most publications came from the USA (n=3607), United Kingdom (n=1462), Canada (n=981), Germany (n=877), and Spain (n=857). The search results include articles (74.4 %), book chapters (9.4 %), review (6.1 %), conference papers (3.7 %), books (2.5 %), and editorials (1.4 %).

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[1] Council of Europe Portal. Integration Linguistique des Migrants Adultes (ILMA). Language repertoire. Accessed June 20, 2023. https://www.coe.int/de/web/lang-migrants/repertoire-language-

[2] Little, D. (2012). The linguistic integration of adult migrants and the Common European Framework of Reference for Languages (CEFR) Language Policy Unit. DGII – Education Department. Council of Europe. Accessed 19, 2023. https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016802fc1ca

Figure 1

Research on Multilingualism: Breakdown by Year
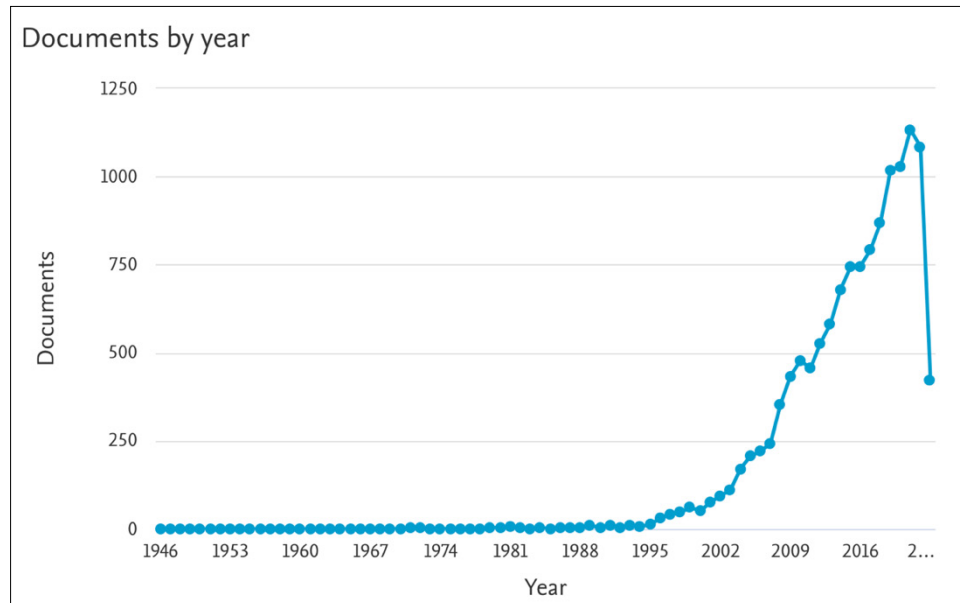
Note. Source: Scopus Database as of June 19, 2023

The top cited articles on multilingualism are "Bilingualism, aging, and cognitive control: Evidence from the Simon task" (Bialystok et al., 2004) with 1,083 citations, "The language experience and proficiency questionnaire (LEAP-Q): Assessing language profiles in bilinguals and multilinguals" (Marian et al., 2007) with 1,063 citations, and "Moment analysis and translanguaging space: Discursive construction of identities by multilingual Chinese youth in Britain" (Wei, 2011) cited 926 times.

As for the recently published research on multilingualism, they range from language anxiety (AL-Qadri et al., 2023), multilingualism and multiculturalism in teacher education (Baumgart, 2023), multilingualism for pluralizing knowledge (Droz, 2023), managing multilingualism in a tourist areas (Ferenčík & Bariová, 2023) to assessing language profiles in bilinguals and multilinguals (Marian et al., 2007), language awareness pedagogy (Pfeffer, 2023), multilingualism in health emergency learning (Utunen et al., 2023), the language ideologies of multilingual nannies (Vessey & Nicolai, 2023), multilingual learning and cognitive restructuring (Wang & Wei, 2023), transformative pedagogy through translanguaging and co-learning (Wei, 2023).

Bilingualism

The search on "bilingualism" in the Scopus database resulted in 11,168 documents as of June 19, 2023. The oldest indexed publications date back to 1923. The field began to constantly rise, starting from the early 2000s from about 50 publications a year to over 900 in 2022 and 2023 (See Fig.2). The most abundant authors include Ellen Bialystok (153 publications) and Albert Costa (81 publications). Most

documents are authored by researchers affiliated in the USA (n=3,674), the UK (n=1,281), and Canada (n=1,110). The top sources are the *Bilingualism* (n=408), the *International Journal of Bilingualism* (n=353), and the *International Journal of Bilingual Education and Bilingualism* (n=338).

The most highly cited publications on bilingualism cover "Translanguaging: Language, bilingualism and education" (García & Wei, 2013) with 1,626 citations, "Linguistic interdependence and the educational development of bilingual children" (Cummins, 1979) cited 1,615 times, and "Language style as audience design" (Bell, 1984) with 1,364 citations.

The recent publications on bilingualism research bilingualism in infancy and toddlerhood (Rocha-Hidalgo & Barr, 2023; Schott et al., 2023), bilingualism in the education of deaf learners (Simpson & Mayer, 2023), particular languages within the field of bilingualism (Polinsky, 2023), bilingual brain processes (Ding et al., 2023), and other aspects.

Plurilingualism

The Scopus search brought 640 documents (as of June 19, 2023) containing the term "plurilingualism" in their titles, summaries, or keywords published from 1981 to 2023. The yearly publication distribution is uneven, with only few in the 20th century and early 2000s per year. A constant rise started in 2012, whereas 2022 brought as many as 82 publications. Most of the documents are found in the subject areas of Social Sciences and Arts & Humanities. The most prolific authors have affiliations in Canada (104), Spain (102), and France (102). Other countries are represented less impressive. The most cited document in the search results

Figure 2

Research on Bilingualism: Breakdown by Year
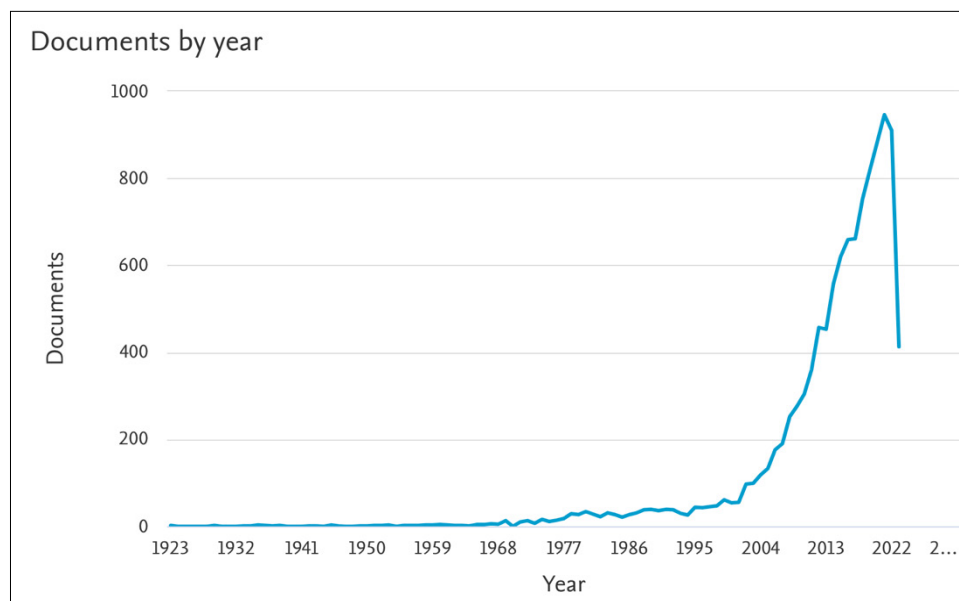
Note. Source: Scopus Database as of June 19, 2023

was published in 2006 and reached 500 citations (Coleman, 2006). The second and third most cited publications have 217 and 204 citations respectively (Lorenzo & et al., 2010; Flores, 2013). Only ten research papers in the search results exceed 100 citations and only twenty papers have more than 50 citations.

The studies on plurilingualism range from English-medium teaching in higher education (Coleman, 2006), relationships between multilingualism and neoliberalism (Flores, 2013), between plurilingualism and translanguaging (Garcia & Otheguy, 2020), plurilingualism and the panoply of lingual-isms (Marshall & More, 2018) to language motivation (Ush-ioda, 2006), plurilingualism and curriculum design (Piccardo, 2013). We also outline research relating to the monolingual mindset as an impediment to the development of plurilin-gual potential (Clyne, 2008).

The recent titles include pluralistic approaches in a compar-ative curriculum (Drachmann et al., 2023), plurilingual lan-guage policies in higher education (Duarte, 2022), separate language learning models for immigrant students (Resch et al., 2023), plurilingual and pluricultural competence scale (Galante, 2022), a plurilingual approach to ESP (Llanes & Cots, 2022), the multilingual agenda in EMI higher educa-tional institutions (Preece, 2022) and others. The leading sources on linguistic repertoire encompass "

Linguistic Repertoire

The search for "linguistic repertoire" had 445 results as of June 19, 2023. The yearly distribution shows that there was a constant rise, starting after 2012 (See Fig.3). 321 (72.1 %) of

the results accounts for articles, with 84 (18.9 %) book chap-ters and 26 (5.8 %) reviews. The sources include the Inter-national Journal of Multilingualism, International Journal of Bilingual Education and Bilingualism, Journal of Multilingual and Multicultural Development, Educational Linguistics, and International Journal of the Sociology of Language.

As for the field breakdown, 425 publications (51.4 %) belong to Social Sciences. 329 publications (38.9 %) came from Arts & Humanities. Jasone Cenoz and Durk Gorter were the most prolific researchers on the theme, with 12 and 11 articles each.

The top cited articles on linguistic repertoire include "Clari-fying translanguaging and deconstructing named languag-es: A perspective from linguistics" (Otheguy, 2015) cited 798 times, "Linguistic landscape as symbolic construction of the public space: The case of Israel" (Ben-Rafael, 2006) with 428 citations, and "The linguistic repertoire revisited" (Busch, 2012) cited 285 times.

The recent publications on language repertoire embrace such research topics as linguistic repertoire of primary school learners (Mahadeo-Doorgakant, 2023), raced rep-ertoires (Oostendorp, 2022), and a linguistic repertoire ap-proach to postcolonial fiction (Smith, 2022).

We find that Figures 1-3 show the similar rising patterns, as the interrelations within the field segments are tight. It is almost impossible to delineate research papers on multilin-gualism from those on bilingualism, plurilingualism, mono-lingualism, and linguistic repertoire.

Figure 3
Research on Language Repertoire: Breakdown by Year
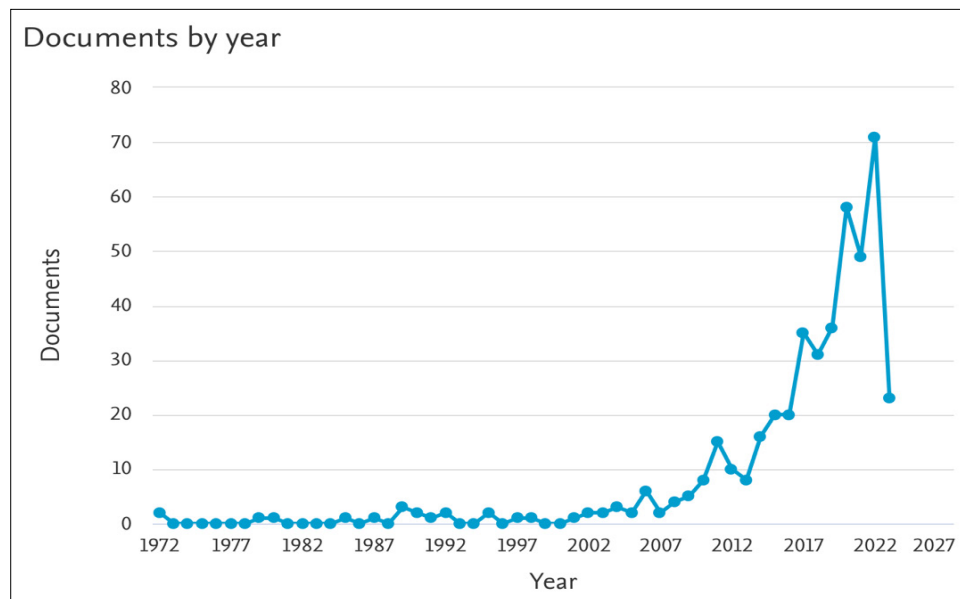
Note. Source: Scopus Database as of June 19, 2023

CONCLUSION AND IMPLICATIONS

The Journal of Language and Education intends to focus more on research related to multilingualism. The dynamic and rapidly developing field is aligned with several over-lapping segments of research, including monolingualism, bilingualism, plurilingualism, and linguistic repertoire. The JLE welcomes studies focused on educational implications of multilingual approaches in language learning as well as research on the ideologies and theories related to the field.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Lilia Raitskaya: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Software, Validation, Visualization, Writing – original draft, Writing – review & editing, other contribution.

Elena Tikhonova: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Software, Validation, Visualization, Writing – original draft, Writing – review & editing, other contribution.

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Research Article Introductions in Applied Linguistics: A Comparative Study on the Use of Appeals

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ABSTRACT

Introduction: Although extensive studies have been carried out on the rhetorical structure of research article introduction (RAI), centrality as a promotional strategy has received very little attention.

Purpose: To address this lacuna in research literature, this study investigates centrality claims and how the appeals are realized strategically and linguistically.

Method: 60 RAIs from three-corpora, i.e., 20 English L1 corpus (written by native authors in English), 20 English FL Corpus (written by Indonesian authors in English), and 20 Indonesian L1 corpus (written by Indonesian authors in Indonesian Language), in the field of applied linguistics (AL) were analyzed. The analysis started from the step of claiming centrality found in the authors' RAIs using the Swales' (1990) framework. Wang and Yang's (2015) framework was used to identify the types of appeals in the claiming centrality.

Results: This study indicates that the three groups of authors use four types of appeals, namely the appeal to salience, magnitude, topicality, and problematicity. The appeals appear in varied ways, i.e., referring to the research world and the real world. Although application of each appeal in the step of claiming centrality is relatively different in the three groups, some share similarities in using the appeals in terms of referring to the research world and the real world.

Conclusion: This study provides pedagogical implications for teaching academic writing, particularly in writing research articles for publication.

KEYWORDS

appeal, claiming centrality, research article introduction

INTRODUCTION

Previous scholars who focused on genre analysis of research articles (RAs) focused their attention onto research article introductions (RAIs). They investigated the moves and steps in the section (Muangsamai, 2018; Msuya, 2020; Rochma et al., 2020). In comparative study, some scholars examined the cross-disciplinary variations in rhetorical styles (Afshar et al., 2018; Behnam & Nikoukhesal, 2017; Nabilla et al., 2021), while some others highlighted the differences of moves and steps used by native and non-native speakers of English (Deveci, 2020; Farnia & Barati, 2017; Gao & Pramoolsook, 2023; Klimova, 2017). Along with the growing interest in investigating move-step structure in RAIs, some recent studies have also examined and highlighted linguistic features in the section, such as the use of lexical bundles (Fajri, 2020; Cortes, 2013; Yang, 2022) and metadiscourse markers (Alghazo et al., 2021a; Alghazo et al., 2021b; Alotaibi & Arabi, 2020; Al-Zubeiry & Assaggaf, 2023; Liao, 2020).

The findings of previous studies have provided fruitful and meaningful insights and have assisted non-native and novice authors in writing well-organized introductions, as expected by the gatekeepers of science (journal editors and reviewers). However, other specific aspects need to be examined more deeply, if we are to discuss the introductory section of RA. Previous studies had focused on a specific move in the introduction section, namely establishing a niche (e.g., Chen and Li, 2019; Lim, 2012; Zainuddin & Shaari, 2017). Such specific investigations also attracted the interest of other scholars to take a deeper look into a spe-

cific step. For example,, Arianto et al. (2021) and Arianto and Basthomi (2021) identified several strategies in indicating research gaps: one of the steps being establishing a niche. A question of theoretical and pedagogical importance is whether authors also use strategies in other steps in other moves.

At the beginning of the introduction section, authors should promote the topics of their studies by employing a crucial step: claiming centrality (one of the steps in establishing a territory), in order to attract readers' attention (Swales, 1990; 2004). The use of this globally recognizable step is to provoke, persuade, and convince readers about the topics being discussed. Little is known about the practices of authors in using strategies in this step in their RAIs, particularly those who are non-native and novice authors. Up to now, far too little attention has been paid to the issue.

The few studies (e.g., Abdi & Sadeghi, 2018; Wang & Yang, 2015) have been mostly limited to authors' appeals (strategies in claiming centrality), namely appeals to salience, magnitude, topicality, and problematicity. At the same time, so far no investigation has been conducted s far into the differences in using the types of appeals by the authors of English L1 (native English authors writing RAIs in English), English FL (Indonesian authors writing RAIs in English), and Indonesian L1 (Indonesian authors writing RAIs in Indonesia). It is of empirical interest to carry out a study to address this gap. This will help to establish both rhetorically and linguistically to what extent Indonesian authors writing English RAIs transfer, underuse, or overuse rhetorical features, e.g., strategies claiming centrality of their first language. This study aims to investigate the types of appeals in English RAIs written by native authors (English L1) and Indonesian authors (English FL), and Indonesian RAIs written by Indonesian authors (Indonesian L1), by answering two research questions:

1. How frequently do authors make appeals in their applied linguistic RAIs to promote their research topics?

2. What are the differences, if any, in the frequency of appealing strategies used in English RAIs written by native authors (English L1) and Indonesian authors (English FL), and in Indonesian RAIs written by Indonesian authors (Indonesian L1)?

LITERATURE REVIEW

Promotional Strategy (i.e., the Step of Claiming Centrality) in Research Article Introductions

The introduction section plays a crucial role in promoting research topics (Wang & Yang, 2015), so there is a need to study strategy types used by authors use to promote the research topics and how the linguistic features are realized in each strategy type. The step of claiming centrality step is one of the steps in establishing a territory. It is a promotional strategy since it consists of appeals that have a clear function to boost authors' academic promotion, and make their introductions more impressive (Wang & Yang, 2015; Swales, 1990, 2004). Therefore, although extensive studies have been carried out on the moves and steps of the introductory section of RAs, the existence of appeals as the strategies to promote the research topics in the claiming centrality step should not be ignored.

Few studies have focused on the types of appeals authors use to promote their research topics. For example,, Lindeberg (2004) found six types of appeals used by economists: appeals to practitioners, economy, authority, research, scope, and topicality. Harwood (2005) studied promotional acts in four disciplines (i.e., Physics, Economics, Computing Science, Business & Management). He suggested that using *I* and *we* can be claimed as self-promotional devices to highlight the authors' position in persuading their research topics. Meanwhile, Afros and Schryer (2009) focused on the realization of promotion through the application of metadiscourse markers. They found that using evaluative lexis and self-citations in the introductions are claimed as the most promotional values in language and literary studies.

In the field of AL, Wang and Yang (2015) considered adapting the frameworks of Martin and Rose (2007), Martin and White (2005), and Hood (2010) to identify the types of appeals used by applied linguists. They found that the authors used the appeal to magnitude, followed by the appeal to salience, topicality, and problematicity. Conceptualized, the appeals can be identified in the following way:

1. The appeal to salience is how authors invoke the readers about how valuable and important the topic is (Wang & Yang, 2015). This appeal functions to demonstrate the value of importance and significance, as well as the advantages of conducting the research topic (Abdi & Sadeghi, 2018; Arsyad & Wardhana, 2023)

2. The appeal to magnitude can be portrayed by looking at how authors show the growth research topics and expose them as prevalent and need to be discussed. Showing the multiplicity of studies or amount of research can be used as graduation or amplification to indicate the popularity of the research topics (Arsyad & Wardhana, 2023; Wang & Yang, 2015).

3. The appeal to topicality is how readers see the currency and newness of the topics introduced by the authors (Wang & Yang, 2015). The novelty of the research can be strengthened by using this appeal,

since it offers new knowledge from the research (Abdi & Sadeghi, 2018; Arsyad & Wardhana, 2023)

4. The appeal to problematicity is the way in which authors unveil the problems or conflict of the topics and attract the readers that the problematicity of the topics is worth conducting. The expectation from promoting the provoking problems or challenges in relation to the research topics is that the authors can create further endavours to solve the problems (Wang & Yang, 2015)

A few years later, by adopting the four appeals categorized by Wang and Yang (2015), Abdi and Sadeghi (2018) compared the use of the four appeals by native and non-native authors (Iranian authors). The results showed that the appeal to salience is most frequent in English L1 and L2. However, they found that English L1 authors referred to the entities in the real world more than L2 authors. In contrast to what was identified by Wang and Yang (2015), the English L1 authors used entities in the real world more than the research world.

The contradictory findings found by previous scholars are a matter for considerable discussion and further studies. Another question of theoretical and pedagogical importance is whether the use of appeal in English L1 and FL also differs from the mother tongue language of the authors, for example, the Indonesian language. This may be because the mother tongue language possibly influences the rhetorical structure of English RA. The previous studies have not compared the rhetorical styles of RAIs written in English and Indonesian in order to identify the differences between the use of moves and steps and the research traditions influenced by Indonesian styles, and the extent to which they should be ruled out. This is particularly relevant to writing a good English RAI, to be accepted in broader communities. Research has to be published internationally and readable in the wider discourse communities. Although, from a practical standpoint, there might be differences between the RAIs written in English and Indonesian, it should be noted that the research topics must be convincing and attract readers'

attention using the appeals and the linguistic choices employed by the authors in promoting the topics.

MATERIALS AND METHODS

Corpus Selection and Data Collection

In order to address the research questions, 60 introductions of AL RAs were randomly taken from reputable peer-reviewed journals (published from 2019-2022). The corpus in English L1 includes ten from *Applied Linguistics* and ten from *System*. Of 20 introductions in English FL, ten from *Studies in English Language and Education (SiELE)* and ten from the *Indonesian Journal of Applied Linguistics (IJAL)*. The journals are indexed by internationally reputable academic research databases, such as Scopus, Social Sciences Citation Index, Language Teaching, Education Research Index, etc. Meanwhile, the corpus in Indonesian L1 includes ten from *Diglossia* and ten from *Lingua Didaktika*. The two journals have been accredited by the Indonesian Directorate of Higher Education (DIKTI) and are indexed by Science and Technology Index (SINTA). Accordingly, all RAIs were coded according to their groups, EngL1 01-20 for English L1 (written by native authors), EngFL 01-20 for English FL (Indonesian authors who wrote the RAIs in English), IndL1 01-20 for Indonesian L1 (Indonesian authors who wrote the RAIs in Indonesia).

Data Analysis

In analyzing the data, two frameworks, Swales' (1990) and Wang and Yang's (2015) frameworks, were adopted (Figure 1). Swales' (1990) framework is considered more suitable in this study since it accommodates the claiming centrality step which belongs to establishing a territory. Accordingly, for this study, we took the framework as our starting point, in order to identify the step used by the authors of the three groups. The frequency of occurrences of claiming centrality step was first identified from each group. The total frequency of occurrences of the step used was descriptively counted and compared (in percentages).

Figure 1
Swales' (1990) and Wang and Yang's (2015) frameworks
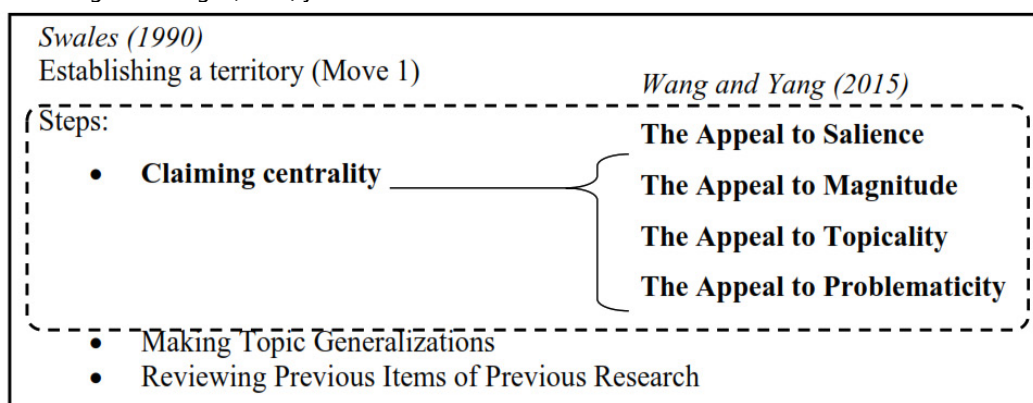
Then, the framework of Yang and Wang (2015) was used to identify the four appeals and their corresponding linguistic realizations (Table 1). They are contained in the promotional strategy (i.e., claiming centrality) that the occurrences had previously been identified and highlighted. The types of appeals were identified and coded accordingly for quantitative analysis. The chi-square test was used to examine whether there is a statistically significant difference in using the appeals across the three groups of authors.

In order to ensure reliability, we invited another coder with experience in move analysis to analyze 15 RAIs selected randomly from the corpus. The inter-coding result was calculated using Cronbach alpha. It showed a 92% agreement between two coders regarding their step of claiming centrality identifications and 87% regarding types of appeals identifications. The disagreement between coders was discussed, and we resolved it based on the inputs received .

RESULTS

The Use of Appeals in RA Introductions by AL Authors

Based on the data analysis, all four appeals were found in the three groups, i.e., English L1, English FL, and Indonesian L1.

As can be seen in Table 2, the appeal to salience was the promotional strategy most used by AL authors. This strategy functions to show the usefulness or the importance of the proposed topics being promoted in the RA introductions. The second highest appeal strategy used by the AL authors was the appeal to problematicity. It indicates that the au-

thors still consider showing challenges, problems, and difficulties of certain issues as a strategy to convince readers that they are worth conducting. However, the appeal to topicality was the second lowest strategy used, followed by the appeal to topicality as the lowest type of appeal used in the AL RA introductions.

The Differences in Using Appealing Strategies across the Three Groups (English L1, English FL, and Indonesian L1 Authors)

Some differences were found in terms of the distribution of the appeals. Across groups, in the Indonesian L1 Group (93 times/46.03%), the use of the appeal to salience was the most frequently used appeal. Also, the appeal to problematicity was mostly used by the authors in the group (73 times/48.66%). The authors in the English L1 employed the appeal to magnitude (22 times/50%) and topicality (18 times/51.42%) in most.

Based on statistical analysis, there is a significant difference in the use of appeal strategies across the three groups (p<.05). The number of appeals to salience used by the Eng-L1 group differs significantly from Indo-L1 group, but it is not remarkably different from Eng-FL group. Furthermore, although the frequency of the appeal to problematicity used by the Eng-L1 group was not different from the Indo-L1 group, there is a significant difference between the group of Eng-FL and Indo-L1 in terms of frequency. Surprisingly, there are significant differences in using the appeal to magnitude and topicality between the two groups of authors (Eng-L1 and Eng-FL groups) and Indo-L1 groups. It indicated that the Indonesian authors understood how to propose and strengthen their arguments about the topics in their English RA introductions using the four appeals. The

Table 1

Types of Appeals and Their Linguistic Realization (Adapted from Wang & Yang, 2015)

No	Types of appeals	Linguistic realization
1	The appeal to salience	Attitudinal expressions (e.g., allows...to improve).
		Adjectives denoting the significance or the importance of research topics (e.g., important, useful).
		Noun denoting the advantages of conducting a research topic (e.g., advantages, benefits).
2	The appeal to magnitude	An attitudinal expression denoting graduation (e.g., amount of research, a sizable body of research, many studies).
		Phrases denoting popularity (e.g., popular topics, prevalent issues, etc.).
		The prevalence of a phenomenon by referring to its frequency (e.g., most frequently)
3	The appeal to topicality	Phrases indicating urgency (...still discussed).
		Temporal pointers (e.g., recently, recent, has started to, now).
4	The appeal to problematicity	Words indicating problematic conditions (e.g., problems, conflicts, challenges, difficulties, limitations, controversies)

Note: Adapted from "Claiming Centrality as Promotion in Applied Linguistics Research Article Introductions", by W. Wang and C. Yang, 2015, *Journal of English for Academic Purposes, 20*, 162-175

Table 2

Frequency of Occurrences and Distribution of the Appeals by Type in Each Group

No	Promotional Strategies in Claiming Centrality	F	%
1	The appeal to salience	202	46.86
2	The appeal to magnitude	44	10.20
3	The appeal to topicality	35	8.12
4	The appeal to problematicity	150	36.89
	Total	431	100

result showed that the frequency of occurrences of the appeals used by the Eng-L1 and Eng-FL groups was not significantly different.

The appeal to salience appeared most in the AL RAIs, with the highest frequencies in the three groups - Indonesian L1 (50.06%), English FL (46.72%), and English L1 (37.14%). The lowest use of appeal was found in the appeal to topicality – Indonesian L1 (2 times), English FL (15 times), and English L1 (18 times). In terms of orientation to the research world and real-world entities, almost all appeals were made with reference to both entities. However, in Indonesian L1, the authors did not make the claim related to their popularity of topics regarding the research world (Table 3 and Figure 1).

Table 3 and Figure 1 indicate that the authors in Indonesian L1 and English L1 groups were more likely to claim the importance of their research topics with regard to the research world. Meanwhile, in the English FL group, the authors tended to show the appeal to salience in the research world more than the real one. However, in the English L1 group, it was found that the three appeals to magnitude, topicality, and problematic, were often turned towards the research world. However, the three appeals were made with the reference to the real world in English FL and Indonesian L1 groups. This showsthat ways to promote research topics in English RAIs (written by Indonesian authors) are still influenced by the style commonly used in writing Indonesian RAIs, in which the real-world entity was more often used in the three appeals.

Appeal to Salience

This strategy is used when the authors need to show the importance of their research topics. Wang and Yang (2015) suggest that the topics' usefulness, significance, or advantages should be clearly stated in the introduction section. They add that authors need to use phrases denoting the importance of their research topics (i.e., as an essential aspect of knowledge, the advantages of…) and attitudinal expressions (i.e., to improve, allows, aids), in order to indicate the importance of the research topics. In our study, the authors from the three groups used this strategy when they promoted their topics. Excerpts can be seen below:

Excerpt 1

The provision of comprehensible input *to students* **is essential** *in English as a foreign language (EFL) and second language (L2) classrooms (e.g., Krashen, 1982, 1985; Schmidt, 1992). …As several prior studies* **have shown the positive effects** *of* **gestures on learners,** *it can be concluded that* **gestures play an important role as input to learners for comprehension***.*

(Sys-RAI-05)

Excerpt 2

It has also become **a consensus** *that obtaining* **feedback from the teacher is more important** *than that from peers (Wihastyanang et al., 2020). To sum up, studies show that teacher feedback* **keeps worth employing.** *Furthermore, the advent of technology leads* **online written feedback** *to take* **its pivotal role** *in English L2 writing.*

(IJAL-RAI-004)

Excerpt 3

Ketika mengalami kendala pada saat berkomunikasi, seorang penutur akan menggunakan **cara-cara** *tertentu yang berkesinambungan. Cara-cara yang dapat digunakan misalnya dengan strategi komunikasi penghindaran, strategi komunikasi pengganti, dan strategi komunikasi meminta bantuan.*

#When someone ***gets problems in communication****, she or he utilizes* ***certain strategies****. Those are, for example, avoidance, alternative, and appeal for help strategies.#*

(Diglossia-RAI01)

Excerpt 1 indicates that an appeal to salience (i.e., *essential*), from the entity *the provision of comprehensible input,* was powered by the number of citations. The next sentence also indicates the importance of the proposed topic (i.e., *gestures*): the experiential meanings around researchers (i.e., several prior studies have shown…). Similar to Excerpt 2, the authors from English FL also showed an invoked attitude by referring to the previous study (*Wihastyanang et al., 2020*) that teacher feedback is essential and worth employing. It indicates that making reference to previous researchers' claims may increase the authors' confidence in showing the importance of their proposed research. It also makes the claims more appealing and convincing. Meanwhile, the au-

Table 3
Chi-Square Test Result

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	*44.488[a]*	*6*	*.000*
Likelihood Ratio	*53.309*	*6*	*.000*
Linear-by-Linear Association	*.246*	*1*	*.620*
N of Valid Cases	*431*		

Appeals * Groups Cross-Tabulation					
			Groups		**Total**
			Eng-L1	Eng-FL	Indo-L1	
		Count	52a	57a, b	93b	202
	Appeal to Salient	Expected Count	64.2	57.2	80.6	202.0
		% within Appeals	25.7%	28.2%	46.0%	100.0%
		Adjusted Residual	-2.53	-.04	2.44	
		Count	22a	18a	4b	44
	Appeal to Magnitude	Expected Count	14.0	12.5	17.6	44.0
		% within Appeals	50.0%	40.9%	9.1%	100.0%
		Adjusted Residual	2.74	1.96	-4.41	
Appeals		Count	18a	15a	2b	35
	Appeal to Topicality	Expected Count	11.1	9.9	14.0	35.0
		% within Appeals	51.4%	42.9%	5.7%	100.0%
		Adjusted Residual	2.60	1.99	-4.31	
		Count	45a, b	32b	73a	150
	Appeal to Problematicity	Expected Count	47.7	42.5	59.9	150.0
		% within Appeals	30.0%	21.3%	48.7%	100.0%
		Adjusted Residual	-.58	-2.35	2.71	
		Count	137	122	172	431
Total		Expected Count	137.0	122.0	172.0	431.0
		% within Appeals	31.8%	28.3%	39.9%	100.0%

thors in the Indonesian L1 group preferred to state the importance of *the strategy of avoidance, alternative, and appeal for help* by making reference to real-world situation to show that the strategies can solve problems in communication.

Appeal to Magnitude

Abdi and Sadeghi (2018) claim that this strategy can be detected when authors indicate the relatively large number of studies related to the topics being discussed, such as indicating the popularity of the topic over a long time. Wang and Yang (2015) summarize the linguistic features authors

use in the appeal to magnitude, for example, phrases denoting the amount of research (i.e., a sizable body of…), attitudinal expression leading to increasing popularity of topics (i.e., burgeoning interest, indisputable worldwide popularity), or an adverb of frequency (i.e., …is most frequently used…).

Excerpt 4

In academic contexts where second language (L2) writing is involved, **machine translation (MT) through PCs, mobile phones, and the web is a widely used** *source of reference during* **writing***.*

(Sys-RAI-07)

Table 4

Orientation to Research/Real-World Entities across the Three Groups

No	Promotional Strategies in Claiming Centrality	English L1		English L2		Indonesian L1	
		Research World	Real World	Research World	Real World	Research World	Real World
		F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
1	The appeal to salience	24 (42.30)	28 (53.84)	36 (63.15)	21 (36.84)	19 (20.43)	74 (79.56)
2	The appeal to magnitude	12 (54.54)	10 (45.45)	8 (44.44)	10 (55.55)	0 (0)	4 (100)
3	The appeal to topicality	12 (66.66)	6 (33.33)	8 (53.33)	7 (46.66)	1 (50)	1 (50)
4	The appeal to problematicity	28 (62.22)	17 (37.77)	10 (31.25)	22 (68.75)	8 (10.95)	65 (89.04)
	Total	*79 (56.42)*	*61 (43.57)*	*62 (50.81)*	*60 (49.18)*	*28 (16.27)*	*144 (83.72)*

Figure 2

Research World and Real-World Orientation in Each Group
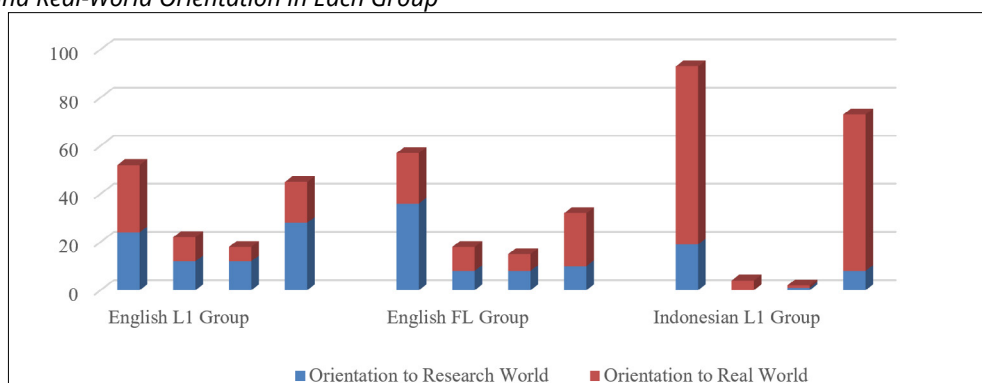
Excerpt 5

Necessarily, there have been **many investigations** *showing limited impacts of* **WCF on students' learning***.*

(SiELE-RAI-002)

Excerpt 6

TPACK *studies have been conducted in* **various countries***. In Asia, the results of TPACK studies have been from a number of countries such as Vietnam, Singapore, China, Turkey, and Malaysia.* **Many of the studies** *involved pre-service teachers (e.g., Graham et al., 2012; Pamuk, 2011), followed by in-service teachers (e.g., Chai et al., 2013; Guerrero, 2010),...*

(SiELE 07)

Excerpt 7

Penelitian tentang penyangga dalam proses pembelajaran **banyak dikaji** *dari tipe tipe penyangga yang digunakan oleh guru dan eksperimentasi dampak pengunaan penyangga terhadap hasil belajar siswa.*

*#***Research on scaffolding** *in the learning process is* **widely investigated** *from the types of scaffolding used by teachers and is experimented with to see its effect on students' learning outcomes.#*

(LingDi-RAI05)

Based on excerpt 4, promotion using the appeal to magnitude can be identified when the authors use a premodifier denoting attitudinal expression leading to increasing popularity of a topic (i.e., *widely used source of reference*). The aim is to draw readers' attention to the issue of machine translation. Another way of using the appeal to magnitude is also found in this study when the authors promote their research topics (i.e., *WCF on students' learning, TPACK, scaffolding*) using phrases denoting the extensive amount of research, such as *widely investigated, many of the studies, many investigations*, as seen in excerpt 5, 6, and 7.

Another important piece of information from the data in this study is that authors in the English L1 and English FL groups tended to use adverbs indicating the prevalence of a phenomenon (e.g., *widely, largely, mostly, frequently, excessively, extensively, broadly, globally*). Invoking attitudes by grading experiential meanings in terms of the amount of research (e.g., *large-scale designs, large-scale data, a large amount of..., a large Germany-wide representative sample of immigrants, many*) and scope (e.g., *the widespread use of MT, extensive line of research, the global position of...*) were also found in English L1 corpus. In contrast, Indonesian L1 rarely used such linguistic markers indicating the popularity or prevalence of their research topics.

Appeal to Topicality

This strategy refers to how authors inform the readers that their topics are current. Wang and Yang (2015) state that it involves the way in which authors emphasize the novelty of their research topics by using adverbs (e.g., recently), phrases (e.g., recent thinking), and verbs (e.g., has started...), in order to indicate the newness or recency of their research topics. In this study, the strategy was also found in the three corpora. The realization of the strategy can be seen below:

Excerpt 7

Early MT studies *were conducted primarily within the context of* **translation studies** *and often viewed MT as a source of errors (Belam, 2003; Kliffer, 2005; Ni~no, 2008), specifically lexico-grammatical errors that must be corrected through post-editing. However, with the* **widespread** *use of MT for writing in a foreign or second language, studies have been conducted* **recently** *to highlight its significance in L2 writing.*

(Sys-RAI-07)

Excerpt 8

As the demand for providing good models of academic and scientific texts keeps increasing for publication, the subject **(move analysis) has been getting** *a considerable amount of attention for the past* **few years** *(Marefat & Mohammadzadeh, 2013).*

(IJAL-RAI-006)

Excerpt 9

Pendidikan **di era sekarang ini** *merupakan permasalahan yang sangat menarik didiskusikan pada banyak forum, dari forum formal maupun nonformal; mulai dari kebijakan, sistem, sampai sumber daya tenaga pendidiknya.*

*#***Education in this era** *is a very interesting issue to be discussed in many forums, from formal and non-formal forums; ranging from policies, and systems, to the resources of the educators.#*

(Diglossia, RAI04)

In the excerpts above, the research topic concerned is first promoted by indicating the research roadmap related to the topic. In order to emphasize the newness of the topic (i.e., *Machine Translation is abbreviated to MT),* the authors used a temporal adverbial (i.e., *recently*). Another temporal adverbial, i.e., *currently*, was also found in both groups (English L1 and FL) to indicate the urgency of the topic in the recent situation. Also, the appeal to topicality concerning entities in the research world is shown in Excerpt 8. Here the authors emphasized the sustainability of the topic, as indicated by the present perfect progressive used. Moreover, the word *few* in the phrase *past few years* can also indicate that the research topic is not outdated and still has contributions in this current situation. On the other hand, the recency of the topic can still be invoked by describing it as a living field

(Wang & Yang, 2015), as it is shown in Excerpt 9 that the authors used a circumstance time indicating current condition (i.e., *di era sekarang ini*-in this era) to describe the current situation related to the topic.

Appeal to Problematicity

This type of appeal emphasizes how authors claim their proposed topics as challenging topics. Authors can promote the topic by showing its problems, challenges, conflicts, or difficulties. They can use words to indicate the use of the strategy (e.g., challenge(s), limitation(s), problem(s), controversies, etc.) (Wang & Yang, 2015).

Excerpt 10

A **mismatch** *between the linguistic knowledge base and opportunities for language use is understood to be* **problematic** *for L2 development. Specifically, opportunities for language use that draw* **on a limited linguistic knowledge** *base likely lead to limited L2 development (DeKeyser 1997, 2017).* **To date,** *however, the role of prior linguistic knowledge in understanding the nature and extent of linguistic development during* **SA is not well understood***.*

(AL-RAI-6)

Excerpt 11

Indonesian teachers *are often encountered with* **a dilemma** *in carrying out duties. On the one hand* **they have to provide students with adequate support** *to learning within a formal education setting; on the other hand, they are faced with* **contextual problems** *as the impacts of the education system.*

(IJAL-RAI-003)

Excerpt 12

Salah satu faktor yang dapat memengaruhi **kendala** *tersebut adalah mothertongue interference. Hal ini sesuai dengan yang diungkapkan Ellis (1997:51) bahwa bahasa ibu sebagai bahasa pertama dapat menyebabkan* **terganggunya** *pemerolehan bahasa kedua.*

#One of the factors contributing to the **difficulties** *is mother tongue interference. This is in line with what Ellis (1997: 51) stated that the mother tongue as a first language can* **disrupt** *second language acquisition. #*

(LingDid, RAI04)

The three excerpts above illustrate that the authors in the three corpora agreed to raise the problems to show the appeal to problematicity. They used words or phrases indicating problems (*i.e., dilemma, problematic, limited, not well understood, difficulties, disrupt*). As shown in excerpts 10 and 12, the authors began with the controversial issue related to their proposed topics. Then, they referred to what has been claimed in the previous research, in order to strengthen their arguments. To make it more problematic, we may raise another issue, as shown in Excerpt 10, where in the

third sentence the authors stated another controversial opinion. Meanwhile, the authors in excerpt 11 pointed out the problematic situation made with reference to entities in the real world.

DISCUSSION

Our investigation was motivated by the study conducted by Abdi and Sadeghi (2018) and Wang and Yang (2015). Wang and Yang (2015) considered Swales' (1990) conceptualization of appeals and Lindeberg's (2004) elaboration of appeals, in order to investigate the types of appeals in the introductory sections of AL RAIs. They identified four types of appeals used by the authors in the discipline, namely appeal to salience, to magnitude, to problematicity, and topicality. A few years later, Abdi and Sadeghi (2018) compared the appeals used by English L1 and L2 in AL RAIs. Our study adds another group for comparison with the two groups, namely, Indonesian L1, assuming that Indonesian authors might be influenced by their first language when they write the introductions in English, particularly in claiming centrality step. Therefore, we compare the use of appeals used by English L1, English FL, and Indonesian L1 authors and discuss argumentatively the logical reasons why the underuse or overuse of appeals happens as Indonesian authors promote their topics in claiming centrality in English.

Based on this study, we found that authors from the three corpora used four types of appeals to promote their topics. Although this finding corroborates those of the previous researchers (i.e., Abdi & Sadeghi, 2018; Wang & Yang, 2015), some differences in using each appeal between this present study and the previous ones were found. In this study, English L1 authors used the appeal to salience most often. However, the study conducted by Wang and Yang (2015) found that the appeal magnitude occurred in a vast majority. This might be due to the trend of research from 2019-2022 in which the use of technologies during the pandemic era influenced scholars to examine, investigate, and observe the implementations of technologies in language learning. Consequently, authors need to show the importance and usefulness of their proposed topics to convince their audiences at that moment in time. This might also differ in promoting topics if Covid-19 becomes endemic.

Moreover, our finding confirms the findings of Abdi & Sadeghi (2018) that the most frequently used type of appeal in AL RAIs written by native (English L1) and non-native English (English L2) is the appeal to salience, followed by the appeal to problematicity, magnitude, and topicality. Surprisingly, the order of the frequency of using the appeals is also similar to what has been found in the Indonesian L1 group. Authors in the Indonesian L1 group also appear to believe that persuading readers by showing the importance of the topics is a necessary to attract readers' attention. They are also more likely to claim the salience of their research topics concerning the real world, and it is similar to the group of English L1. However, the difference between the orientation to the research world and the real world in the Indonesian L1 group is too significant. It differs from English L1 group where the difference between real-world and research-world orientation is insignificant. The overwhelming use of the appeal in the Indonesian L1 group indicates that the authors still primarily express inscribed attitudes, rather than promote the usefulness of the topics argumentatively by turning entities into the research world. On the other hand, in the English FL group, it is the other way around. The author tended more to use the appeal to salience with the orientation to research the world. Therefore, although practitioner interests are considered (Wang & Yang, 2015), authors need to give strong arguments, based on supporting evidence from previous studies, concerning the advantages of research to solve problems in a real-world context. It should be noted that the difference between the orientation to real-world and research world while using the appeal should not too significant.

The appeal to problematicity was found as the second-highest type of appeal used by the three groups. In the introduction section, authors may introduce problems before proposing solutions to solving them (Arianto et al., 2021; Arianto & Basthomi, 2021; Nabila et al., 2022). They can also highlight the limitations of previous studies as problems which become the signal of gaps which can be proposed for further studies (Chen & Li, 2019). In the context of applied linguistics, particularly in language learning, problematicity might be a foundation to provoke readers that there are still some problems that need to be solved. The problems or cases tend to be specific to those which authors have encountered in particular situations (Mirahayuni, 2002) The research results are expected to give contributions to the advancement of theories leading to resolving other practitioners' problems. However, it should be noted that the problems shown should also be representative of other researchers' problems. Audiences who read the statements containing the appeal will be provoked to admit the authors' claims.

Moreover, the second least common type of appeal was that of topicality, which aims to show the recency or currency of the topics discussed in the introductions. Disciplinarily speaking, the AL authors in all three groups of corpora considered the use of the appeal. The appeal was made with reference to entities in both research and real worlds, and the authors are more likely to claim their research areas in the research world. This finding corroborates the previous study (i.e., Wang & Yang, 2015). However, in the Indonesian L1 group, only a minority of authors used the appeal (twice, 50% in the research world and 50% in the real world). Some

factors might influence the low number of occurrences of the appeal. First, the lack of references might be a factor as to why the authors in the group used the appeal inadequately. Furthermore, the editorial team of national journals might be highly provoked to see the urgency of the research. This is related to the way in which authors state the importance of the topics and problems observed in certain specific situations. However, to the best of our knowledge, the marketization of research should be seen through the ways in which the authors persuade readers not only about the importance or urgency of the topics but also about the newness of the topics. International journal editors may also see the currency of the article, if the authors are able to show the novelty of a phenomenon. Consequently, the concern of appealing to topicality must be more directed towards a research world where readers will highlight the currency of a topic by identifying the lists of current studies shown in the introductions. Therefore, authors need to contextualize their issues by synthesizing the current studies or emerging research trends worldwide, in order to get their research published internationally, and achieve broader readability.

Magnitude is considered the least appeal used by the three groups. Authors from English FL and Indonesian L1 were more likely to claim magnitude with reference to the real world. On the other hand, in the English L1 group, the entity is more associated to the research world. Our findings, related to the distribution of the appeal to magnitude in the English L1 group, is relatively similar to Wang and Yang (2015). We agree that authors are expected to show evidence by listing several previous studies, if they need to state that many *studies have been conducted…, a large amount of studies…, a plentiful of research…*, or other phrases denoting the abundance of the previous related research. Moreover, authors who introduce the recency of research topics, the newness of phenomena, or conflicts related to topics, are also expected to associate their claims with the research world more than with the real world. We cannot ensure that an issue or a topic is new or it can give a novel contribution without reviewing the contextualization of the topic in the current research situation. Furthermore, we cannot mention the problems, if the claims of previous researchers support the problems. As suggested in previous studies (Arianto et al., 2021; Arianto & Basthomi, 2021), when establishing a territory, authors have to study the research, and then establish the problems from research rather than the real world This will make theoretical contributions which automatically contribute to practitioners.

Our findings also indicate that in the English FL and Indonesian L1 groups, the authors are more likely to use the appeal to magnitude and problematicity with reference to the real world. If real-world orientation is massively shown in move 1, it will undoubtedly affect the authors' difficulties in positioning their research gaps in move 2 (establishing a niche) (Arianto et al., 2021; Hamp-Lyons & Heasley, 2009; Kanok-

silapatham, 2005). A further influential socio-cultural factor may the infrequency of references to the research world, particularly in claiming the popularity, prevalence, difficulties, and challenges of a research topic or phenomenon. Establishing a territory, particularly in a centrality claim step, constitutes a fundamental step where the authors provide sufficient information to meet the expectation of their discourse communities. They can refer to previous literature or studies playing key role in strengthening their arguments and occupying a large amount of information in the introduction (Xiao et al., 2022; Saricaoglu, 2021). Indonesian authors need to acknowledge that the core of justifying potential research is how they claim their research topics and contextualize their topics to the current situations made from referring to the current studies (research world). In other words, sharing schemata that conventionally occurs in Indonesian RAIs (Safnil, 2003) should include references. Accordingly, when Indonesian authors or other non-native English authors promote their research topics in English RAIs, particularly in the field of AL, they have to follow the standards of marketization of research topics using promotional strategies (Wang & Yang, 2015). They need to know that the marketization of research in claiming centrality is dissimilar to what they do in their mother language RAIs .

CONCLUSION

This study explored authors' promotional strategies used by English L1, English FL, and Indonesian L1 authors. Our study identified four major types of appeals: salience, magnitude, topicality, and problematicity. These are strategies applied by the three groups of authors in varied ways relating the entities to research and real worlds. The three groups of authors integrated the four strategies, in order to increase the persuasive promotion of their research topics and make their topics appealing. The findings also indicate that although the three groups share similarities in the order of using strategies from the most to the least, they displayed dissimilarities in using the appeals in terms of frequency of occurrences of referencing the research world and the real world. English FL authors seem to be influenced by the cultural norms of the Indonesian language. They used the appeal to magnitude and problematicity made with reference to entities in the real world more than in the research world, and this is similar to the Indonesian L1 group in which the entities in the real world were more preferably used in terms of applying the two appeals.

This study is not without limitations. Since this study focused on comparing the application of appeals strategically and linguistically in applied linguistic RAIs only, we suggest that further study investigates appeals in the claiming centrality step in RAIs across disciplines. This will give a more comprehensive description among scientists in each discipline. Furthermore, it will provide insightful information, if oth-

er studies focus on how the cultural norms of the mother tongue language influence the use of appeals in English RAIs qualitatively. In other words, other researchers can triangulate their data. For example,, after examining the use of appeals by calculating the number of occurrences of the strategies, they can use qualitative methods of data collection, such as using (semi-) structured interviews. As a result, they can identify why certain appeals are prominently used to promote research topics using their mother language.

Furthermore, this study has pedagogical implications. The need to acquire knowledge about the rhetorical structure of RAI, particularly in understanding how appeals are constructed in the step of claiming centrality, is critically important for students, particularly those who are studying academic writing courses. EFL teachers may consider integrating the findings of this study into their teaching materials, especially with regard to writing research articles for international publications. They should also discuss the use of appeals and show how each appeal is constructed with reference to entities in either the research world or the real world.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

M. Affandi Arianto: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Supervision, Visualization, Writing – original draft, Writing – review & editing.

Maulluddul Haq: Methodology, Validation, Writing – review & editing.

Jufrizal: Methodology, Supervision, Validation, Writing – review & editing.

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Lexical Bundles in Indonesian EFL Textbooks: A Corpus Analysis

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ABSTRACT

Background: Lexical bundles in textbooks are of paramount importance in foreign language learning. They provide a framework for new vocabulary acquisition and help to build fluency. Despite many studies on lexical bundles, investigations into their usage in EFL textbooks in the Indonesian context are still rare.

Purpose: This corpus-based study examines the patterns and structural classifications of lexical bundles in EFL course textbooks for Indonesian senior high school students. As such, it could yield ready-made chunks of English which could be incorporated into students' spoken and written communication.

Method: The AntConc software version 3.5.9 was used to extract lexical bundles from five Indonesian Senior High School English textbooks. These books were endorsed by the government to be used across the country. The corpus revealed that the textbooks had 54,009 lexical bundles. In addition, the bundles were categorized into patterns and structural classifications based on Biber et al. (1999).

Results: The results showed the patterns included three-word lexical bundles with 32,527 occurrences, four-word with 11,620, five-word with 6,073, and six-word with 3,789. Furthermore, eleven structural classifications of lexical bundles were found in the textbooks: "noun phrase + of phrase fragment" with 173 occurrences; "noun phrase + other post modifier fragment" with 44; "other noun phrases fragment" with 157; "prepositional phrase + of" with 13; "other prepositional phrases" with 243; "anticipatory it + verb phrase/adjective phrase" with 13; "passive verb + prepositional phrase" with 19; "copula be + noun phrase/ adjective phrase" with 30; "(verb phrase +) that- clause" with 59; and "(verb/adjective +) to- clause" with 239.

Conclusion: Three-word lexical bundles were the most frequent in the senior high English textbooks. High frequency implies repetition of the bundles. Also, the other prepositional phrase fragment was the most frequent structural classification. Short bundles may have been intended to help students to retain vocabulary and recall the bundles in the usage. This study, therefore, provides valuable insights into the most common groups of words used in the Indonesian EFL textbooks. Pedagogically speaking, repeated bundles in English textbooks can familiarize EFL students with the patterns, and they can use them in spoken and written communication.

KEYWORDS

lexical bundles, corpus linguistics, senior high school English textbooks

INTRODUCTION

Lexical bundles have gained much attention from studies in corpus linguistics (e.g., Apple, 2022; Biber & Barbieri, 2007; Biber et al., 1999; Kim & Kessler, 2022; Liu & Chen, 2020; Panthong & Poonpon, 2020; Sanosi, 2022). This idea pertains to a cluster of words that tend to occur together with a higher frequency in a particular type of text (Biber et al., 1999). Scott (1997, p. 234) labeled these bundles of words "clusters", since they can be seen as a cohesive unit, similar to treating a set of keywords as a single word. Therefore, the process of grouping the words is called clustering. Stubbs (2015) used the term "N-grams", where

N refers to the sequence of words. It is worth noting that lexical bundles differ from idioms, which tend to be fixed in structure, complete in a phrase, and semantically complete. Unlike idioms, lexical bundles are not formulaic and fixed in their function at pragmatic levels (Biber et al., 2004; Biber et al., 1999; Kurniawan & Haerunisa, 2023; Panthong & Poonpon, 2020), and they frequently appear as strings of three or more words. Since lexical bundles play a significant role in communication as building blocks for discourse, they are considered essential for English language education. They are especially valuable in evaluating students' proficiency in English and supporting their language acquisition (Akbulut, 2020; Hussain et al., 2021; Northbrook & Conklin, 2019; Siricharoen & Wijitsopon, 2020).

The use of bundles of words in EFL textbooks is essential for improving students' vocabulary, since these textbooks place utmost importance on the target language. Firstly, individual words change their meaning when embedded in different contextual environments. Students need to understand the meaning of structured phrases, in order to comprehend the overall meaning of the sentence (Nesi & Basturkmen, 2009). By grasping the meanings of words, students can express themselves beyond their current level of proficiency and expand their vocabulary knowledge. Secondly, although lexical bundles exhibit intricate and incomplete structural patterns, they serve as vital building blocks of typical discourse (Conrad & Biber, 2005; Gil & Caro, 2019). While linguists may not recognize them intuitively, they fulfill an essential function. Thirdly, lexical bundles constitute the basic construction of discourse in academic registers, particularly in spoken and written forms (Conrad & Biber, 2005). These bundles are crucial for English language students, since they comprise simple expressions and are easy to learn within the normal language acquisition process (Biber et al., 1999; Northbrook et al., 2022). Lastly, since lexical bundles are highly prevalent in natural language, mastering them aids students in enhancing their fluency and achieving more natural usage (Hyland & Jiang, 2018).

Studies have shown that lexical bundles are present and significant in English materials, as highlighted by various researchers (e.g., Allan, 2016, 2017; Ganji & Nasrabady, 2021; Hussain et al., 2021; Jablonkai, 2009; Lee, 2020; Northbrook & Conklin, 2018, 2019; Northbrook et al., 2022). Lexical bundles have been proven to be helpful in improving reading comprehension and assisting students in achieving higher levels of language proficiency. This is achieved through the use of graded readers (Allan, 2016) and multi-word combinations (Lee, 2020; Hussain et al., 2021). The use of formulaic and lexically-dense language has also been found to be crucial in enhancing students' proficiency levels (Ganji & Nasrabady, 2021; Jablonkai, 2009). However, Allan (2017) found that the majority of the bundles available were for language instruction, whereas only a small portion was for the target language input. Additionally, the target input bundles were mostly formal, which was not consistent with

English as a Lingua Franca (ELF) daily conversations. Similarly, Northbrook and Conklin (2018) discovered that lexical bundles in Japanese EFL textbooks were unlikely to present and model authentic conversational language, prioritizing high-frequency language instead. Authentic lexical bundles were crucial in sharpening EFL students' communicative competence, as they showed sensitivity towards recurring lexical bundles in their input, primarily from their textbooks (Northbrook & Conklin, 2019; Northbrook et al., 2022).

Since lexical bundles may create simple expressions that accelerate students' vocabulary mastery and target language proficiency, the presence of lexical bundles in English textbooks helps the students to acquire the target language. Therefore, the authors of the books have tried to provide such language inputs in the textbooks. While Indonesian scholars have explored the use of word bundles in writing (e.g., Fajri et al., 2020; Kurniawan & Haerunisa, 2023; Oktavianti & Prayogi, 2022; Putri & Suhardijanto, 2022), as far as we know, no research has yet focused on analyzing lexical bundles in Indonesian ELT textbooks. This study seeks to examine the use of lexical bundles in English textbooks written by Indonesian authors for high school students in Indonesia who are learning English as a foreign language. These textbooks are often used as a resource for the students to improve their language skills. Even though Meunier and Gouverneur (2009) stated that some textbooks are sometimes not worth teaching due to language use, ignorance of practical usage, and infrequent words and phrases, some authors have endeavored to make the target language as natural as possible. This suggests that textbooks should make authentic and natural contexts providing typical English features, such as collocations and vague language (Alasmary, 2022; Alfiandita & Ardi, 2020; Hussain et al., 2021; Meunier, 2012). In this regard, the natural use of the target language is reflected in the patterns and structural classifications of lexical bundles.

By considering the importance of lexical bundles, this paper aims to analyze the frequency of patterns and structural classification which mostly appear in English textbooks for Indonesian senior high school students. In addition, this study is expected to help evaluate the language used in textbooks. The following questions are addressed:

1. Which lexical bundle patterns are most commonly utilized in senior high school EFL textbooks?

2. What is the most common structural classification of lexical bundles in senior high school EFL textbooks?

THEORETICAL UNDERPINNINGS

Lexical bundles are various in patterns and structural classifications. Therefore, understanding its patterns and structural classifications is vital to frame this study. The following

subsections present patterns and structural classifications of lexical bundles, using the concept and examples from Biber et al. (1999).

Patterns of Lexical Bundles

Identifying the patterns of lexical bundles gives insight into how words and phrases are combined together in texts. Biber et al. (1999) proposed patterns of word combinations and set different minimum cut-offs for each pattern of lexical bundles. While the minimum cut-off is somewhat arbitrary and dependent on the study's scope, it helps determine what qualifies as a lexical bundle. For instance, a two-word combination such as "I don't" (I do not) can be considered a lexical bundle when it comprises three lexical units. Furthermore, when certain three- or four-word combinations appear at least ten times per million words across a minimum of five texts, they are considered as lexical bundles (cf. Salazar, 2014).

Moreover, studies have established that the shorter the bundles, the more frequent they are. Biber et al. (1999) illustrated this by demonstrating that three-word lexical bundles occur more than 80,000 times per million words in spoken discourse and over 60,000 in academic writing. Four-word lexical bundles occur over 8,500 times per million words in conversational genres and over 5,000 in academic works. However, five- and six-word clusters are infrequent in both conversation and academic writing.

Given that five- and six-word bundles are less frequent than their shorter counterparts, Biber et al. (1999) established a lower cut-off for them. These longer bundles tend to appear across a minimum of five texts to be categorized as lexical bundles. Consequently, the most frequently observed patterns of lexical bundles, as indicated by corpus software, are the three-word and four-word combinations, whereas five- and six-word bundles are relatively less common.

While it is possible to extract lexical bundles using an n+1 algorithm (where n represents the word number in a bundle) through a corpus program (Kopaczyk, 2013), there is a potential for overlap between these bundles. Such an overlap can occur in two ways, namely syntagmatic and paradigmatic. In the case of syntagmatic overlap, the bundles start and end with a different word. The rest of the words, except the beginning and end, are the same as the previous bundle. Although there is an overlap between two bundles, their counts will vary in the corpus because the items in the beginnings or endings of the bundles are different. In brief, the same-length bundles represent different structural patterns even though there is a syntagmatic overlap between them (Kopaczyk, 2013). On the other hand, paradigmatic overlap occurs like a 'matryoshka doll' effect, where the shorter bundles are included in the longer ones. The next

bundle starts with the same word from the previous ones and ends with a different word. For instance, the first bundle is "a matter of," and the next will be "a matter of fact."

Structural Classification of Lexical Bundles

In terms of categorizing lexical bundles based on structure, most of them tend to be incomplete. Nevertheless, according to Biber et al. (1999), complete structures of lexical bundles account for 15% in conversational language and 5% in academic texts. Lexical bundles are essentially fragments embedded within phrases or clauses (Salazar, 2014). Despite their incomplete nature, there exists a strong grammatical correlation among lexical bundles, leading to the development of a taxonomy that classifies them into various primary structural categories (Biber et al., 1999; Gil & Caro, 2019).

Biber et al. (1999) categorized the structural framework into twelve classifications. Later, Chen and Baker (2010) reorganized original classifications of lexical bundles of Biber et al (1999) into three main phrasal categories. These categories are based on the types of phrases they belong to, namely noun phrases, prepositional phrases, and verb phrases. Meanwhile, the clausal categories of lexical bundles consist of adverbial clauses, and bundles formed by that-clauses and to-clauses. Adverbial clauses modify the verb in the independent clause, while that-clauses and to-clauses function as nominal elements within the sentence. The following subsections offer a more detailed overview of the twelve classifications by Biber et al. (1999).

Noun Phrase with of- Phrase Fragment

These lexical bundles possess a wide range of meanings and are used for the tangible attributes, including place, size, and quantity (e.g., "*the size of the sample* makes …"). Moreover, they are used for existence or presence, and abstract qualities (e.g., "… *due to the presence of the* …" and "*the use of* a diameter…"). They also explain processes or events which extend throughout a duration (e.g., "… contributed to *the development of an* additional depletion …").

Noun Phrase with Other Post-Modifier Fragments

Recurrent expressions rarely follow a noun phrase with a post-modifier other than of-phrase. There are two types of these bundles, namely noun phrase with a post-nominal clause fragment and noun phrase with a prepositional phrase fragment. These bundles describe the process of how it occurs using "*the way in which*" and "*to extent to which*" (e.g., "… concerning *the way in which* electrons were…"). It is used to identify the relationship among entities. This also consists of the noun + complement clause combination (e.g., "*the fact that the* …. is difficult to …").

Prepositional Phrase with Embedded of- Phrase Fragment

This category functions as the post-modifier of the noun. The majority of this category's lexical bundles express abstract and logical relationships (e.g., "*as a result of these* ….").

Other Prepositional Phrase (fragment)

Most lexical bundles which begin with a preposition "*in*" are frequent in this category (e.g., "*in the next chapter* …."). Another expression is "*at the same time,*" which is used to differentiate between two statements or occurrences considered to be compatible (e.g., "In this way, …, yet *at the same time* provided …").

Anticipatory it + Verb Phrase/ Adjective Phrase

The predominance of lexical bundles which initiate an extraposed structure contain predicative adjectives governing a complement phrase. This is typically a to-clause (e.g., "…, *it is possible to* recognize …"). The majority of these extraposed bundles with verb predicates are of the passive that-clause (e.g., "*it should be noted* that …").

Passive Verb + Prepositional Phrase Fragment

In this category, the lexical bundles are composed of a passive voice verb and a prepositional phrase. It describes logical relationships rather than the agent in a by-phrase (e.g., "… *is shown in figure* …") and also identifies the basis of findings (e.g., "… *is based on the* fact that …").

Copula be + Noun Phrase/ Adjective Phrase

Each lexical unit in this category starts with the copula be (or may be). There are two major subgroups dependent on the subject predicative, namely noun and adjective phrases. These bundles serve as the subject of the copula be (e.g., "the project *is one of the* most…"). In addition, lexical bundles with adjective phrases are used to show causative/comparative relations (e.g., "it *may be due to* …").

(Verb Phrase +) that-Clause Fragment

The majority of lexical bundles containing a verb followed by a that-clause in the main sentence are extraposition structures. These bundles frequently appear in unmarked declarative structures as a complement clause (e.g., "… have found *that there is a* positive correlation between …").

(Verb/ Adjective +) to-Clause Fragment

Lexical bundles with predicative adjectives which control a to-clause indicate a possibility or ability (e.g., "… work *is likely to be*…"). Meanwhile, those with verb predicates that control a to-clause identify previous findings (e.g., "…. *has been shown to* operate in …").

Adverbial Clause Fragment

This structural classification is used to relate references to other discourse segments. An example is "each individual is, *as we have seen*, …."

Pronoun/ Noun Phrase + be (+…)

It is rare to find lexical bundles which begin with clauses. They have copula be as the verb, and the subject can be the pronouns "*this*" and "*there*". The bundles with "*this*" as a subject are used to connect the information followed by the preceding discourse. An example is "*this is not to* say that…" Meanwhile, those which begin with existential "*there*" are used for informational packaging purposes (e.g., "… showed that *there was no significant* difference between …").

Other Expressions

This category refers to the bundles which do not fit with the other classifications. The examples are "*as well as the", "may or not may not",* and *"the presence or absence*."

MATERIALS AND METHODS

Materials

This study examined five English textbooks written by Indonesian authors and published by the government. These textbooks were chosen as the data source because they were primarily used in schools and distributed for free. Even though the authors were non-native English speakers, they were able to provide the target language inputs by considering the proficiency levels of Indonesian EFL students. Since the books were developed based on the existing national curriculum, the Indonesian government also supervised the writing process to ensure that the learning outcomes set in the curriculum were met. The corpus consists of 300,859 tokens, as shown in Table 1.

Method

The research team employed a corpus-based study. According to McEnery and Wilson (2019), corpus linguistics studies language based on actual examples of usage. Furthermore, the AntConc corpus software version 3.5.9[1] was used to extract the data. This is a multiplatform practical tool that can be used in corpus studies and language classrooms for instigating data-driven language learning (Yusuf, 2020). The software was also used to convert the English textbooks, including instructions and teaching materials, from *pdf* to txt.

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[1]   Anthony, L. (2020). AntConc (Version 3.5.9) [Computer Software]. Waseda University. https://www.laurenceanthony.net/software

Table 1

List of the Books

No	Title	Author(s)	Publisher(s)	Tokens
1.	Interlanguage: English for Senior High School Students X	Joko Priyana, Arnys Rahayu Irjayanti, and Virga Renitasari	Pusat Perbukuan Departemen Pendidikan Nasional	38,871
2.	Interlanguage: English for Senior High School Students XI Science and Social Study Program	Joko Priyana, Riandi, and Anita Setyo Mumpuni	Pusat Perbukuan Departemen Pendidikan Nasional	54,404
3.	Interlanguage: English for Senior High School Students XI Language Study Program	Joko Priyana, Zayin Adib Muhammad, and Eka Dennis Machfutra	Pusat Perbukuan Departemen Pendidikan Nasional	79,171
4.	Interlanguage: English for Senior High School Students XII Science and Social Study Program	Joko Priyana, Triyani Retno Putri Saridewi, and Yuliyanti Rahayu	Pusat Perbukuan Departemen Pendidikan Nasional	52,381
5.	Interlanguage: English for Senior High School Students XII Language Study Program	Joko Priyana, Zayin Adib Muhammad, and Eka Dennis Machfutra	Pusat Perbukuan Departemen Pendidikan Nasional	76,032
Total Tokens in Corpus				***300,859***

The instructions in the textbooks were deliberately included in the corpus, since they provided authenticity for communicative practice (Northbrook & Conklin, 2018). We treated both spoken and written language in the books equally, since they could help students improve their communication skills. However, we chose to exclude the table of contents, acknowledgments, references, authors' biographies, and appendices in the front and back of the books.

Procedures and Data Analysis

The AntConc software has seven main features, namely concordance, concordance plot, file view, clusters/N-grams, collocates, word list, and keyword list. The features used to examine lexical bundles include clusters/N-grams, concordance, and file view. The "N-gram" button was used to identify lexical bundles in the texts, and the "concordance" feature helps identify the concordance line of the bundles. Meanwhile, the "file view" feature functions to see the detailed text of the bundles. In order to provide a broader range of lexical bundles for analysis, we incorporated all possible combinations of words.

The textbooks were converted and stored in the software. Then the research team set the minimum cut-off for all lexical bundle patterns ten times per million words, in order to generate their frequency of patterns (cf. Biber, 2006; Biber et al., 1999). Nevertheless, in the case of 5- and 6- word bundles, we modified the cutoff frequency requirement to include only instances which appeared at least five times within the corpus. The dispersion values utilized in this procedure ranged from zero to one. When a lexical bundle had a dispersion value of zero, it only appeared in one part of the corpus. In contrast, higher dispersion values indicated that the lexical bundle appeared in multiple sections of the corpus (Burch et al., 2017). Subsequently, a list of lexical bundles was generated along with frequencies and dispersion by clicking the start button of the software. There was no treatment of bundle overlapping because either the beginnings or the endings of the item differed. Accordingly, their counts in the corpus were different, and the overlapping bundles were included in the analysis and then categorized into actual patterns. In order to analyze the structural classification of lexical bundles, the research team divided the overlapping bundles into two broad categories, namely phrasal and clausal (Chen & Baker, 2010). We manually double-checked the overlapping bundles to ensure that they did not affect the analysis. Lastly, the frequency for each pattern and structural classification was calculated.

RESULTS

The result section is divided into two subsections. The first section presents the answer to the first research questions, i.e., patterns of lexical bundles in Indonesian EFL textbooks. Meanwhile, the second section describes the structural classifications of the lexical bundles in the textbooks.

Patterns of Lexical Bundles

54,009 lexical bundles were obtained from an analysis of the English textbooks. The patterns of the bundles which mainly occurred in the textbooks were: 3-word with 32,527 frequencies; 4-word with 11,620 frequencies; 5-word with 6,073 frequencies; and the smallest pattern was 6-word with 3,789 frequencies. The authors of the books tend to use three-word lexical bundles. The detailed results and examples of the patterns in the sentences are presented in the following subsections.

Three-Word Lexical Bundles

The list of three-word lexical bundles extracted from the textbooks is displayed in Table 2. The most frequently used was "*in this unit*", followed by "*what is the*" and "*answer the questions*".

This study showed that the bundles appeared helpful as building blocks, even though they were less formulaic in capturing the whole meaning of chunks. The examples of three-word bundles are shown in the following sentences.

(1)   Learn those and more **in this unit** through challenging tasks.

(2)   **What is the** difference among a folktale, myth, and legend?

(3)   Listen to the conversation and then **answer the questions**.

(4)   But **I do not** remember where I left the book.

Four-Word Lexical Bundles

Four-word lexical bundles serve as a suitable illustration of a given aspect (Kopaczyk, 2013). However, this pattern can be considered a more formulaic construction, since they create overlapping bundles and reappear in the form of longer ones.

The four-word lexical bundles consist of 11,620-word combinations. According to Table 5, the highest frequency of four-word lexical bundles was "*the listening script is*", with 140 frequencies. Therefore, all the bundles included in this pattern were the most formulaic in understanding the whole meaning of the chunks. The examples of four-word lexical bundles in the sentence are as follows.

(5)   **The listening script is** in the Appendix.

(6)   The listening script **is in the Appendix**.

(7)   The **listening script is in** the Appendix.

(8)   The listening **script is in the** Appendix.

(9)   **Let us make a** reflection.

As seen from the examples, the meaning of the whole chunks in this pattern can be fully understood. However, the four-word lexical bundles tend to overlap, since the meaning of the three-word was difficult to capture. Even though examples (5), (6), (7), and (8) showed that one sentence contained several four-word lexical bundles, their beginnings or endings were different. In example (7), the bundle was "*listening script is in*", and was "*script is in the*" in example (8), where the word "*script is*" was from the previous bundle. These examples showed syntagmatic overlaps to the right of the following bundle as the consequences of linear arrangement in the texts.

Table 2
Three-Word Lexical Bundles

Rank	Lexical Bundles	Freq
1	in this unit	367
2	what is the	237
3	answer the questions	218
4	I do not	213
5	study the following	195
6	based on the	191
7	is in the	157
8	in the appendix	149
9	the listening script	142
10	listening script is	140
11	script is in	137
12	do you think	126
13	what do you	125
14	let us make	122
15	of the story	121

Table 3
Four-Word Lexical Bundles

Rank	Lexical Bundles	Freq
1	the listening script is	140
2	is in the appendix	138
3	listening script is in	137
4	script is in the	137
5	let us make a	118
6	then answer the questions	108
7	based on the following	88
8	in pairs study the	86
9	and answer the questions	78
10	in this unit you	73
11	and then answer the	67
12	I would like to	65
13	what do you think	64
14	I do not like	62
15	the words in the	60

Five-Word Lexical Bundles

Five-word lexical bundles appear less frequently in conversation and academic prose (Biber et al., 1999). For this reason, Biber et al. (1999) set the lower cut-off for five- and six-word lexical bundles. However, the research teams set five times per million words for the five-word bundles, since the frequency cut-offs were somewhat arbitrary from one study to another, depending on the scope of the research.

Five-word lexical bundles were rarely found in the textbooks. Their examples are shown in the following sentences.

(10) The **listening script is in the** Appendix.

(11) The listening **script is in the Appendix**.

(12) **The listening script is in** the Appendix.

(13) Read the text again **and then answer the questions** below.

Some lexical bundles of a specific length are merged into longer ones by appending «+» symbols before or after them (Biber et al., 1999). For example, the four-word "*listening script is in*" is merged into the five-word "*listening script is in the*". This means that the longer such strings, the more fixed and formulaic they are. The five- and four-word bundles also tend to overlap together. Nevertheless, the same-length bundles still represent different structural patterns (Kopaczyk, 2013).

Table 4
Five-Word Lexical Bundles

Rank	Lexical Bundles	Freq
1	listening script is in the	137
2	script is in the appendix	137
3	the listening script is in	137
4	and then answer the questions	63
5	in this unit you learn	58
6	after learning English in this	56
7	do not like in this	56
8	I do not like in	56
9	I like best in this	56
10	in this unit and write	56
11	learning in this unit and	56
12	let us check your competence	56
13	let us make a summary	56
14	not like in this unit	56
15	of the story	121

Six-Word Lexical Bundles

Six-word bundles are structurally more complex, and often contain two or more embedded phrases and syntagmatic overlaps either to the left or right of a particular bundle (Kopaczyk, 2013). This pattern was the least common among the others. There were only 3,789 six-word bundles found in this study.

Based on Table 5, the highest frequencies of six-word bundles were "*listening script is in the appendix*" and "*the listening script is in the*", repeated around 137 times in five different English textbooks. The examples of this bundle are in the following sentences.

(14) The **listening script is in the Appendix**.

(15) **The listening script is in the** Appendix.

(16) The improvement I have made a**fter learning English in this unit**.

(17) What I **do not like in this unit**.

Even though this pattern rarely appeared in the English textbooks, it was more formulaic than the short ones, because the whole meaning of the chunks can be easily understood.

Structural Classification of Lexical Bundles

The results of the structural classification of all lexical bundles found in senior high school English textbooks are shown

Table 5
Six-Word Lexical Bundles

Rank	Lexical Bundles	Freq
1	listening script is in the appendix	137
2	the listening script is in the	137
3	after learning English in this unit	56
4	do not like in this unit	56
5	I do not like in this	56
6	I like best in this unit	56
7	in this unit and write down	56
8	learning English in this unit	56
9	learning in this unit and write	56
10	like best in this unit	56
11	on your learning in this unit	56
12	this unit and write down your	56
13	this unit let us make a	56
14	this unit the improvement I have	56
15	what I do not like in	56

in Table 6. The examples of each structural classification are presented in the following subsections.

Noun Phrase with of- Phrase Fragment

The noun phrase with of- phrase fragment had the most significant number of lexical bundles among the noun structures - 173. The bundles in this classification indicate quantities, qualities, or measurements and also describe events (Salazar, 2014). Some examples found in English textbooks are as follows:

(18)   Therefore, by buying local groceries we are helping reduce **the amount of** carbon dioxide produced.

(19)   **The beginning of** the story has the function of introducing the characters of the story, where and when the story occurred.

(20)   You advise him to reduce **the use of** pesticides and start using organic farming method as it produces healthier products.

These examples show that this structure always requires a complement (Kopaczyk, 2013). The structure is built from Det + N+ of+ xNP. The xNP part can be filled by various complements. The first example of the bundle "the amount of '' indicates the quantities, the second "the beginning of '' represents the description of events, and the last "the use of '' describes qualities.

Noun Phrase with Other Post Modifier Phrase Fragment

There were two types of this bundle structure, namely noun phrases with post-nominal clause fragments and noun phrases with prepositional phrase fragments. Examples (21) and (22) show a noun phrase with a post-nominal clause fragment, used to identify the relationship among entities. Meanwhile, examples (23) and (24) indicate a noun phrase with a prepositional fragment.

(21)   Listen carefully to **the dialogue between** Denias and Retno.

(22)   Study the words below before you listen to **the conversation between** Anita and a librarian.

(23)   Let us make **a summary in** this unit.

(24)   The purpose of hortatory exposition texts is to argue **a case for** or against a particular position or point of view and it proposes a suggestion at the end of the argumentation.

Table 6

Structural Classification of Lexical Bundles in the Textbooks

Category	Structural Classification of Lexical Bundles	Frequency	Percentage
A Phrasal			
NP- based			
1	Noun Phrase+ of	173	17,35%
2	Noun Phrase+ other post modifier	44	4,41%
3	Other Noun Phrase	157	15,75%
PP- based			
4	Prepositional Phrase+ of	13	1,30%
5	Other Prepositional Phrase	243	24,37%
VP- based			
6	Anticipatory *it* + Verb Phrase/ Adjective Phrase	13	1,30%
7	Passive Verb+ Prepositional Phrase	19	1,91%
8	Copula *be*+ Noun Phrase/Adjective Phrase	30	3,01%
9	Pronoun/ Noun Phrase+ *be*	7	0,70%
B Clausal			
10	(Verb Phrase+) *that*- clause	59	5,92%
11	(Verb/ Adjective+) *to*- clause	239	23,97%
12	Adverbial Clause	0	0,00%
TOTAL		***997***	***100,00%***

Other Noun Phrases

This classification was only for the remaining lexical bundles which did not fit with other noun structure classifications (Biber et al., 1999). The results showed that 157 bundles of other noun phrase structures were found in the English textbooks. The examples are as follows.

(25) The purpose of today's show is to raise students' and youths' awareness to participate in saving our earth from **the global warming**.

(26) **The little boy** pressed his face against the chain link fence.

(27) In a single mouthful, the wolf swallowed **the old lady**.

This bundle structure was built from determiner + noun. However, there was no specific function for this classification, since the remaining bundle is not included in the first and second noun structures.

Prepositional Phrase with Embedded of- Phrase Fragment

Prepositional phrase fragments were the primary group of lexical bundles that were mainly formulaic. The results revealed there were only 13 bundles found in the textbooks. Furthermore, the bundles, consisting of prepositional phrases with embedded of- phrase fragments, serve as the post-modifier of the noun (Biber et al., 1999). Therefore, the bundles in these classifications commonly signified the abstract or logical relationship between prepositional elements. The examples are as follows.

(28) **As a matter of fact**, the government has planned some strategies to do that.

(29) The purpose of hortatory exposition text is to argue a case for or against a particular position or point of view and it proposes a suggestion **at the end of** the argumentation.

(30) **In groups of** four, read the following discussion and then summarize it.

Example (28) showed that the bundle "as a matter of fact" served to mark the fact. The bundles beginning with a preposition "at," as in Example (29), signify temporal relations. Other bundles with a preposition "in," as in Example (30), indicate quantities.

Other Prepositional Phrases (Fragment)

Fragment was the most frequently found in the English textbooks. This classification had the highest number, with a total frequency of 243 lexical bundles. The examples are as follows.

(31) Find the equivalents in Indonesia **according to the** context.

(32) The old king's birthday arrived, and the two oldest daughters brought him presents that were very necessary, but **at the same time** extremely expensive.

(33) After that, use the words **on the left** column to complete the sentences.

(34) Some countries have already banned smoking **in public places**, like Italy and New Zealand.

(35) **On the other hand**, not many students have the opportunity to compete winning the scholarships.

The lexical bundle "according to the" was very common in this classification as it occurred 61 times. In example (31), several bundles refer to something or the text itself (Salazar, 2014). Another very common example in this classification is "at the same time". This bundle contrasts two propositions or events considered compatible (Biber et al., 1999). Example (32) showed the contrast between the very necessary and the costly presents. They were considered compatible with each other. Examples (33) and (34) were used to identify orientation as "on the left" and place as "in public places". Furthermore, example (35) showed a comparison between students who had the opportunity to win scholarships and those who did not. This indicates that other prepositional phrase fragments are also used to compare or establish temporal and logical associations between different concepts (Salazar, 2014). Since this structural classification is the most frequent, the authors of the book often use this structure in the teaching materials. This can raise students' awareness of lexical bundles and their use in spoken and written texts. Therefore, the students can improve their fluency in learning a second language.

Anticipatory it + Verb Phrase/ Adjective Phrase

An adjective controls the beginning of lexical bundles with an anticipatory it pattern, and few of them are controlled by a verb phrase (Biber et al., 1999). The results showed there were 13 lexical bundles for this classification. The bundles beginning this pattern mostly feature a predicative adjective followed by to- or that- clause (Salazar, 2014). The examples are as follows.

(36) **It is nice to** meet you.

(37) When "Dateline CNBC" catches enough of these freaks to have a weekly show on it, **it is time to**

start showing people that we will not tolerate perverts touching our kids.

(38) Based on this, **it can be assumed that** the persona in a poem is not necessarily the poet himself.

It was found that most of the bundles in this classification were "anticipatory it" with a predicative adjective followed by a to-clause. However, there were no bundles with "anticipatory it" and a predicative adjective followed by that-clause in the English textbooks. Examples (36) and (37) contain "anticipatory it" with a predicative adjective, as in the word "nice" and "time" followed by a to-clause. In contrast, a few numbers of lexical bundles in this classification were included in the verb predicative followed by that- clause as in Example (38).

Passive Verb + Prepositional Phrase Fragment

The prepositional phrase shows a logical connection instead of specifying the agent in a by-phrase (Biber et al., 1999). The result showed 19 lexical bundles were in this classification and the examples are as follows.

(39) Questions 12 - 16 **are based on the** following text.

(40) Usually, it **is based on the** criteria of weak and strong arguments.

The bundles "is/are based on the" in Examples (39) and (40) occurred most frequently in the textbooks. The bundle "are based on the" occurred 42 times in five different English textbooks, while "is based on the" occurred ten times. Both examples showed the relation between questions and texts (39) as well as arguments and criteria (40).

Copula be + Noun Phrase/ Adjective Phrase

All lexical bundles in this classification are initiated with the copula "be". The two types of this classification depend on the subject's predictive, whether a noun phrase or an adjective phrase (Biber et al., 1999). There were only 30 bundles for this classification, most of which were followed by a noun phrase.

(41) Washington is home to numerous national landmarks and **is one of the** most popular tourist destinations in the United States.

(42) You **are the one** who gave me the idea about the story I told the class.

(43) Spoof **is a type** of story which has a twist (funny part in the end of the story)

The most frequent lexical bundle in the textbooks was "is one of the" as in Example (41). It occurred 19 times, followed

by "are the one" in example (42), which appeared 18 times. The other examples are as follows.

(44) I **am sorry to** hear the news today.

(45) Really? I **am very happy** to hear you say so.

(46) Well, I think those **are the main** goals, but you know, we can add more goals later on.

These examples show the use of a copula followed by an adjective phrase, such as "sorry" (44), "very happy" (45), or "are the main" (46). They are used to express emotions.

Pronoun/ Noun Phrase+ be

The bundles in this classification were less frequently found in the textbooks and the results showed only seven lexical bundles.

(47) **There are some** mistakes on the spelling.

(48) Total language death occurs when **there are no** speakers of a given language idiom remaining in a population where the idiom was previously used (i.e., when all native speakers die).

These bundles had the copula "be" as the verb, and the subject pronoun can be "this" or "there". In this case, there were no bundles with the subject pronoun "this". Lexical bundles with "there" as the subject pronouns were used for informational packaging purposes, as seen in the two examples above. The bundle "there are some", as in (47), was the most frequent as it appeared 20 times per million words. It was followed by "there are no" which occurred 11 times. Example (47) showed that the bundle "there are some" is used to give information about mistakes in spelling. Meanwhile, Example (48) showed "there are no" was used to inform that when there were no speakers, it would lead to language death.

(Verb Phrase+) that- Clause

Lexical bundles consisting of a that-clause had a verb phrase in the main clause. There are two main types of this structure, namely those containing the main clause verb and those beginning with the that- clause (Biber et al., 1999). The results showed there were 59 lexical bundles for this classification, and all were included in the two classes. The examples are as follows.

(49) **I think that** people who ride without wearing helmets are suicidal, deluded, or just dumb.

(50) **I must say that** the movie was awesome, but the dialogue was sometimes rude.

The two examples used the verb phrase followed by that-clause, in order to emphasize propositional statements. In Example (49), the person wanted to emphasize their statement about people who ride without wearing helmets as well as their statement about the movie in Example (50). Other examples of this structure which only consist of that-clause are as follows.

(51) Many parents also think **that it is** better for their children to work and earn money than to go to school.

(52) The current problem is **that there is** still a possible danger from smoke since smokers can light cigar everywhere.

(53) Does Ayu think **that there is a** possibility for the drug addicts to recover?

Typically, lexical bundles with that- clause often appear as a complement clause in a declarative structure. There are two types of this structure. The first was followed by "it" in (51) as the subject and the copula "is" as a verb. This bundle was also the most frequent, occurring 47 times per million words. The second type was followed by "there" in (52) and (53) as the subject with the present tense "is" as a verb.

(Verb/ Adjective+) to- Clause

Lexical bundles in this structural classification consist of to-clauses or to-clauses that come after a predicative adjective or a verb phrase (Salazar, 2014). It was found that this classification appear in second place with 239 lexical bundles. The examples of lexical bundles used in the sentences are as follows.

(54) Department for Transport that drivers are four times **more likely to** crash if they are holding a mobile or sending a text while at the wheel.

(55) The shoes brought such a good price that this time he **was able to** buy enough leather for four pair of shoes.

(56) The expressions above **are used to** accept an invitation and an offer.

(57) It is your chance **to say that** you love her very much.

(58) **To show that** he was the most powerful man in the kingdom.

There were three main classification types, namely predicative adjective+ to-clause, (passive) verb phrase+ to-clause, and simple to-clause. The bundles containing predicative adjective+ to- clause were commonly used to indicate likeli-

hood as in (54) and possibility/ ability as in (55). In contrast, those with verb phrases before to- clause were used to refer to something (56). The phrase was typically in the passive voice. Finally, the simple to-clause was often used to indicate purposes/aims, as in (57) and (58). It was also usually found at the beginning of the sentence (Salazar, 2014).

DISCUSSION

The results showed that the shorter the bundles, the more frequent they were. The shortest or three-word bundle with 32,527 frequencies, exceeded the others in the five Senior High School English textbooks written by Indonesian authors. Furthermore, the least used pattern was the longest or the six-word bundles with only 3,789 frequencies. However, it was unexpectedly found that some word combinations, such as "I do not", were in the most frequent pattern of three-word bundles. According to Biber et al. (1999), it is commonly found in non-academic texts rather than academic textbooks. In a language learning context, such word combinations can be easily found in textbook dialogue samples. The topics of dialogue vary from formal to non-formal. They are a normal speaking exercise in textbooks used by EFL students, in this case, in Indonesia. Kopaczyk (2013) as well as Northbrook and Conklin (2018) also revealed that this pattern tended to appear in conversations, since they were too short to capture the whole meaning of a chunk. It was common, therefore, to come across the bundle "I do not" in an everyday conversation between peers at school: for example, in the line "I do not remember where I left the book." As the frequency of vocabulary usage in textbooks tends to increase as the grade level progresses (e.g., Cao et al., 2022; Paraschiv et al., 2023), the authors of the books might have also been aware of students' English proficiency levels across the country. In this way the use of simple expressions in the textbooks could catalyze their next levels of language proficiency.

Written dialogues can provide a practically linguistic explanation of using particular terms, vocabulary, or grammar. Since it has become commonplace for short lexical bundles to be found in EFL textbooks, particularly in the dialogue sections, four-word bundles, such as "I don't like," "I would like to," and "what do you think," are considered important for understanding particular grammar points, thereby making them high-frequency bundles relevant to study. These bundles can encourage students to express themselves in different ways, such as stating their dislike for swimming, offering assistance, or asking for opinions on an idea. Northbrook and Conklin (2018) argued that the word combinations in textbooks should be more versatile and open to interpretation, especially considering the topics that students are likely to discuss. Their study in junior high school English textbooks in Japan revealed that the phrase "do you have any pets" had little impact. Students were more likely to be interested in discussing their plans for the weekend with

friends, rather than someone's pets. In order to make textbooks more relatable, it was suggested that the word "ideas" be used instead of "pets" in this context (Northbrook & Conklin, 2018, p. 328). By using language which reflects real-life conversations, the students could easily apply it in both informal and academic settings (Ganji & Nasrabady, 2021). Thus, a corpus can provide valuable insights to make sure that the language used in textbooks is as natural as possible.

The research findings indicate that the lexical bundles were primarily derived from the instructional materials found in the textbooks, as shown in Table 2. This supports Allan's (2017) study which found that these bundles were often used in providing instructions. Moreover, as the textbooks featured a variety of text types, such as narratives, news, and speeches, the target bundles were also identified in these pieces, as in (18), (27), and (28). The presence of lexical bundles in instructions, reading materials, and exercises helped students acquaint themselves with and use these combinations of words in spoken and written communication (Abu-Rabiah, 2023; Cortes, 2004, 2006; Northbrook & Conklin, 2019; Northbrook et al., 2022). Furthermore, repeated exposure to three or more words in a specific order assisted students in retaining vocabulary and recalling the bundles more easily. This finding is consistent with Nekrasova's (2009) study which suggested that EFL students remembered word sequences better in short-term memory and recalled them with minimal modification. Learning such a common formulaic language is also useful in EFL writing, since students can quickly choose the appropriate words and phrases to express their ideas. In this regard, teachers can use corpus linguistics, among other techniques, to enhance students' writing skills (Birhan, 2018; Durrant & Mathews-Aydinli, 2011; Wijaya & Ardi, 2022). During teaching and learning activities, drawing explicit attention to lexical bundles, such as asking students to read instructions and introducing new chapters where lexical bundles usually appear, can raise students' awareness of these essential elements of academic language. They can enhance their ability to recognize, store, and process information over numerous exposures (Northbrook et al., 2022; Richter et al., 2022).

The findings of this study are consistent with those of Putri and Suhardijanto (2022) who examined bundles of words in legal documents in the Indonesian context. Both studies revealed that the most common types of bundles in senior high school English textbooks and legal documents were composed of three or four words. Three-word bundles were more prevalent in legal and academic writing because they utilized simpler expressions. They were less formulaic, and could be more easily learned through natural language acquisition. Conversely, the longest bundles, consisting of six or seven words, were the least frequently used. These findings suggested that Indonesians had a preference for three-word bundles in academic and legal writing, despite the differences in the specific bundles utilized in each corpus. The

textbooks and legal documents both favored three-word bundles, but textbooks used simpler language to facilitate comprehension for students. Legal documents employed more complex and formulaic bundles, in order to convey precise legal information. Therefore, teachers can assist advanced students in improving their writing skills in academic and legal domains by providing activities and materials that focus on teaching and practicing these lexical bundles.

With regards to structural analysis, both the current study and Putri and Suhardijanto (2022) divided lexical bundles into two categories: phrasal (dependent) and clausal (independent). However, a contrasting difference between the two studies was identified. Clause-based bundles were more dominant in Indonesian legal documents, in order to avoid multi-interpretations in legal documents. This preference for complete structure stems from the belief that they can convey more comprehensive and accurate meaning. Nevertheless, this finding contradicts the idea put forth by Biber and Barbieri (2007) that most lexical bundles do not have a complete sentence structure. In addition, the current study found that phrase-based lexical bundles, particularly prepositional phrases, such as "according to", were the most frequently used word combinations in the five English textbooks used in Indonesia. The high frequency of prepositional phrases can be attributed to the common writing instructions templates and the authors' levels of English language proficiency. Besides prepositional phrases, the authors of English textbooks exhibited a tendency to use more noun phrases with of-, such as "the beginning of" and "the amount of". These research-oriented bundles indicate quantities, qualities, or measurements and also describe events. This is consistent with Allen (2009) as well as Beng and Keong (2015), who reported that the most prevalent lexical bundles in their database were those associated with the noun phrases used in academic work.

Although this study sheds light on the lexical bundles of English textbooks in Indonesia, it has some limitations that may impact data collection and analysis. First, the number of data used was relatively limited, with 300,859 tokens from the five English textbooks used by Indonesian schools. Moreover, the textbooks used in this case were all written by Indonesian authors, with the same primary authors, and published by the same publishers. This narrows the possibility of obtaining a variety of data. Since the first authors were the same, it was most likely that the choice of words would be monotonous and less varied. Future studies are expected to employ a more significant number of English textbooks with different authors for more comprehensive findings. Secondly, the research team did not conduct qualitative data gathering, such as interviews with the textbook users, in this case, students and teachers, to justify the pedagogical implications of lexical bundles. Future researchers are expected to further examine how Indonesian students process the common word combinations they come across in their textbooks (cf. Northbrook & Conklin, 2019; North-

brook et al., 2022). Finally, it should be noted that this study did not compare the lexical bundles found in the textbooks to those used by native English speakers. In order to further investigate this issue, future studies can compare the lexical bundles in the textbooks to those found in established corpora, such as the Corpus of Contemporary American English (COCA) and the British National Corpus (BNC). The comparison can shed light on the use of English by non-native English speakers, since multilingual speakers now use it in various linguistically and culturally diverse communities of practices worldwide (Iswandari & Ardi, 2022; Nindya et al., 2022; Sugiharto, 2023).

CONCLUSION

This study highlighted that the most frequent patterns of lexical bundles were three-word and four-word bundles. The least frequent pattern was the 6-word. In terms of structural classifications, eleven out of twelve were used in English textbooks. Furthermore, other prepositional phrase fragments structure include the most frequent classification which occurred 243 times. The authors tended to use more noun phrases with of-, such as "the beginning of". This means they predominantly used prepositions in the teaching materials. The pronoun/Noun phrase + be structure was the least systematic classification, and no adverbial clause fragment structure was found in the textbooks. The use of lexical bundles in English textbooks gives exposure to L2 students. The short bundles enable students to retain English vocabulary and make them easily recall short expressions in usage. Also, the frequent structural patterns found in textbooks, like "the beginning of" and "the use of," can prompt students to further expand various noun phrases in their writing and speaking. Thus, repeated exposure to the word combinations familiarizes students with them and allows their usage in oral and written communication.

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DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Priyatno Ardi: Conceptualization; Formal analysis; Methodology; Project administration; Resources; Writing – original draft; Writing – review & editing.

Yacinta Dinda Oktafiani: Conceptualization; Investigation; Methodology; Writing – original draft; Writing – review & editing.

Nugraheni Widianingtyas: Methodology; Writing – original draft; Writing – review & editing.

Olga V. Dekhnich: Validation; Writing – review & editing.

Utami Widiati: Validation; Writing – review & editing.

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An Investigation of Turkish EFL Teachers' Work Alienation during the COVID-19 Pandemic

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ABSTRACT

Introduction: The education sector has been severely affected by the pandemic caused by the sudden outbreak of coronavirus disease (COVID-19), despite the preventive measures taken and innovations brought to mitigate its effects.

Purpose: This study investigated the impact of alienation experienced by EFL teachers as a result of obligatory social distancing that has become the new normal because of the COVID-19 pandemic. Further, it was determined whether gender, educational level, institution type, and years of experience in the profession were among the active determinants of work alienation.

Method: A mixed-method approach was adopted for this study. Quantitative data were collected using the Work Alienation scale, completed by 160 EFL teachers working at public and private schools in Mersin, Turkey. Qualitative data were gathered from the responses of 18 teachers within the survey group. The data collected from the scale were analysed, and the data from the open-ended survey were coded and classified into three themes.

Results: The findings indicated that EFL teachers experienced low levels of work alienation during the pandemic, and the survey data provided thought-provoking examples of the damage caused by the pandemic. Although no significant differences were identified in alienation based on gender, institution type, and educational level, significant differences based on the years of experience were found in the powerlessness, meaninglessness, and isolation subscales, whereby teachers with 1–5 years of experience endured a higher level of work alienation than those with more experience.

Conclusion: The findings of the study not only raise awareness regarding the importance of providing guidance to EFL teachers during the pandemic but also raise concerns about their wellbeing and digital literacy.

KEYWORDS

English as a foreign language, English language teaching, teacher alienation, teaching as labour, work alienation, online teaching

INTRODUCTION

The COVID-19 pandemic has altered societies, causing a global crisis. People have become physically separated, which has resulted in damaged social bonds and limited interactions. According to the United Nations' (2020) policy brief, 94% of students worldwide were affected by the pandemic, which equates to 1.58 billion learners. Language teaching has been considerably affected, as it requires interaction between the input provider and receiver. Thus, the pandemic required prompt adaptations to new teaching methodologies, approaches, and digital educational tools. Furthermore, dependence on video conferencing applications and interactive lesson materials required increased digital competence. Teachers and learners were forced to use digital platforms such as Google Classroom, Blackboard, Zoom, and WhatsApp groups, and adapt to the processes. Bailey and Lee (2020) revealed that teachers with more experience and familiarity with digital tools were more likely to perceive fewer hindrances and utilize more tools than those with lesser or no experience. The most significant

barriers encountered by learners were technical issues related to accessing online classes, attending online exams or activities, and connectivity issues (Mahyoob, 2020). In addition, social distancing and the lack of interaction, a physical learning environment, and sufficient guidance from teachers (Karataş & Tuncer, 2020) were also crucial challenges to foreign language learning. Moreover, teachers' workload and job requirements are constantly increasing, which reduces the work environment's quality and results in burnout and work alienation (Akar, 2018).

This study aimed to investigate the level of work alienation experienced by EFL teachers during the COVID-19 pandemic, an area that has not yet been explored in the literature regarding this context and sample. Furthermore, the studies on alienation have mainly focused on primary school teachers' alienation (Elma, 2003; Köse, 2018; Kovancı & Ergen, 2019), and student alienation (Özdemir & Rahimi, 2013) in the Turkish context. Hence, a comprehensive understanding of EFL teachers' work alienation during the ongoing pandemic cannot be overstated. However, limited research in the EFL field has utilized Seeman's (1959) framework for alienation, which includes five dimensions—powerlessness, meaninglessness, normlessness, isolation, and self-estrangement—all of which are considered to be helpful to identify and analyse the factors contributing to work alienation in a more comprehensive and established framework. Therefore, by adopting this theoretical framework, researchers can gain a deeper understanding of the experiences of EFL teachers and develop more targeted interventions to address the specific aspects of work alienation experienced by them. The results of this study will contribute to the literature on EFL teachers' work alienation and provide insights for the appropriate authorities.

LITERATURE REVIEW

Work Alienation

From the Marxist perspective, work is the essence of human life, acting as a mediator in how people ascribe meaning to the world. The concept of alienation in the context of labour refers to the separation of the worker from the product of their labour and the process of labour itself. When labour becomes a commodity that is bought and sold on the market, and the worker is reduced to a mere instrument of production, they may experience a sense of estrangement and disconnection from their work. This can lead to feelings of powerlessness, meaninglessness, normlessness, isolation, and self-estrangement, as described in Seeman's (1959) framework for alienation. Spenner (1988, p.75) emphasized the concept of self-directed jobs, wherein individuals are empowered to control their work, organize and manage their own product, and have flexible scheduling, stating that people who work "in self-directed jobs become less authoritarian, less self-deprecatory, less fatalistic, and less conformist

in their ideas while becoming more self-confident and more responsible to standards of morality." Similarly, work conditions with a lack of control can cause alienation from the product and process, and result in self-estrangement. More precisely, "through deprivation of control over the means and product of labour, the worker loses something in and of himself" (Josephson & Josephson, 1973, p.173). Consequently, a negative relationship between job satisfaction, which refers to the level of contentment an employee experiences with their job, and work alienation has been identified in studies by Korkmazer and Ekingen (2017) and Siron et al. (2015). Similarly, studies by Akar (2018) and Çetinkanat and Kösterelioğlu (2016) have identified a negative relationship between quality of work-life (QWL), which refers to the overall level of satisfaction, comfort, and well-being experienced by an employee in their work environment, and work alienation. Many teachers are not included in decision-making processes and lack a sense of control over the job, which can trigger work alienation, given that "power and authority have been centralized at the top of the school hierarchy" in educational organizations (Tsang, 2016, p.4). Teachers are given pre-prepared books and curricula, which may result in feelings of disempowerment. Moreover, "the expectations, interventions, and many applications and enforcements related to the educational system can lead teachers to become alienated from their jobs" (Yorulmaz et al., 2015, p.33). Dissatisfaction with work, heavy workloads, and lack of appreciation may also lower job commitment, which is highly related to work alienation (Ramaswami et al., 1993).

The theoretical framework used in this study, Seeman's (1959) theory of work alienation, is based on the idea that work can be a source of meaningfulness and fulfilment in people's lives. However, when certain conditions are present in the work environment, workers can become alienated from their work and the meaning it provides. As mentioned before, Seeman (1969) defines work alienation in five dimensions: powerlessness, meaninglessness, normlessness, isolation, and self-estrangement. Having a sense of powerlessness refers to feeling like you do not have any control over your environment at work or the process of making decisions. Meaninglessness refers to a sense that work lacks significance or purpose. Normlessness describes a feeling of a lack of clear expectations or standards in the workplace. Isolation refers to a sense of disconnection from colleagues and other social connections. Finally, self-estrangement refers to feeling disconnected from one's own sense of identity and values. Together, these dimensions create a complex web of negative feelings toward work that can lead to a sense of disconnection from the workplace and ultimately impact job satisfaction and well-being. The existing literature emphasizes how lack of social bonds in the organizations (Seeman, 1967) and isolation from friends and co-workers (Forsyth & Hoy, 1978) trigger work alienation in the isolation dimension. Work alienation in the meaninglessness dimension entails experiencing work as devoid of meaning (Nair & Vohra, 2010). Hence, related authorities, employers, and

administrators should examine the reasons triggering work alienation and focus on improving the QWL.

The COVID-19 Pandemic and Alienation in Education

Education has become one of the worst affected sectors since the pandemic, as educators and learners have been challenged by distance education, the introduction of new digital learning tools, the physical separation from the school environment, and psychological barriers. Distance education has become an area of concern with learners experiencing a "lack of self-control and self-learning ability" and lacking a "face-to-face teacher or even parental supervision" (Zhou et al., 2020, p.516). Distance education has also forced the reformulation of the approaches and methods used in classes that necessitated quick adaptations to e-learning to avoid disruptions to education. The need for information and communication technologies (ICTs) and physical distancing and job insecurity accelerated teachers' work alienation (Kozhina & Vinokurov, 2020). Among the concerns raised by Hamilton et al. (2020) is the lack of support and guidance provided to teachers when it comes to their digital literacy. The importance of incorporating technology in the teaching of English has become increasingly apparent to teachers (Khatoony & Nezhadmehr, 2020). Concordantly, some studies have highlighted the importance of professional development in distance learning (Caglayan et al., 2021) and classroom interaction (Walsh, 2011), whereas others noted that "computer-based information technologies separate and alienate people from direct experience with nature and community" (Knapp, 1998, p.7). Although Yeşilyurt (2021) was in favour of distance education during the pandemic, and Falfushynska et al. (2020) proposed blended education for the future, the challenges are not negligible, as some Turkish university students prefer traditional face-to-face education because they feel disconnected from school and friends (Ustabulut & Keskin, 2020). The challenges faced by distance education include the lack of government support, high costs associated with e-learning, internet speeds (Mahmoodi-Shahrebabaki, 2014), a lack of ICT infrastructure and curriculum adaptations to e-learning (Qureshi et al., 2012), and the need for academic staff training (Soydal et al., 2011). Aliyyah et al. (2020) emphasized collaboration among stakeholders, educators, learners, and parents. Five instructional strategy principles have been suggested by Bao (2020) as a means of ensuring effective online education: 1) appropriate relevance between instructions and learning, 2) effective delivery, 3) adequate faculty and instructor support, 4) high-quality participation to enhance student learning, and 5) preparation of a contingency plan to prepare for emergencies. Similarly, Toquero (2020) revealed the need to reassess the curriculum to be responsive to the needs of universities. Almazova et al. (2020) recognized the importance of professional development programs to provide university teachers with psychological, technical, and methodological support. Similarly, Atmojo and Nugroho (2020) supported technology integration in language learning, ICT, and online language learning courses for teacher education and training programs.

In line with the earlier literature, the starting point of this study was to investigate the challenges experienced by EFL teachers during the pandemic, especially in relation to distance education. Further, it was determined whether variables such as gender, educational level, institution type, and years of experience in the field were indicators of work alienation. The findings will help in creating an environment where EFL teachers may share and reflect on their experiences during the pandemic. Therefore, the research questions of this study were as follows.

(1) How do Turkish EFL teachers perceive the impact of the COVID-19 pandemic on their work alienation?

(2) Are there any significant differences in EFL teachers' work alienation based on their demographic information, such as: gender, years of experience in teaching, institution type (private or public), and educational level (elementary, secondary, or high school)?

(3) Are there any statistically significant differences in Turkish EFL teachers' perceptions of the four dimensions of the work alienation scale: powerlessness, meaninglessness, isolation, and alienation from school?

METHOD

Research Design

As part of this study, gender, educational level, institution type, and experience were examined to determine whether work alienation is influenced by the COVID-19 pandemic in relation to four subdimensions of the work alienation scale, which are powerlessness, meaninglessness, isolation, and alienation from school. Moreover, the study created a context for EFL teachers to share and reflect on their experiences. We used both quantitative and qualitative research methods to obtain valid results, confirm generalizations (Panthee, 2020), gain profound perceptions, and "increase the richness of data" (Patton, 1990, p.324). During the course of the study, the university board approved the protocol as a master's thesis, and all participants provided written informed consent prior to participation in the study. As part of the mixed-method research, data were collected over a period of six months.

Participants

The convenience sampling method was adopted to select participants because it was difficult to contact teachers, especially during school closures. An online link to the Elma's (2003) Work Alienation Scale was shared with EFL teacher groups. The sample for the scale was 160 EFL teachers working in private and public schools in Mersin, Turkey.

Additionally, all participants were provided with links to an open-ended survey, and 18 participants voluntarily agreed to participate. The scale and the open-ended survey, which are described later in the paper, were completed online, and participants were provided with consent forms and asked to supply demographic information. The demographic characteristics of the participants are presented in Tables 1 and 2.

Table 1

Demographic Characteristics of the Participants

Baseline Characteristic	N	%
Gender		
Female	126	78.8
Male	34	21.3
Educational Level		
Primary education	34	21.3
Secondary Education	84	52.5
High school	42	26.3
Years of Teaching Experience		
1–5	60	37.5
6–10	51	31.9
11–15	15	9.4
16–20	18	11.3
21–25	8	5.0
26+	8	5.0
Institution Type		
State	100	62.5
Private	60	37.5
TOTAL	*160*	*100.0*

Instruments

The Work Alienation Scale (see Appendix I for the original Turkish version) was designed by Elma (2003). It consists of 38 items with four subdimensions: powerlessness, meaninglessness, isolation, and alienation from school. The scale is a 5-point Likert scale, ranging from never to always—1) never, 2) rarely, 3) sometimes, 4) often, and 5) always—to identify the frequency of work alienation, and it was used in reference to the first, second and third research questions. As the scale used in the study is in Turkish, it was not translated into English (see Appendix II for the English-translated version of the original version for this publication) because the participants of this study were also Turkish. In other words, participants were likely to be more comfortable and familiar with the Turkish language and, consequently, better able to understand and respond to the questions. Therefore, using the original Turkish version of the scale was considered to

be the most appropriate and reliable approach for this particular study.

Regarding the reliability of the scale, Cronbach alpha values were found to be .90 for powerlessness, .91 for meaninglessness, .91 for isolation, and .63 for alienation from school subscales. The total Cronbach's alpha value of the Work Alienation Scale was .94. Therefore, the reliability of this tool was high.

The second instrument, an open-ended survey with seven questions (see Appendix III), was designed to investigate EFL teachers' perceptions and experiences and utilized to seek complementary answers for the first research question. It was used to gain more insights into how they perceive work alienation regarding the pandemic and other concerns that the quantitative survey could not provide. We developed four questions based on Davarcı's (2011) study on labour alienation among university teachers. It is important to note that all questions were posed in English, and no changes have been made to quotations to avoid misinterpretation.

Data Analysis

Analysis of the data from the Work Alienation Scale was performed using SPSS software. Descriptive statistics were used to analyse the demographic information provided by the participants. EFL teachers' alienation levels, educational level, and years of experience in the field were analysed using one-way ANOVA, whereas a t-test was used to determine whether EFL teachers' alienation levels differed based on their gender and institution type. Finally, the results regarding experience in the field were further analysed using post-hoc analysis. The subdimensions of the scale were analysed using correlation analysis, and the relationships among them were identified accordingly.

The data obtained through the open-ended surveys were subjected to a coding process in order to facilitate its organization into three main themes, which are presented in Table 3, and to align with the objectives of this study. The codes were assigned based on the frequency of occurrence of themes during the analysis of the data. Subsequently, the researchers interpreted the data, and the findings were discussed in relation to the earlier cited studies.

RESULTS

Qualitative Data Findings

Frequency Distribution of Codes for Themes

It is the purpose of this section to present the findings for the first research question on how Turkish EFL teachers perceive the impact of the COVID-19 pandemic on their work

alienation. Table 2 demonstrates the characteristics of the open-ended survey participants and Table 3 illustrates three themes that emerged from participant responses: work environment, barriers to teaching, and psychological impact of the pandemic on teachers.

Findings on Work Environment

This theme includes how teachers' work environment affects them and their teaching experience. Regarding attitudes toward school management and the system, the results indicate that EFL teachers are mostly dissatisfied with external factors such as work conditions (f = 12) and workload (f = 8). A participant reflected on her experience as follows:

Ruby: Our school principal did his best to handle the situation and provided information and guidance at every step of the new decision-making process. However, I could not get enough guidance on paperwork or other job requirements, except teaching, since it was my first year. Also, I worked at a private institution last year, and the owner of the school was too demanding and oppressive to the teachers and doubled his demands when the pandemic started.

Table 2

Demographic Characteristics of the Open-Ended Survey Participants

Participants	Gender	Educational Level	Years of Teaching Experience	Institution Type
Ruby	Female	Secondary School	1–5	State School
Laura	Female	High School	1–5	State School
Jack	Male	Secondary School	1–5	Private School
Tena	Female	Primary School	1–5	State School
Sophie	Female	High School	16–20	State School
Michelle	Female	Secondary School	1–5	State School
Hailey	Female	Secondary School	6–10	Private School
Lisa	Female	Secondary School	11–15	Private School
Emma	Female	Primary School	6–10	Private School
Alice	Female	High School	6–10	Private School
Eva	Female	Primary School	1–5	Private School
Leo	Male	Secondary School	1–5	Private School
Jane	Female	Secondary School	1–5	State School
Grace	Female	Primary School	1–5	Private School
Amy	Female	Primary School	1–5	State School
Rachel	Female	Secondary School	1–5	State School
Lily	Female	Secondary School	1–5	State School
Sarah	Female	Secondary School	6–10	Private School

Table 3

Frequency Distribution of Codes for Themes

Themes	Codes	Frequency of Codes
Work Environment	Work conditions	12
	Workload	8
Barriers to Teaching	Poor communication withstudents	14
	Technology-related issues	10
	Adaptation and teachers'readiness	8
Psychological Impact of thePandemic on the Teachers	Tiredness	15
	Loss of enthusiasm, interest,and motivation	13
	Self-doubt	8

Findings on Barriers to Teaching

The theme highlights the challenges EFL teachers faced during the COVID-19 pandemic. The teachers were mostly challenged by poor communication with their students (f = 14), followed by technical issues (f = 10) and the sudden transition to distance education and related adaptation problems (f = 8). A participant (Lily) expressed how the pandemic and distance education affected her students' success rates and perceived e-learning as a whistle in the wind, while another participant (Jack) perceived this period as a chance for improvement.

> Lily: ... I could not reach them [the students] because distant learning is a vain attempt to teach children. They become easily distracted. I could not give them sufficient feedback. We alienated each other. This adversely affected learning performance.

> Jack: I rarely feel alienated. When it comes to its impact on my teaching, I can say that the pandemic showed us that we should engage more in technology-based courses, and we should give more importance to that because the upcoming generation will be very good at technology. Therefore, I must be proficient at using new technology, specifically in the field of education.

While teachers reported being caught off guard and facing challenges while adjusting their lesson plans, students, and themselves to an uncertain situation, most believed that taking this opportunity would lead to their improvement as teachers.

Findings on Psychological Impact of Pandemic on the Teachers

This theme addresses the reflections, psychological states, and well-being of EFL teachers during the recent pandemic. The most commonly used expression was feeling tired (f = 15):

> Ruby: I feel relieved at the end of the day because there is not an arranged schedule for our lessons from Eğitim Bilişim Ağı (EBA) [Educational Information Network]. The lesson times are scattered throughout the day, making it impossible to make another plan as well as giving me a headache and backache from sitting in front of the computer.

Similarly, the participants expressed demotivation, disinterest, and a decrease in enthusiasm (f =13) toward the profession, teaching, and distance education. Some teachers, like Eva and Laura, evaluated teaching during the pandemic as a vain attempt, whereas others, like Rachel and Sophie, questioned their job preferences.

> Eva: I become less attracted to my job each day, less motivated, and less excited.

> Laura: I still love teaching English, but I am not as enthusiastic as before.

> Rachel: I feel like English is just a lesson now, so it's not as enjoyable as it used to be.

> Sophie: I loved teaching English, but now I am just tired.

Perhaps one of the most striking expressions from the participants was self-doubt (f = 8). The participants reported that they felt inadequate regarding learning new approaches, digital learning/teaching tools, and management styles. Therefore, the teachers started to question their teaching competencies, and they hold themselves responsible for the failure of their students:

> Hailey: I asked myself: Did you solve each problem or every student's distance education problem? Did you reach all students? Are you okay today? This situation makes me feel insufficient for my students.

> Amy: I had found online teaching inspiring and exciting at first during the pandemic. But then, I saw that not every child has the same right to be in the same boat. It made me think that I was incapable of reaching them, so I sometimes lost my faith in teaching.

> Rachel: Being in class with in-person communication is always my choice, so I don't think I am effective enough with these online lessons, and this discourages me to teach.

Quantitative Data Findings

Findings According to Descriptive Statistics of the Work Alienation Scale

In response to the first research question, the analysis of the subdimensions of the Work Alienation Scale indicated that EFL teachers experienced low levels of alienation in all subdimensions. The alienation level of teachers was on the "rarely" level for powerlessness ($\bar{x}$ = 2.8), closer to the "sometimes" level for meaninglessness ($\bar{x}$ = 2.0) and isolation ($\bar{x}$ = 2.2), whereas it was on the "sometimes" level for alienation from school ($\bar{x}$ = 3.5), as shown in Table 4. The items forming the alienation from school subdimension included positive attitudes toward the profession. More precisely, a higher mean score for this subdimension indicated that although teachers experienced alienation at low levels, they were not alienated from school.

Findings on Gender, Educational Level, and Institution Type

In response to the second research question, the t-test analysis of gender and institution-type variables indicated no statistically significant difference between female and male participants and between private and public schools in all subdimensions ($p > 0.05$). According to the ANOVA results regarding educational level, participants' alienation levels did not differ ($p > 0.05$).

Table 4

Descriptive Statistics for the Work Alienation Scale and Its Subscales Used in the Study

Subscales	N	Mean	SD
Powerlessness	160	2.7831	.985
Meaninglessness	160	2.0231	.943
Isolation	160	2.2406	1.01
Alienation from school	160	3.4648	.656

Findings on Years of Experience in Teaching

According to the ANOVA test, EFL teachers' work alienation levels differed Table in terms of their years of experience. As shown in Table 5, Post-hoc Tukey test results demonstrate that teachers with 1-5 years of experience have higher levels of work alienation in the powerlessness and isolation subdimensions of the Work Alienation Scale than those with more experience. The level of alienation differed in the meaninglessness dimension as well; however, it was not significant when compared to the powerlessness and isolation dimensions.

Correlation Analysis of the Work Alienation Scale

As part of this study, the third research question examined whether the Work Alienation Scale significantly correlated with the dimensions of powerlessness, meaninglessness, isolation, and alienation from school. In Table 6, the results demonstrate a positive and moderate to strong correlation between powerlessness and meaninglessness (r = .674), isolation and powerlessness (r = .652), and a strong correlation between isolation and meaninglessness (r = .757). Aliena-

tion from school did not demonstrate a significant relationship with any of the other dimensions.

DISCUSSION

This study aimed to extend the understanding of the challenges that EFL teachers have experienced during the pandemic. Descriptive statistics for the subdimensions indicated low levels of work alienation in the powerlessness, meaninglessness, and isolation subdimensions, whereas the alienation from school subscale indicated higher-than-usual work alienation on the "sometimes" level. Thus, the COVID-19 pandemic may not be a strong determinant of EFL teachers' work alienation, have a direct impact on teachers' alienation level, or cause a strong change in their perceptions about their profession. Previous literature presents moderate levels of teachers' work alienation in Turkey (Erbas, 2014; Şimşek et al., 2012). However, some studies have demonstrated teachers' increasing work alienation (Çetinkanat & Kösterelioğlu, 2016; Tsang, 2016), especially during the pandemic (Alparslan et al., 2021; Kozhina & Vinokurov, 2020).

According to the Post-hoc Tukey test, teachers who have had 1–5 years of experience are more alienated from their work than those with more experience in the powerlessness, meaninglessness, and isolation dimensions. These results are in accordance with Calabrese and Anderson (1986), Elma (2003), Yorulmaz et al. (2015), and Tsang (2016). It is likely that the only statistically significant difference was observed among teachers with 1–5 years of experience as a result of the adverse effects of the pandemic, and feelings of disappointment may have contributed to the adoption of negative attitudes toward the profession. Additionally, they may feel insecure because they are contract teachers who have

Table 5

Comparison of Alienation Levels in Terms of Experience with the ANOVA Test

Subscales	Groups	N	X̄	SD	F	P	Multiple Comparison (TUKEY)
Powerlessness	1–5 (a)	60	3.0717	.94063			
	6–10 (b)	51	2.6059	1.02458	**4.286**	**.015**	**a>b**
	11+ (c)	49	2.6143	.93229			**a>c**
	1–5 (a)	60	2.2500	1.09537			
Meaninglessness	6–10 (b)	51	1.8569	.80654			
	11+ (c)	49	1.9184	.83183	**2.895**	**.058**	**a>b**
	1–5 (a)	60	2.4967	1.09032			**a>c**
Isolation	6–10 (b)	51	2.0667	.97173			
	11+ (c)	49	2.1082	.89904	**3.186**	**.044**	**a>b**
	1–5 (a)	60	3.4854	.70037			**a>c**
Alienation from school	6–10 (b)	51	3.4020	.65542			
	11+ (c)	49	3.5051	.60862	**.353**	**.703**	**-**
	N	160					

Table 6

Correlation Analysis of the Subdimensions of the Work Alienation Scale

Subscales		Powerlessness	Meaninglessness	Isolation	Alienation from school
Powerlessness	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	160			
Meaninglessness	Pearson Correlation	.674**	1		
	Sig. (2-tailed)	.000			
	N	160	160		
Isolation	Pearson Correlation	.652**	.757**	1	
	Sig. (2-tailed)	.000	.000		
	N	160	160	160	
Alienation from school	Pearson Correlation	.088	.119	.140	1
	Sig. (2-tailed)	.267	.132	.078	
	N	160	160	160	160

to teach for at least three years before they are tenured in public schools or are in the process of renewing contracts in private schools. Job insecurity, which has been identified as a critical predictor of work alienation in private universities (Taamneh & AL-Gharaibeh, 2014), has become more prevalent among university professors during the pandemic (Kozhina & Vinokurov, 2020). In addition, teachers with less experience in online teaching have expressed frustration (Bailey & Lee, 2020).

In their study, Eryılmaz and Burgaz (2011) found that public school teachers were more alienated than private school teachers in the powerlessness, normlessness, and self-estrangement dimensions. However, although the quantitative data did not find statistically significant differences between the two institutions, the survey data analysis offered a different perspective. The data forming the work environment theme highlighted the importance of support from school management and guidance and provoked reconsideration about workload and QWL. Çetinkanat and Kösterelioğlu's (2016) study found a negative and significant relationship between QWL and work alienation. Negative attitudes toward the system may be attributed to the heavy workloads and long working hours required by private schools. Moreover, some participants specifically highlighted that they were from public schools in considerably remote areas. As demonstrated by Ünsal and Usta (2021), village schoolteachers experience greater work alienation than teachers working in the city centre. The open-ended surveys hinted at differences between private and public EFL teachers through profound insights into the participants' teaching practices.

Another issue was the technology-related challenges associated with distance education, which led to the second theme, barriers to teaching. Many teachers highlighted

deficits in technological infrastructure, issues with teacher readiness, and poor communication. These findings are in agreement with Dong (2020), who identified poor network infrastructure as a barrier to online education. Additionally, Almazova et al. (2020) noted that computer literacy levels and teacher readiness hindered the implementation of efficient online education. Similarly, Karahisar and Unluer (2022) drew attention to the competency of academics with distance education while emphasizing the importance of providing support to them.

The gender variable was chosen because female teachers outnumber male teachers at elementary and secondary levels in both public and private schools (Ministry of National Education Strategy Development Presidency, 2020). In addition, role conflict between working women is a significant indicator of stress (Martin & Hansen, 1985) and, as Yadav and Nagle (2012) argue, stress can also be a feeling of alienation in some cases. According to Howard (1986) and Elma (2003), gender played little or no role in alienation. Nevertheless, some studies revealed greater female teacher alienation in the powerlessness, meaninglessness, and isolation dimensions (Erdem, 2014) due to career barriers for women (Inandı et al., 2018), while others reported greater alienation among male teachers (Dağlı & Avarbek, 2017; Knoop, 1982). It may be perceived that Mersin is an advantageous area for schools since our sample was limited to that area. Research conducted in other cities, therefore, may yield different results. Importantly, the teachers faced similar challenges during the pandemic, regardless of their gender. According to the analysis of the educational level variable, no significant difference was found among primary, secondary, and high school EFL teachers' work alienation levels, which may be attributed to school closures owing to the pandemic. Given that work alienation can occur when an employee

feels a lack of connection or purpose within their workplace and can lead to feelings of isolation and detachment, it was also intensified by COVID-19-induced professional isolation and reduced meaningfulness of work, negatively affecting job satisfaction and commitment (Lagios et al., 2022). Therefore, it is important for organizations, and especially schools, to prioritize building a positive work culture and addressing any factors that may contribute to work alienation among employees.

It has been shown through correlation analysis that powerlessness and meaninglessness, isolation and powerlessness, and isolation and meaninglessness are positively related. This may be explained by the nature of alienation. Individuals who feel powerless are likely to experience meaninglessness, especially considering that teachers in Turkey are not involved in the decision-making process. Furthermore, it was found that when teachers perceive themselves as being highly skilled and competent in their jobs, their sense of detachment from their work decreases (Yorulmaz et al., 2015). Isolation was also found to be related to powerlessness. In this study, we did not find a significant correlation between alienation from school and other subscales.

Last but not least, the theme of the psychological impact of the pandemic on teachers highlighted teachers' experiences, reflections on their teaching practices, and how the process influenced them. Tiredness may be due to fewer break times, classes not being scheduled on time and, therefore, not maximising output each day, and falling behind on the curriculum due to technical issues and poor attendance by students. The reasons for this emerging code may include all the issues mentioned previously, such as technical problems, heavy workload, lack of support, and adaptation to distance education. The lack of digital competence of teachers may lead them to feel disempowered and insufficient. Moreover, gender may be influential, as female participants tended to question their teaching and displayed self-blame behaviours more than male participants. A study by Voronin et al. (2020) provided evidence for coping responses during the pandemic wherein female participants reported higher rates of self-blame. Finally, the results indicate that teachers are open to new approaches, experiences, and responsibilities.

CONCLUSION

In this study, we investigated Turkish EFL teachers' work alienation during the COVID-19 pandemic and its related factors. According to Elma's Work Alienation Scale (2003), teachers have low levels of work alienation across all dimensions. However, alienation levels varied based on experience, and a higher level of alienation was reported among teachers with 1–5 years of experience. The study also allowed EFL teachers to express their thoughts and experiences. EFL teachers were mostly dissatisfied with their increasing workload, felt physically and mentally tired, felt distant from the students and the educational process, lacked knowledge or guidance on digital literacy, experienced technical issues that disrupted lessons, and were confronted by unequal student access to digital devices. The most outstanding finding was that teachers held themselves responsible for students' failures and questioned their teaching competencies. Consequently, their motivation, enthusiasm, and interest decreased. Thus, the importance of guidance and support provided to the teachers, improvements in the technological infrastructure, teacher-parent collaboration, and the psychological wellbeing of teachers should be acknowledged to manage the crisis caused by the pandemic.

In the absence of a physical connection with the school environment, students can feel alienated from the education system. Therefore, the need for psychological and technological support for teachers should be emphasized. Providing teacher training courses on digital literacy and problem-solving strategies is important. Further, contingency plans can be drafted for unexpected situations. Stakeholders should improve the technological infrastructure to meet district requirements. Thus, principals and employers should be provided with guidance so that they can guide teachers. Finally, teachers should be heard and supported because they are active agents of the education process. A larger sample for face-to-face interviews would ensure more generalizable and reliable data. Including different locations and examining different variables such as marital status, age, salary, and class hours may result in different outcomes.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Tugce Bilgi: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing.

Seden Eraldemir Tuyan: Conceptualization; Resources; Validation; Visualization; Writing – review & editing.

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APPENDIX A

Original Questionnaire

BÖLÜM I

Genel Bilgiler

Cinsiyet: Kadın ☐   Erkek ☐

Sınıf: İlköğretim ☐   Ortaöğretim ☐   Lise ☐

Okul: Özel kurum ☐   Devlet okulu ☐

Öğretmenlik mesleğinde deneyim süresi:

1-5 ☐   6-10 ☐   11-15 ☐   16-20 ☐   21-25 ☐   26+ ☐

*Lütfen ekteki maddeleri COVID-19 Pandemi dönemine dair duygu ve düşüncelerinize göre cevaplayınız.

Bölüm II

EFL ÖĞRETMENLERİNİN PANDEMİ SÜRECİNDE İŞE YABANCILAŞMASI ÖLÇEĞİ

Madde No	MADDELER	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
1	Ortaya çıkan sorunlarla mücadele etmek gücümü yitirdiğimi düşünüyorum.					
2	Öğrencilerimle etkili iletişim kurmakta zorlanıyorum.					
3	İşimde tükendiğimi, yıprandığımı hissediyorum.					
4	Okula ve öğrencilerime yaptığım katkının yeterli olmadığını düşünüyorum.					
5	Çalışma isteğimi ve heyecanımı yitirdiğimi hissediyorum.					
6	İş yaşamımda her şeyin benim dışımda geliştiğini hissediyorum.					
7	Öğretmenlikten soğuduğumu hissediyorum.					
8	Okuldan gereksinim duyduğum sosyal desteği alamadığımı hissediyorum.					
9	Okulda doğruları savunmanın artık yarar getirmediğini düşünüyorum.					
10	Okuldaki kurallarla birlikte yaratıcılığımı engellediğini düşünüyorum.					
11	Neyi niçin öğrettiğimin hiçbir anlamının olmadığını düşünüyorum.					
12	Öğretilenlerin gerçek hayatta hiçbir işe yaramadığını düşünüyorum.					
13	Aynı konuları öğretmekten bıktığımı hissediyorum.					
14	Kendimi anlamsız bir iş yapıyormuşum gibi hissediyorum.					
15	İdealist öğretmenleri gördükçe, öğretmenlikten uzaklaştığım duygusunu yaşıyorum.					
16	Bir öğretmen olarak kendimi işe yaramaz ve önemsiz hissediyorum.					
17	Öğretme eyleminin anlamsız bir çaba olduğunu düşünüyorum.					
18	Öğretmenliği sıkıcı bulmaya başladım.					

Madde No	MADDELER	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
19	Öğretmenliği sadece gelir getirici bir kaynak olarak görüyorum.					
20	Okulda/uzaktan eğitimde, ders verme makinesine dönüştüğümü hissediyorum.					
21	Öğretmenliğin benim için monotonlaşmaya başladığını hissediyorum.					
22	Zorunlu olmadıkça diğer öğretmen ve yöneticilerle bir araya gelmemeye çalışıyorum.					
23	Okulda dışlandığım duygusunu yaşıyorum.					
24	Öğretmenler odasından ve/veya online toplantılardan uzak durmayı tercih ediyorum.					
25	Okuldaki ilişkilerin içten ve samimi olmadığını düşünüyorum.					
26	Okulda kendimi yalnız hissediyorum.					
27	Sınıf dışı etkinliklerde sorumluluk üstlenmeyi sevmiyorum.					
28	Okuldaki diğer öğretmenlerle, okul dışında bir şeyler yapmayı arzulamıyorum.					
29	Sosyal çevremi çok sıkıcı bulmaya başladım.					
30	Hayatımda bir boşluk duygusu yaşıyorum.					
31	Aynı görüşte olmadığım insanlardan uzak durmayı yeğliyorum.					
32	Okulla ilgili konularla ilgilenmediğim zamanlarda kendimi boşluktaymış gibi hissediyorum.					
33	Meslektaşlarım tarafından takdir edilmeyi önemsiyorum.					
34	Öğretmenliğin yapılabilecek en iyi meslek olduğunu düşünüyorum.					
35	Okulda işim ile ilgili konularda sorumluluk almaktan zevk alıyorum.					
36	Okulda/uzaktan eğitimde kurallara aykırı davrandığımda suçluluk duygusu yaşıyorum.					
37	Öğrencilerimin başarı ya da başarısızlığından kendimi sorumlu tutuyorum.					
38	Okulda/online derste sınıftayken kendimi daha rahat hissediyorum.					

APPENDIX B

Questionnaire Items in English
1. I feel that I have lost my strength to deal with problems at school.
2. I have difficulty communicating with my students.
3. I feel exhausted and worn out in my job.
4. I think that my contribution to the school and my students is not enough.
5. I feel that I have lost my willingness and excitement to work.
6. I feel that everything in my work life is developing outside of me.
7. I feel that I have been alienated from teaching recently.
8. I feel that I cannot get the social support I need from school.
9. I think that defending the truth at school no longer brings benefits.
10. I think the rules at school hinder my creativity.
11. I do not think there is any point in what I teach why.
12. I think that what is taught in school is useless in real life.
13. I feel tired of teaching the same subjects in school.
14. I feel like I am doing a meaningless job at school.
15. As I see idealistic teachers, I feel that I am moving away from teaching.
16. I feel useless and insignificant as a teacher.
17. I think the act of teaching is a pointless endeavour.
18. I find teaching boring.
19. I see teaching as just a source of income.
20. I feel like I have become a teaching machine at school.
21. I feel like teaching is getting monotonous for me.
22. I try not to get together with other teachers and administrators unless it is necessary.
23. I have the feeling of being excluded at school.
24. I prefer to stay away from the teachers' room.
25. I think that the relationships at school are not candid and sincere.
26. I feel lonely at school.
27. I am not particularly eager to take responsibility for extracurricular activities.
28. I do not want to do things outside of school with other teachers at school.
29. I find my social circle very dull.
30. I have a feeling of emptiness in my life.
31. I prefer to stay away from people with whom I disagree.
32. I feel like I am in a void, when I am not at school.
33. I care about being appreciated by my colleagues.
34. I think that teaching is the best profession that can be done.
35. I enjoy taking responsibility for my work at school.
36. I feel guilty when I violate the rules at school.
37. I hold myself responsible for the success or failure of my students.
38. I feel more comfortable in the classroom at school.

APPENDIX C

Open-ended survey questions

1. What were your motives to become an English teacher?

2. How can you describe your relationship with your students during COVID-19 pandemic?

3. How can you describe your relationship with your employers/principals?

4. At the end of a working day, how do you feel yourself when you finish your lessons?

5. What are the things you like and don't like about your job?

6. How do you think COVID-19 pandemic impact on your teaching experience and your level of alienation?

7. How can you compare your feelings about teaching English before and during COVID-19 pandemic?

Vocabulary Breadth and Depth in Early School-Aged Children with Developmental Language Disorder – Evidence from Serbian Speaking Children

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ABSTRACT

Objectives: Taking into account the positive association observed between lexical abilities and academic performance in children, this research aims to compare the expressive vocabulary skills and the organization of the lexical-semantic network in early school-aged children diagnosed with developmental language disorder (DLD) and their typically developing (TD) peers.

Method: The sample included 57 participants (aged 7 and 8 years), 27 children diagnosed with DLD and 30 TD children. The Boston Naming Test and Word Association Task were employed to assess lexical abilities.

Results: The findings revealed that children with DLD produced significantly fewer correct answers and a higher number of errors during the naming task when compared to their typically developing peers. Moreover, children with DLD provided significantly fewer developmentally mature types of associations and significantly more developmentally immature ones.

Conclusion: The study results indicate that children with DLD continue to display significant lexical deficits during school-age, encompassing both vocabulary breadth and depth. These findings highlight the importance of implementing additional intervention approaches that focus on semantic aspects to prevent further language deterioration and mitigate the potential negative impact of lexical impairments on the academic achievements of these children.

KEYWORDS

developmental language disorder, lexical abilities, early school-age

INTRODUCTION

The term «developmental language disorder» (DLD), or previously classified as «specific language impairment», refers to a disorder in the language development associated with no known sensory, neurological, intellectual or emotional deficits (Bishop, CATALISE Consortium et al., 2017).

In the literature, there is still commonly accepted view that children with DLD demonstrate an unequal linguistic profile, with poor and inefficient syntactic abilities as a hallmark deficit. Despite reports of reduced receptive and expressive vocabularies in children with DLD compared to age-level expectations (Gray et al., 1999), as well as word-finding difficulties (German, 2000), lexical processing abilities are considered to be relatively preserved (Pizzioli & Schelstraete, 2011). Thus, there is a need for more research in the area of lexical abilities in these children in order to evaluate this theory further. In addition, most studies included only preschool or preschool and school-aged children together (McGregor et al., 2002; Sheng & McGregor, 2010a, Sheng & McGregor, 2010b), while studies with only school-age children are rare in the literature.

Researches in the area of lexical-semantic development in children with DLD are important for several reasons. Difficulties of vocabulary development can severely

restrict a child to express communicative message. Moreover, delayed development of lexical-semantic abilities can have a negative impact on development of other language skills, given that early lexical knowledge stimulates the development of syntactic and pragmatic abilities (Matthews et al., 2018; Tomasello, 2000). Also, lexical deficits are related to academic difficulties in these children (e.g., Isoaho et al., 2016). On the other hand, the lexicon is a very dynamic and complex construct which includes, apart from the storage, ability to access and integrate linguistic data (lexical processing). Therefore, the study of lexical-semantic abilities in children with DLD significantly contributes understanding of lexical-semantic network, both in terms of content and in terms of functioning.

Vocabulary Organization

Vocabulary represents a number of lexical-semantic representations organized into multiple hierarchical levels. Lexical-semantic representations consist of a large number of semantic features, which includes visual and functional characteristics of a lexical concept (Peters & Borovsky, 2019). Based on Bock and Levelt (1994) theoretical concept, semantic features of the lexical concept *sheep* are that it is *animal* which gives *milk* and growth *wool*, among others. On the other hand, the lexical concept *goat*, among other things, contains semantic features: *animal* which *gives milk*. Lexical concepts that belong to the same semantic category share a number of semantic features. Accordingly, lexical concepts *sheep* and *goat* share common semantic features *animal* and *gives milk*. During development, a child enriches lexical concepts with growing number of semantic features, while firming denotative (narrow) meaning of terms (Dwyer & Harbaugh, 2020). With linguistic experience, the meaning of lexical concepts extends to the connotative (wider) meanings (Sloutsky & Deng, 2019). Activation of a particular lexical concept activates all semantic features one has. Thereby, activation of the lexical-semantic network is broader and more stable with a larger number of semantic features in one's lexicon for any given concept (Patterson et al., 2007). Thus, activation of the lexical concept *goat*, for example, triggers semantic features shared with other lexical concepts in same semantic category. If a child has sparse lexical concepts, activation of a semantic network will be weaker and child may name a wrong concept from semantic category, usually one which is more frequent than required concept. Consequently, semantic errors are most frequent during the development of lexical-semantic abilities. For example, instead of *goat*, child can name a superordinate (e.g., *animal*) or other term from semantic category acquired earlier and used more frequently, such as *sheep*.

Vocabulary is often described in the context of two dimensions, «breadth» and «depth». Vocabulary «breadth» is usually measured by number of words that one has in his lexicon, through the receptive or expressive vocabulary assessment (McGregor et al., 2002). Assessing vocabulary breadth provides an estimation of the total number of concepts in one's lexicon, without focusing on the depth of knowledge for each concept (Hadley & Dickinson, 2020). This suggests a more superficial and less comprehensive aspect of word knowledge (Hoffman et al., 2014). Vocabulary «depth» includes all lexical concept features deposited in semantic memory (phonological, syntactic, semantic and colloquial), as well as their organisation. Measuring vocabulary depth indicates more «deeper» knowledge of words and the quality of lexical representations. (Hadley & Dickinson, 2020). Measuring this aspect of the lexicon can be challenging, and it is typically assessed through tasks such as word definitions, lexical ambiguity resolution, synonym tasks, word associations, and analysis of naming errors (Lahey & Edwards, 1999; McGregor et al., 2012; Boucher et al., 2008; Norbury, 2005).

Developmental Language Disorder

According to the ICD-11 criteria, DLD is characterized as a language impairment that persists during the developmental period, typically in early childhood. It involves deficits in the acquisition, comprehension, production, and/or use of language, whether spoken or written, leading to significant limitations in communication abilities (WHO, 2020). The affected individual's language skills are notably below the expected level for their age. It is essential to note that these language deficits cannot be attributed to any other neurodevelopmental disorder, sensory impairment, or neurological condition, including brain injury or infection (WHO, 2020).

Although data in the literature show that DLD represents a very heterogeneous group of disorders (Bishop, 2014a; Leonard, 2014), difficulties occur within all language levels. These children differ from typically developing (TD) peers at microlevel and macrolevel of language structure (Leonard, 2014). Regarding microlevel, these children can have phonological, morphosyntactic and semantic deficits. Most commonly, these difficulties are manifested as delayed occurrence of the first word, difficulties in learning and discriminating sounds, as well as in learning words, the use of simplified and incomplete sentences, omission and substitution of grammatical morphemes and difficulties in understanding complex sentences and grammatical rules of a native language (Bishop, 2008; Bishop, 2014a; Leonard, 2014). Regarding macrolevel, children with DLD can have deficits in the area of pragmatic abilities, conversational and narrative skills (Leonard, 2014). Deficits at macrolevel are usually manifested as difficulties in formulating pragmatic acts, initiating communication, resolving conflicts in verbal and non-verbal way, lacking coherent discourse, while some children with DLD may also have difficulties in the area of social relationships, social cognition and competence (Bishop, 2008; Bishop, 2014a; Leonard, 2014). However, difficulties in pragmatic and social skills in children with DLD are typically attributed to phonological, lexical-semantic, and syntactic

deficits that they experience, rather than being characteristic of the social communication impairments commonly observed in children with autism spectrum disorder (Bishop, 2014b; Leonard, 2014).

Lexical-Semantic Abilities in Children with Developmental Language Disorder

Information from prior research suggests the existence of diverse types of lexical-semantic deficits in children with DLD. These children exhibit substantial delays in early word acquisition (La Paro et al., 2004; Rice et al., 2008) and necessitate more attempts to learn new words in comparison to typically developing (TD) children (Gray, 2004; Kapa & Erikson, 2020). Additionally, they demonstrate less flexibility in employing strategies within cross-situational word-learning contexts (McGregor et al., 2022). Semantic knowledge deficits primarily account for the difficulties observed in the learning of new words in children with DLD (Gray, 2004).

Preschool-aged children with DLD have significant word-finding and naming difficulties. These difficulties include smaller number of lexical concepts in the vocabulary, extended latency during word retrieval and more frequent errors on naming tasks, compared to TD children (Haebig et al., 2019; Jackson et al., 2016; Leonard et al., 2019; Sheng & McGregor, 2010a; Sheng & McGregor, 2010b; Storkel et al., 2017). Previously it was thought that these children have adequate knowledge of words but they use ineffective and inadequate recall strategy (e.g., Rubin & Lieberman, 1983; Wolf, 1982), while recent studies support the view that children with DLD have sparse semantic representations in the lexicon, significantly less developed lexical-semantic network and difficulties in semantic processing (e.g. Drljan & Vuković, 2019; Sheng & McGregor, 2010a). Studies have revealed that children with DLD tend to make semantic errors more frequently during naming tasks compared to TD children (Sheng & McGregor, 2010b). These errors involve naming a word that is semantically related to the target word (superordinate, coordinate or other word semantically related to a prompt) (Drljan, 2022; Drljan & Vuković, 2019; Drljan et al., 2019). Lahey and Edwards (1999) speculate that semantic errors in children with DLD indicate diffuse semantic-lexical representations and that semantic-lexical representations are poorly differentiated, as well as poorly organized. Additionally, using the word association paradigm Sheng and McGregor (2010a) hypothesized that the spread of semantic activation in children with DLD is significantly weaker compared to TD children, and it is operating in an environment with a high level of errors (which they called *noise*) and with higher expression of primitive organizational principles (reflected in developmentally immature associations). However, the data so far indicate that children with DLD do not make atypical or random naming errors, suggesting that the structure of the lexical network, although underdeveloped, is similar to one seen in TD children (Sheng & McGregor, 2010b).

Studies investigating vocabulary breadth and depth in school-aged children with DLD are limited. While typically developing (TD) children show improvements in naming speed, accuracy, and similarity to adult speakers as they progress through school (Dockrell & Messer, 2004; Nippold, 2007), existing literature suggests that school-aged children and college students with DLD may continue to experience lexical difficulties during this period (Bishop & Hsu, 2015; McGregor et al., 2017a; McGregor et al., 2017b; McGregor et al., 2020).

Some evidence indicate that these children have difficulties with learning new words even at a school-age, but also that learning new words at a school-age is greatly influenced by reading skills (Kan & Windsor, 2010). Considering that a large percentage of children with DLD have difficulties in reading at a school-age (Catts et al., 2002), a double cause-effect relationship can lead to more severe lexical deficits in some children with DLD during this period. One of the few studies that included only school-aged children with DLD showed that these children can have significant deficits in semantic processing even in that period. Also, children with DLD exhibited more difficulties with the semantic aspects of definitions compared to the syntactic aspects (Marinellie & Johnson, 2002). Also, in two studies utilizing the definition task, data indicated that children with DLD provided lower content scores in their definitions compared to the control group (Dosi, 2021; Dosi & Gavriilidou, 2020). Data from another study using a same task indicate that school-aged children with DLD have difficulties in semantic processing unrelated to phonological and syntactic abilities (Mainela-Arnold et al., 2010). This indicates that sparse lexical representations are the cause of difficulties in semantic processing in school-aged children with DLD (Mainela-Arnold et al., 2010). On the other hand, in Pizzioli and Schelstraete study (Pizzioli & Schelstraete, 2011), school-aged children with DLD also performed significantly worse on a lexical-decision task (also a measure of lexical processing), compared to their TD peers. However, the authors explained the differences by the occurrence of the lexical-semantic network «overactivation» in children with DLD. According to their hypothesis, children with DLD do not necessarily have weaker associative links between words compared to TD children. Instead, difficulties in lexical processing may result from excessive activation of the semantic network. This compensatory mechanism is induced by the grammatical and syntactic deficit observed in children with DLD (Pizzioli & Schelstraete, 2011).

Present Study

In the existing literature, only a limited amount of research has been conducted on vocabulary breadth and depth in school-aged children with DLD. Most of the previous studies included mixed, school and preschool-aged children (McGregor et al., 2002; Sheng & McGregor, 2010a; 2010b) or small sample of children with DLD (Marinellie & John-

son, 2002). Also, previous studies of semantic processing in school-aged children with DLD used a word definition tasks (Mainela-Arnold et al., 2010; Marinellie & Johnson, 2002). However, definition of words relies heavily on syntactic abilities (Marinellie & Johnson, 2002) and syntactic difficulties are one of the dominant symptoms of DLD (Leonard, 2014). DLD children almost always have shortened and sparse sentences and pronounced morphological difficulties, which can persist even at school age (Leonard, 2014; Zwitserlood et al., 2015). Given that the definition task requires the sentences formulation with a purpose of describing a given concept, difficulties on this area may be caused by syntactic deficits that DLD children have. In addition, research on school-aged children with DLD is important because there is strong evidence of a link between lexical-semantic abilities and academic skills. Data from the literature suggest a significant association of lexical-semantic abilities with arithmetic (Amalric & Dehaene, 2018; Swanson & Beebe-Frankenberger, 2004) and writing skills (Singer & Bashir, 2004). Also, expressive vocabulary and lexical processing abilities are important predictors of reading skills and reading comprehension (Karami & Salahshoor, 2014; Roth et al., 2002; Verhoeven & Van Leeuwe, 2008). Furthermore, there are indications that the comorbidity of dyslexia and dyscalculia could be attributed to a shared deficit in storing and/or retrieving factual knowledge from semantic memory (Willburger et al., 2008). These data indicate that the lexical impairment in children with DLD can significantly aggravate the acquisition of reading, writing, and arithmetic skills during early school-age period. Investigating lexical-semantic abilities of school-aged children with DLD provides useful guidelines not only in the rehabilitation, but also in the pedagogical approach with these children in mastering academic skills.

Accordingly, the *main objective* of this research is comparison of expressive vocabulary and lexical processing skills between early school-aged children with DLD and their TD peers. Research questions derived from main objective were:

1. Do Serbian-speaking school-aged children with DLD differ from their peers on two dimensions of vocabulary knowledge (breadth and depth)?

2. What is the error pattern on tasks assessing vocabulary breadth and depth, as well as the organization of the lexical-semantic network in children with DLD?

METHOD

Participants and Settings

The study included a total of 57 participants, all aged between seven and eight years. The participants were divided into two distinct groups: a group of children diagnosed with the expressive type of DLD, consisting of 27 children, and a

group of typically developing (TD) children. Participants with DLD were selected from the Institute for Psychophysiological Disorders and Speech Pathology «Prof. Dr Cvetko Brajovic» located in Belgrade, Serbia. In Serbia, children are commonly screened for language abilities at the ages of three and six. At the age of six, the screening is performed by a speech therapist at health centres and it is obligatory. If speech and language disorder is suspected, the child is sent further for evaluation in specialized institutions, such as the aforementioned institute. Children with DLD were included in the study based on the criterion of having an IQ score above 85. Data on the type of developmental language disorder and level of intelligence were obtained from the documentation of speech therapists and psychologists from the Institute. All children underwent assessment using the Wechsler Intelligence Scale for Children Revised, which has been normed on the Serbian population (Biro, 1997). The diagnosis of the type of speech and language disorders was conducted by qualified speech and language therapists from the Institute. The assessment included a battery of tests, such as the Phoneme Discrimination Test (Kostić, Vladisavljević & Popović, 1983) (scoring below 75% of age-expected performance), Understanding and Comprehension of Speech Test (scoring below 75% of age-expected performance) (Vladisavljević, 1997), Children's Grammar Test (scoring below 50% of age-expected performance) (Vladisavljević, 1983), Global Articulation Test (scoring below 75% of age-expected performance) (Kostić & Vladisavljevic, 1983), and Semantic Test (scoring below 50% of age-expected performance) (Vladisavljević, 1983). The above-mentioned instruments are not standardized, and language deficits are determined based on deviations from what is considered typical development (as given in parentheses with each individual test). This is commonly used tests in institutions in Serbia for language assessment of children, as well as in researches including Serbian speaking children with language impairments (e.g. Drljan & Vuković, 2017; Vuković & Stojanović, 2011). Due to the heterogeneity of the DLD population we wanted to recruit children from the DLD population broadly defined regarding the level of specific structural language abilities and level of severity.

The TD group comprised 30 first and second-grade children who were recruited from local schools in Belgrade as well. Data on language status and level of intelligence were obtained from the documentation of speech therapists and psychologists from schools. Written consent was obtained from the parents prior to the assessment.

All children are native Serbian speakers and monolinguals with both Serbian speaking parents, and all participants live in Belgrade.

Each child was individually tested in a quiet room either at the Institute or at their respective school. Lexical-semantic assessment was done by first author of this paper within the

time frame covering the second school semester during the late winter and the entire spring.

The research received approval from the Ethical Board of the Institute for Psychophysiological Disorders and Speech Pathology «Prof. Dr Cvetko Brajovic» in Belgrade, Serbia (1575/19-09-2016), as a part of larger project investigating lexical and cognitive abilities in children with DLD.

Data about age, gender, maternal education and general IQ measures for both groups are given in Table 1. There were no participants in the sample whose mothers had only an elementary level of education, therefore we compared middle and high school maternal education.

Assessments and Measures

The Boston Naming Test (BNT – Kaplan et al., 1983) is a standardized instrument used to assess expressive vocabulary skills, specifically measuring vocabulary breadth. It includes 60 black-and-white drawing objects and is designed to evaluate confrontational naming (visual naming) in children and adults, both with and without speech and language deficits. Confrontational naming is a common way for assessing vocabulary breadth in children (McGregor et al., 2012). BNT answers were coded as correct and errors. Furthermore, the errors made during the assessment were classified into several categories. *Semantic errors* involved providing answers that were semantically related to the target word, which included superordinate, coordinate, and associative errors. *Unrelated errors* consisted of real words that were not semantically related to the target word, such as «bed» being named as «scissors.» *Phonological errors* occurred when words were phonologically similar but not semantically related to the target word, for example, «globe» being named as «robe.» *Circumlocutions* referred to providing a semantic description of the target word without giving its correct name. *Pseudowords* were made-up words that did not exist in the Serbian language. Lastly, *omissions* were instances where the participant did not provide any response for a given item.

Word Association Task (WAT) is a non-standardized task that measures lexical-semantic organization and it was used in previous studies for assessment of vocabulary depth in DLD children (McGregor et al., 2012; Sandgren et al., 2021; Sheng & McGregor, 2010a), typically developing bilingual children (Peña et al., 2003), as well as in children with other developmental disorders which include language impairment (Küçük & Acarlar, 2022; McGregor et al., 2012). Free association task was used because it shows directly the strength of connections within the lexicon itself (Nelson et al., 2005), thus reducing the possibility of the influence on syntactic abilities which may be the case with the word definition task. Also, considering that the children from our sample had poor achievements on the morphosyntactic test (below 50% of age expected performance on Children's grammar), association task was more appropriate choice for vocabulary depth assessment. 80 words (nouns and adjectives) were used from Kent-Rosanof list (Kent & Rosanoff, 1910), and 10 lexical verbs were added. Lexical verbs were added in order to complete the three main classes of content words. The same word classes, as well as a similar percentage ratio of individual content word classes, were used in database norming study in the field of semantic network research (Nelson et al., 2004). The association test based on the Kent-Rosanof list is one of the most extensively studied linguistic tests available in the literature, particularly within the context of the Birkbeck Vocabulary Project (Meara, 1984). Based on the Serbian Children's frequency dictionary (Lukić, 1983), all the chosen words were acquired early in development with either high or medium frequency of use, and the children in the sample were familiar with all the words from the list. Words were medium to high imageability, and mostly concrete words were included with a small number of abstract words within all three classes of content words. The task is performed in a way that the examiner tells the child a word from the list and he or she has to say the first word that comes to mind. Before the assessment, the child was

Table 1

Participant Characteristics

		Age of participants (months)	General IQ	Maternal education		Gender	
Group	*n*	*Mean(SD)*	*Mean(SD)*	*n(%)*		*n(%)*	
DLD	27	83.963(7.085)	99.78(11.13)	Midle	17(63)	Male	20(74.1)
				High	10(37)	Female	7(25.9)
TD	30	83.567(6.632)	102.10(10.27)	Midle	11(36.7)	Male	15(50)
				High	19(63.3)	Female	15(50)
		F = .048,	F = .671,	χ2 = 2.950;		χ2 = 2.534;	
		df = 1;	df = 1;	df = 1;		df = 1;	
		p = .828	p = .416	p = .086		p = .060	

Note: DLD – developmental language disorder; TD – typically developing

given two examples of words that were not from the list, and when the examiner was sure that the child understood, he began with the task. After each response to a given stimulus word, the examiner asked the child if he or she knew the word.

Associations were classified into six categories: *paradigmatic* associations included those with a clear semantic relation to a stimulus word, such as superordinate, coordinate, or other words that are semantically related to the prompt 2. associations were categorized as *syntagmatic* if they bear a clear sequential or colloquial relationship with the prompt. The three types of association were classified into this category: a) words that can form syntactic relationships with the stimulus word (e.g. *music – listen*) b) words that are in a colloquial relationship with stimulus word and often used in everyday speech as idioms (e.g. *butterfly – stomach* meaning «falling in love») c) compound words (e.g. derivation, compounding etc.) 3. *phonological* were those that rhyme with the prompt word but without any semantic relation (blue – glue) 4. *unrelated* were those that bore no perceivable relation to the prompt 5. *echolalic* responses consisted of the repetition of the target word and 6. *omissions*.

Code reliability. To ensure the reliability of coding, a second coder, who was unaware of the children's identities, independently coded 15% of samples from each group. The point-to-point agreement between the two coders averaged 95%. Any discrepancies in coding were resolved through discussions and agreement between the coders.

Data Analysis

Percentages of all types of BNT answers and WAT associations were used as scores for statistical analysis. Data analysis included method of descriptive (minimum, maximum and mean values, standard deviation) and inferential statistics (Chi-square test and analysis of variance – ANOVA). Chi-square test and analysis of variance (ANOVA) were employed to compare the two groups of children based on age, gender, general IQ, and maternal education.

Correct answers and omissions on the BNT test were used for comparing expressive vocabulary, and differences were investigated by using an ANOVA.

Analysis of semantic, unrelated, circumlocutions and pseudoword errors on the BNT test, as well as all types of associations on the WAT task were used for comparing lexical processing skills, and differences were investigated using ANOVA.

RESULTS

Children with DLD gave significantly less correct answers, as well as more omissions on the BNT compared to TD children (p ≤ .000). Regarding errors, children with DLD made a significantly higher number of semantic and unrelated errors compared to their peers. However, there were no significant differences between children with DLD and their TD peers in terms of the number of phonological errors, circumlocutions, and pseudowords (p > .05) (Table 2).

Table 2

Groups Comparison of Answers Percentages on BNT

		Mean	SD	F	p
Correct answers	DLD	48.148	11.842	92.770	**.000**
	TD	73.599	7.810		
Semantic errors	DLD	14.752	5.675	20.136	**.000**
	TD	9.277	3.354		
Unrelated errors	DLD	3.581	4.708	16.180	**.000**
	TD	.111	.424		
Circumlocutions	DLD	3.272	4.945	.727	.398
	TD	2.282	2.650		
Phonological errors	DLD	.803	1.926	1.141	.290
	TD	.389	.840		
Pseudowords	DLD	.062	.321	1.113	.298
	TD	.000	.000		
Omissions	DLD	28.209	14.609	35.538	**.000**
	TD	9.944	6.940		

Note: BNT – Boston Naming Test; DLD – developmental language disorder; TD – typically developing. Statistically significant differences are bolded.

Analysis of answers distribution on BNT reveals a somewhat comparable pattern in both groups of children. Namely, children with DLD made a greater proportion of correct answers, followed by omissions, semantic, unrelated, circumlocutive and phonological errors, with lowest proportion of pseudoword type errors (Table 2). On the other hand, TD children made also a greater proportion of correct answers, followed in descending order by omissions and semantic errors, circumlocutive, phonological and unrelated errors, with lowest proportion of pseudoword type of errors (Table 2)

Regarding WAT, there are significant differences between children with DLD and their TD peers in the number of paradigmatic ($p \le .000$), syntagmatic ($p < .05$), unrelated ($p < .01$), and echolalic associations ($p < .05$), as well as in the number of omissions ($p < .05$). In particular, the results revealed that children with DLD performed significantly worse than their TD peers, demonstrating a higher occurrence of immature associations (unrelated and echolalic) and a lower frequency of mature associations (paradigmatic and syntagmatic) (Table 3).

Regarding the number of phonological association children with DLD and TD children did not differ significantly.

DISCUSSION

The comparison of correct answers and errors between children with DLD and their TD peers revealed significant differences in the results. Namely, children with DLD gave significantly fewer correct answers and had significantly higher number of omissions. Significantly smaller number of correctly retrieved words and more omissions indicate deficits in vocabulary size or vocabulary breadth in school-aged children with DLD. It is difficult to reliably compare our results with the results of previous studies because most of them included both preschool and school-aged children in the sample, or just preschoolers. Since we lack naming studies specifically focused on school-aged children with DLD, our ability to fully compare our results with previous research is limited. However, our findings do align with previous studies, indicating that children with DLD may exhibit deficient vocabulary skills even during school-age. Our results partially confirm one obtained in research of Sheng and McGregor (Sheng & McGregor, 2010b), who have examined confrontational object naming in children with DLD with an average age of 7 years and 2 months. The findings of this study revealed that children with DLD provided significantly fewer correct answers compared to their TD peers. However, omissions were not significantly considered, yet they were classified as «other errors». Also, due to small sample in this study (n = 14), no reliable conclusions can be drawn about vocabulary breadth deficits of school-aged children with DLD. Löfkvist and colleagues (Löfkvist et al., 2014) also included children of both age categories and used the same methodology as in our study. The outcomes of their study indicated that children with DLD, aged 5.6 to 9, had fewer correct answers on the BNT when compared to their TD peers. Additionally, children with DLD demonstrated a significantly higher frequency of omitted answers compared to children with autism spectrum disorder. Although the authors of that paper hypothesize that the higher number of omissions on the naming test is due to difficulties in word retrieval, however, the respond latency is a better indicator of word retrieval difficulties (Messer & Dockrell, 2006).

Table 3

Groups Comparison of Associations Percentages on WAT

		Mean	SD	F	p
Paradigmatic	DLD	31.276	26.752	92.770	**.000**
	TD	58.111	19.023		
Syntagmatic	DLD	20.042	14.548	20.136	**.020**
	TD	30.075	16.840		
Unrelated	DLD	22.427	19.744	16.180	**.009**
	TD	11.295	10.214		
Phonological	DLD	3.814	14.643	.727	.089
	TD	.545	.824		
Echolalic	DLD	16.337	33.772	1.141	**.011**
	TD	.074	.281		
Omission	DLD	2.880	6.064	1.113	**.013**
	TD	.037	.203		

Note: WAT – Word Association Task; DLD – developmental language disorder; TD – typically developing Statistically significant differences are bolded.

During the school years, reading plays an increasingly crucial role in enriching vocabulary (Kan & Windsor, 2010). However, children with DLD are also at a higher risk of experiencing reading difficulties (Catts, 2002). Our study's results highlight the necessity for implementing school-based direct teaching techniques of new words for children with DLD. These children may find it more challenging to understand the meanings of new words through reading and understanding context in written material (Justice et al., 2005).

Distribution analysis of BNT answers showed similar pattern in both groups, children with DLD and their TD peers, which confirms the results of some previous research. (Brusewitz & Tallberg, 2010; Storms et al., 2004). Also, our results are in a line with results of Sheng and McGregor (Sheng & McGregor, 2010b) regarding the distribution of errors in a mixed age group of children with DLD. In this study, semantic type of errors were the most frequent and phonological errors were the least frequent ones in children with DLD. These data indicate possibility that phonological difficulties are not the cause of lexical-semantic deficits in school-aged children with DLD. Namely, phonological forms of words shape children's semantic representations during the early vocabulary development, and it is hypothesized that the challenges in processing and retaining novel phonological sequences might be the underlying cause of lexical-semantic difficulties in DLD (Gathercole, 2006; Quam et al., 2021). If the same mechanism is assumed to underlie lexical-semantic deficits in school-aged DLD children, we would expect a difference between children with DLD and their TD peers in the number of phonological errors during the naming test, or at least higher proportion of this type of errors. In support of this view, the results of the research conducted by Mainela-Arnold and colleagues (Mainela-Arnold et al., 2010) showed that phonological difficulties cannot explain the lexical-semantic deficits in children with DLD at school-age. Moreover, phonological errors suggest that the accurate semantic representation has been accessed, but the phonological representation appears to be inadequately defined or difficult to access. Therefore, the infrequency and the lack of a notable distinction between TD children and children with DLD regarding this type of error indicate that the naming difficulties in school-aged children with DLD are primarily due to deficits in lexical-semantic organization.

Nonetheless, the comparable pattern of error distribution suggests that children with DLD still follow a similar developmental trajectory as typically developing (TD) children, which aligns with the findings of Sheng and McGregor (2010b).

Furthermore, the notable disparity in the number of semantic and unrelated answers implies that school-aged children with DLD may exhibit limited semantic fields and weakened associative links between these semantic fields even during their school-age years, which is consistent with some of the previous studies with preschool and mixed age

groups (preschool and school-aged) (McGregor & Appel, 2002; Sheng & McGregor, 2010b). Namely, semantic errors in children with DLD are the result of insufficient number of semantic characteristics for given concepts, as well as the consequence of weak associative links between concepts within a semantic category (McGregor & Appel, 2002; Sheng & McGregor, 2010b). The significantly higher number of unrelated answers on BNT may indicate a more severe deficit at the level of the lexical semantic network in school-aged children with DLD. The unrelated type of errors has not been significantly studied in children with DLD because they rarely occur during confrontational naming tasks and/or they were classified into groups of errors that were not significantly analysed according to the aim of specific studies, such as «other errors» (Sheng & McGregor, 2010b) or answers with «no semantic or phonological relation to target word» (Lahey & Edwards, 1999). However, this type of errors has been well studied in adults with acquired language disorders. Unrelated answers are most frequent in Wernicke's aphasia indicating severe deficits of vocabulary organization (Kohn & Goodglass, 1985; Laine et al., 1992). Also, answers that bare no semantic relationship with the presented item may be the result of distinct deficits in the activation of the lexical-semantic network, as well as weakened connections within the system of lexical semantics (Dell et al., 1997). Accordingly, it can be inferred that certain children with DLD at an early school-age might exhibit pronounced deficits in lexical-semantic organization.

In TD children, reorganization of the lexicon usually begins at the age of six and develops very dynamically up to the age of nine, when children begin to use more paradigmatic associations and reduce the number of syntagmatic associations (DiPisa, T., 2016). When comparing the lexical processing of children with DLD and their TD peers, significant differences were noted in the number of paradigmatic and syntagmatic associations. Specifically, children with DLD had significantly fewer paradigmatic and syntagmatic associations, pointing to a deficit in lexical processing (Sheng & McGregor, 2010a). Conversely, children with DLD in our sample gave more echolalic answers and unrelated associations than TD children, as well as more omissions. This is an indication that even at school-age, children with DLD can have a poorly developed lexical-semantic network. According to the theory of Collins and Loftus (Collins & Loftus, 1975), the strength of activation determines which word will be activated in a semantic network. Sheng and McGregor (2010a) proposed an additional hypothesis that suggests weaker activation in the semantic network, leading to limited access to semantic connections and, consequently, an increase in non-semantic associations, such as unrelated and echolalic responses. Echolalic responses may indicate a child's inability to access a specific concept or process a word effectively (Cronin, 2002).

The findings of our study align with previous research, which also reported significant deficits in lexical-semantic process-

ing in preschool or mixed-age groups of children with DLD (Broedelet et al., 2023; Dockrell et al., 2003; Drljan & Ječmenica, 2023; McGregor & Appel, 2002; McGregor et al., 2002; Sandgren et al., 2021; Simmonds et al., 2005). Moreover, the results support a growing body of evidence indicating that children with DLD may experience substantial lexical processing deficits even during school-age (Mainela-Arnold et al., 2010; Marinellie & Johnson, 2002). The results also suggest that certain children with DLD might experience a more pronounced impairment within the semantic network, which is not in a line with some of the previous studies in which this deficit were considered as a consequence of poor syntactic abilities (Pizzioli & Schelstraete, 2011).

Summarizing the results, we can say that some children with DLD can have significant difficulties of vocabulary breadth and depth, even at school-age, and there is an indication of severe semantic deficits. Indeed, child development is a dynamic process, and challenges in one learning system can exert a substantial and enduring negative influence on the advancement of another learning system, particularly when these systems are interconnected and closely linked (Guo et al., 2023). Results of some previous studies indicate that underdeveloped lexical-semantic processing abilities can impair reading and comprehension of written material in school-age children (Roth et al., 2002; Verhoeven & Van Leeuwe, 2008). Also, «deep word knowledge» is a key factor and direct predictor of reading comprehension, an ability that affects overall academic achievement (Dickinson et al., 2010; Hadley et al., 2016). This implies the need for implementing special intervention techniques which will improve expressive vocabulary and lexical-semantic processing skills in school-aged children with DLD. There are several studies which examined intervention approaches targeting lexical abilities in children with DLD at school-age. Some of them compared semantically and phonologically-based techniques (Bragard et al., 2012; Parsons et al., 2005), other focused primarily on morphological awareness (Good et al., 2015) or semantically-based approaches (Ebbels et al., 2012). Due to initial mastering of reading skills, phonologically-based approaches (e.g. phonological awareness training) prevail during the first years of elementary school for all children, including children with DLD who attend regular schools. However, the results of our study indicate the need for additional semantically-based interventions. Namely, phonologically-based intervention can improve naming of target words, but generalization to other words usually does not occur (Best, 2005). Semantic intervention endeavours to enrich the comprehension of specific word features, reinforcing the corresponding semantic representation (Bragard et al., 2012), while concurrently fostering self-cuing skills in school-aged children with DLD (Wittman, 1996). Additionally, considering that DLD children often rely on gestures when they have comprehension difficulties (Botting et al., 2010; Mainela-Arnold et al., 2014), it would be useful to consider the gesture-based methods that have been shown to improve the depth of word knowledge in TD children (for

review see Lawson-Adams, 2020), which can also be the implication for future studies.

Shortcoming of our study is that we did not control some of the socio-demographic variables and children's cognitive abilities. Namely, the sample of participants did not include children residing in rural areas, which would give a better insight into children's lexical-semantic abilities because there are indications of the potential influence of this socio-demographic variable on language development. (e.g. Bornstein & Cote, 2005; Vázquez, 2018). Also, we did not control differences in nonverbal IQ, which proved to be a better control variable than general IQ.

CONCLUSION

To summarize the results of our research, it can be concluded that children with DLD display significant deficits in lexical abilities during early school-age. Moreover, the analysis of errors reveals that the observed deficit in children with DLD extends beyond a limited vocabulary breadth or a reduced number of terms in their expressive lexicon. The examination of naming errors and lexical processing performance indicates that school-aged children with DLD may face profound challenges in organizing and developing their lexical-semantic network. These difficulties manifest as deficits in the activation of the lexical-semantic network, indicating sparse semantic fields and weak connections between concepts within semantic categories and across different semantic categories.

In Serbia, when children reach the age to enrol in school, they are evaluated with standard assessment that does not include a more specific assessment of lexical-semantic abilities. Therefore, schooling is postponed only if the child has developmentally low achievements regarding morphosyntactic and phonological abilities. Our study's findings reveal that school-aged children with DLD, who are attending regular school, can encounter notable challenges in their lexical-semantic abilities, which implies the more comprehensive assessment and use of additional interventional approach for these children. Also, results showed that even those lexical concepts that these children have in their vocabulary are characterized with poor semantic representations and with small number of semantic characteristics. Accordingly, for improving the expressive vocabulary skills and the organization of the semantic network, it is necessary to apply additional semantically-based intervention approaches with these children, in addition to the standard phonological ones that are regularly applied during the initial mastery of reading skills. Additional semantically-based strategies that facilitate access to and organisation of the lexicon can significantly improve the efficiency of naming and lexical processing, and thus improve the process of acquiring and applying academic knowledge and skills.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Bojana J. Drljan: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – original draft.

Nevena R. Ječmenica: Conceptualization; Data curation; Investigation; Project administration; Resources; Supervision; Validation; Visualization; Writing: original draft.

Ivana P. Arsenić: Conceptualization; Data curation; Investigation; Project administration; Resources; Supervision; Validation; Visualization; Writing – original draft.

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On the Relationship of Iranian EFL Learners' Engagement and Self-Regulation with Their Learning Outcomes

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ABSTRACT

Background: Language learning is a long and tedious process and some students may lose their initial interest, so their learning achievement might in turn decrease. Student engagement and self-regulation can be seen as influential in helping them to restore their enthusiasm and motivation. Engagement can assist students to be actively involved in their school work in order to become more motivated and interested in language learning. Further, self-regulation also seems to contribute to have students regulate their learning behavior and engagement, which could possibly play a role in their learning outcomes.

Purpose: The purpose of this study was thus to investigate the relationships of self-regulation and student engagement with learning outcomes.

Method: The participants, selected through convenience sampling, included 146 language learners learning English at the Iran Language Institute (ILI) Gorgan, Iran. They were given two questionnaires and a language proficiency test.

Results: The obtained data were analyzed by using SPSS, version 26. The results of Spearman's rho correlation tests indicated that there were statistically significant relationships of self-regulation and student engagement with learning outcomes, with student engagement having a stronger association with learning outcomes. Moreover, student engagement as a global construct was a better predictor of learning outcomes.

Conclusion: Since student engagement is comparatively new in the realm of language education, the findings can contribute to our understanding of its role in learning outcomes. Besides, the results have pedagogical implications for language learners and language teachers alike.

KEYWORDS

self-regulation, student engagement, learning outcomes, EFL learners, language learning

INTRODUCTION

Language learning is a time consuming and sometimes tedious endeavor, which may result in students' withdrawal from the learning process (Menken, 2010). Therefore, language learners may require to become more engaged and interested in their school tasks and activities as "student engagement in academic activities is critical to success" (Webber et al., 2013; p. 591). Likewise, Wong and Liem (2022) believed that student engagement plays a crucial role in the outcomes of the learners' schooling.

This engagement, however, needs to be guided or directed to the right track in order to make the most of the class hour and not to waste students' energy and time. Self-regulation seems to help students regulate their engagement with academic activities and make them assume responsibility for their own learning. In this regard, Coelho et al. (2018) were of the view that engagement and self-regulation are relevant as students "need to be able to modulate behaviors and control attention to be engaged" (p. 1). They even contended that self-regulation skills can be regarded as a distin-

guishing feature of successful development, which is connected to academic achievement.

Student engagement can be regulated by language learners when they are actively, intentionally, and thoughtfully involved in how they work within academic settings (Baumeister & Vohs, 2004; Boekaerts et al., 2000). Self-regulation, on the other hand, is closely connected to student engagement as the two constructs have so many features in common that both attempt to account for psychological learning processes (Wolters & Taylor, 2012). Moreover, Winne and Perry (2000) reasoned that self-regulation can help learners to regulate their engagement in doing academic tasks.

Most educators and scholars may wonder "why some learners learn faster than others and why some learners achieve ultimately higher levels than others" (Dörnyei, 2010, p. 4). In fact, the question is what causes this variation in the students' learning outcomes. One explanation might be that students may sometimes lose their initial motivation and interest to continue language learning, leading to their poor achievement. Therefore, they may need to be pushed forward so that they become more interested to be involved in their academic activities. Student engagement and self-regulation have been independently suggested by various scholars as indicators of students' achievement (Commissiong, 2020; Finn & Zimmer, 2012; Mello, 2016; Moyer, 2014; Pellas, 2014). What, however, has been paid less attention to is the investigation of the relationship of these two constructs together with learning outcomes in the same study in language education. The results of the present study can help us to gain more understanding of the relationships among the variables under study. Hence, since there seems to be scant research on the roles of student engagement (Khajavy, 2021; Mercer, 2019) and self-regulation in the learners' learning outcomes in the domain of language education, the current study was thus an attempt to fill this gap by investigating the relationships among these variables empirically in the Iranian EFL context.

LITERATURE REVIEW

Self-Regulation

Given the literature on developmental and educational psychology, when learners actively aim at a target for their learning, control their actions and behaviors, and regulate cognition to achieve those goals, they in essence are employing self-regulated learning strategies (Pintrich, 2000). In other words, students are no longer passive recipients of knowledge, but are actively constructing it while engaged in their learning experiences. In simple terms, it can indicate how students manage, supervise, and evaluate to what extent they have made progress in their learning. Self-regulation, however, like many other concepts in language education and educational psychology literature, seems to be a multi-

dimensional and complex construct. Boekaerts et al. (2000) reasoned that "self-regulation is a very difficult construct to define theoretically as well as to operationalize empirically" (p. 4). Zimmerman and Kitsantas (2014), however, defined self-regulation as "processes that learners use to activate and maintain cognitions, emotions, and behaviors to attain personal goals" (p. 145). Learners make use of such goals to generate self-centered feedback circles in order to monitor their effectiveness as well as to adapt their functioning. As Zimmerman and Kitsantas put, in order to achieve difficult goals and keep working towards them, learners need to have positive beliefs that motivate and support them.

Self-regulated learners, as Zimmerman (1990) put, seem to have substantial control over and intense awareness of their extent of knowledge and identified abilities. In contrast to inactive students, self-regulated learners take initiative by actively seeking out information and taking the necessary actions to learn it. In other words, when they face difficulties like unfavorable studying conditions, teachers who are hard to understand, or difficult textbooks, they have the ability to find a way to do well. As self-regulated students are effective and can regulate their own learning (Filice et al., 2020), they see learning as an organized and controllable practice, and they take more responsibility for their learning outcomes. (Zimmerman & Martinez-Pons, 1986). Self-regulated students, directed by their objectives, know their assets and confinements (Lunsford, 2020). In short, self-regulated students are able to study and learn on their own without needing help from teachers, parents, or friends, and monitor their own learning by investing constant effort to gain knowledge and skills (Zimmerman, 1989).

Student Engagement

As it was earlier mentioned, the two constructs of self-regulation and student engagement have many characteristics in common. Simply put, students can employ self-regulated learning strategies to control and monitor their levels of engagement. Engagement in general concerns "learners' active participation and involvement in a language learning task or activity" (Hiver et al., 2021, p. 2). According to Dörnyei (2018), student engagement concerns involvement in school-related activities and academic tasks. Research has shown that actively engaged students are "both more successful academically and more likely to avoid the pitfalls of adolescence" (Skinner et al., 2008, p. 765). Student engagement is frequently praised as the main focus of education. In language learning, student engagement is of more significance as students need to actively participate in order to gain communicative competence (Dörnyei, 2018). According to Trowler (2010), student engagement means more than just being involved or participating, entailing emotions and meaning-generating tasks. Engagement which lacks feelings is only involvement or even passivity. Reeve (2012) argued that student engagement can manifest when a learner participates energetically in a learning task.

However, when students are engaged, it means that they have been able to stay focused and motivated despite having many things that could distract them. Hence, as Dörnyei (2018) put, motivation is necessary for "preparing the deal," but engagement is indispensable for "sealing the deal". In short, engagement includes motivation and implementation. Students are increasingly "disengaged from the academic and social aspects of school life" as "far too many students are bored, unmotivated, and uninvolved" (Appleton et al., 2008, p. 369). Student engagement has been depicted in the literature as comprising several components. Apparently, as for the dimensions of student engagement, researchers seem to have little consensus on the exact number of the sub-components (Ciric & Jovanovic, 2016; Sinatra et al., 2015). For instance, Appleton et al. (2006) worked on the cognitive and psychological dimensions to measure student engagement. However, Hart et al. (2011), focused their research on the assessment of three constructs of student engagement: affective, behavioral, and cognitive. Still, Reeve (2012, 2013) introduced another component – agentic. Reeve also used the term emotional instead of affective. However, the model employed in the present study had four sub-components as follows:

1. Behavioral engagement is characterized by effort, persistence, and involvement in social and academic activities such as assignment completion and class attendance, and learning tasks such as attention and concentration (Blumenfeld et al., 2004; Reschly & Christenson, 2012). Behavioral engagement could also be relevant to "the 'directing' aspect of attention or the intentional use of attentional effort" (Wong & Liem, 2022, p. 26).

2. Emotional or affective engagement refers to the students' positive or negative emotional reactions to teachers, classmates, and learning (Fredricks et al., 2004), and identification with, or connection to, the educational context (Finn, 1989). Emotional engagement can be observed in "learners' personal affective reactions as they participate in target language-related activities or tasks" (Hiver et al., 2021, p. 5).

3. Cognitive engagement could be described as students' attitudes toward educational tasks and their psychological investment in complicated notions, and their desire to perceive them (Fredricks et al., 2004). Cognitive engagement includes "attention, concentration, focus, absorption, 'heads-on' participation, and a willingness to go beyond what is required" (Skinner & Pitzer, 2012, p. 24). Wong and Liem (2022) described it as "the extent to which students are absorbed during learning activities" (p. 25).

4. Agentic Engagement: Reeve (2012) defined agentic engagement as "students' intentional, proactive, and constructive contribution into the flow of the instruction

they receive" (p. 161). Agentic engagement, as Reeve (2013) put it, could be seen as another helpful way to improve student advancement in that it is no different from the other three sub-components of engagement. Agentic engagement, however, is different from the other three reactive elements as it is a proactive approach to learning and is initiated by the students when they actively contribute to their own learning progression.

The Theoretical Framework

The present study was conducted based on self-determination theory (SDT; Deci & Ryan, 2002). This theory, consisting of three basic, psychological needs of relatedness, autonomy, and competence, posits that individuals will engage constructively in the activities when such needs are satisfied. Engagement can be viewed "in terms of self-regulation and self-determination theories, both of which presume students' active involvement in and reflection on their own learning" (Nichols & Dawson, 2012, p. 471). Therefore, as student engagement and self-regulation are related constructs (Coelho et al., 2018; Wolters & Taylor, 2012), both can be informed by this theory. Further, the instruments applied to collect data on self-regulation and student engagement in this study had been developed according to this theory. Besides, Reeve (2012) argued that the SDT can offer a solid theoretical ground to do empirical research on the aforementioned constructs. Finally, the SDT is also employed to justify the results and discuss the pedagogical implications of the study.

Empirical Studies

Finn and Zimmer (2012) reported that there was a significant association between self-regulated learning and academic achievement. Webber et al. (2013) found that student engagement could predict learning outcomes. Based on the results of her study, Moyer (2014) made the argument that learner engagement and self-regulation could account for exceptional outcomes in second language phonology. The study conducted by Pellas (2014) revealed that self-regulation was positively and significantly correlated with student engagement, and both constructs had effects on the learners' online learning. Zhang et al. (2015) investigated the role of self-regulation in college students' academic engagement and burnout. They reported significant correlations between self-regulation process and academic engagement. Mello (2016), who investigated masters and doctoral students' engagement with the online resources, showed that engagement was rewarded with higher marks and led to more motivated students. Moreover, LeMay (2017) investigated the relationships among academic engagement, motivation, and self-regulation and the predictive capacity of these variables on students' achievement. The findings demonstrated correlations between academic engagement and self-regulation. Ellis and Helaire (2018) examined the relationships between self-regulated learning beliefs and

behavioral engagement. The authors, using SEM as the analytic method, found positive relationships between the variables of their study.

Choi et al. (2018) investigated the impacts of self-regulated learning strategies and motivational factors on students' knowledge of L2 vocabulary. Their analysis showed that motivation influenced EFL vocabulary knowledge mediated by self-regulated vocabulary learning. They also found that motivation had a positive relationship with self-regulated learning of vocabulary. Likewise, Commissiong (2020), studying 385 students and 61 faculty members in the Caribbean, also found significant correlations of student achievement with student engagement and self-regulation. The purpose of Pahuriray's (2021) study was to examine the connection between self-regulating capacity in language learning and academic performance. The results unveiled that higher self-regulation capacity would lead to higher academic achievement. The aim of Park and Kim's (2022) study was to explore how students' self-regulation, co-regulation and behavioral engagement affected their performance in flipped classrooms at college. Their results showed that self-regulation had significant effects on behavioral engagement and academic performance, whereas behavioral engagement had no influence on the students' performance.

A review of the empirical studies conducted in recent years on the construct of student engagement reveals that this concept seems to have been under-researched in the domain of language education so far (Khajavy, 2021; Mercer, 2019), especially in the Iranian EFL context, and deserves more investigations to see its role in the students' learning outcomes. On the other hand, as self-regulation seems to have a close association with student engagement, this construct has also been added to further study its role in the students' learning outcomes. The findings could contribute to our understanding of the relationship between these constructs and students' perceptions of their achievement and the significance of the constructs to learning outcomes. The results of correlation and regression analyses can have the potential to help language teachers in designing appropriate learning activities and make them responsive to learners' needs. Accordingly, as little research has been conducted on student engagement and self-regulation and their roles in students' achievement in the same study in the realm of language education, the current study made attempts to explore the role of self-regulation and student engagement in students' learning outcomes. The following research questions were thus formulated:

1. Is there any significant relationship of student engagement and self-regulation with Iranian EFL learners' learning outcomes?

2. Is there any significant relationship between Iranian EFL learners' engagement and self-regulation?

3. Which construct, self-regulation or student engagement, is a better predictor of Iranian EFL learners' learning outcomes?

METHOD

Participants

This study involved selecting 146 male EFL learners from a total of 164 ones who were studying English at the Iran Language Institute (ILI), adults' branch, Gorgan, Iran, through convenience sampling based on their practical accessibility. These students, who were all Persian native speakers, were at the intermediate level, ensured by Quick Placement Test (QPT). They took the classes, held twice a week in the evening, willingly. The Iran language institute, the oldest language institute in the country, offers courses in English and other international languages. The institute also offers courses in IELTS and TOEFL to its advanced learners (see more at https://www.ili.ir/).

Confidentiality of the participants' data was strictly maintained throughout the study and all of them were assured that their responses would be kept anonymous and used for research purposes only. The distribution of the participants by age and years of language learning is shown in Table 1.

Instruments

Student Engagement Questionnaire (SEQ)

In order to collect the required date on student engagement, a scale adapted from two questionnaires (Hart et al., 2011; Reeve, 2013), was employed (see Appendix A). This modified and finalized scale included 14 items on four dimensions – *emotional engagement*, *behavioral engagement*, *cognitive engagement*, and *agentic engagement.* The items were calculated on a 5-point Likert-type scale from 1= *strongly disagree* to 5= *strongly agree*. The content validity of the questionnaire was confirmed by three experts in the field. Cronbach's alpha was used as indicative of the reliability index of the scale (r=0.82).

Self-Regulation Questionnaire (SRQ)

The scale used to collect data on self-regulation was taken from the questionnaire by Pintrich et al. (1991). This adapted questionnaire had 14 items and three subcomponents: *metacognitive self-regulation*, *time and study environment*, and *effort regulation* (see Appendix B). Each item was measured on a 5-level Likert-type scale from 1= *strongly disagree* to 5= *strongly agree*. The content validity of the scale was verified by three PhD holders in the field. The reliability index of the scale was estimated as .79.

Table 1

Distribution of Participants by Age and Years of Language Learning

Age	Years of Language Learning	Frequency	Percent	Valid Percent	Cumulative Percent
3-15	0-3	1	2.8	2.8	2.8
	4-6	12	33.3	33.3	36.1
	7-9	23	63.9	63.9	100.0
	Total	36	100.0	100.0	
16-18	0-3	28	26.2	26.2	26.2
	4-6	53	49.5	49.5	75.7
	7-9	26	24.3	24.3	100.0
	Total	107	100.0	100.0	
19-20	0-3	1	33.3	33.3	33.3
	4-6	1	33.3	33.3	66.7
	7-9	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

Quick Placement Test (QPT)

The Quick Placement Test (QPT) (2001) had a two-fold role in this study. It was used to both homogenize the participants and select intermediate level language learners, and measure their learning outcomes. This standardized test consists of 60 questions in a multiple-choice format. Those students who scored between 30 and 47 were considered intermediate language learners.

Data Collection Procedures

After taking the QPT, 146 language learners were chosen from 164 male EFL learners and given the questionnaires. The current study was done at the ILI, adult male branch, Gorgan, Iran. The written permission for conducting the study in the institution was attained from the manager of the institute. The students were deemed to be proficient enough to grasp the questionnaire items, yet the first researcher attended all questionnaire administrations in case students needed any probable explanations. He also reminded the students not to miss any items of the questionnaires. Thus, a full response rate was obtained as all the students answered all the questionnaire items.

Data Analysis

The SPSS software, version 26, was employed to do the statistical analysis of the data. In order to determine whether the relationships among self-regulation, student engagement, and learning outcomes were statistically significant, Spearman's rho correlation tests were applied. To show that the relationships were of practical significance, effect sizes, i.e. R^2, were calculated as well (see Creswell, 2012). In addition, multiple regression tests were used to see which construct, self-regulation or student engagement, had a better predictability power over students' learning outcomes.

RESULTS

The descriptive results of the two questionnaires and the QPT are displayed in Table 2. Data screening showed no incomplete questionnaire items, outliers or other aberrations.

As normal distribution of the data is important in using statistical tests, Kolmogorov-Smirnov and Shapiro-Wilk tests were run. The results of these tests are displayed in Table 3.

According to Table 3, the Sig values for Kolmogorov-Smirnov and Shapiro-Wilk tests for SE and SELF are above .05. However, since the Sig value for LOUT is less than .05, the distribution of data for LOUT is not normal. Therefore, non-parametric tests need to be used.

Then to answer research questions 1 and 2, Spearman's rho correlation tests were employed. Table 4 shows the results of these tests.

As can be seen in Table 4, LOUT had significant relationships with both SE (r=.817, n=146, p=.000) and SELF (r=.771, n=146, p=.000). Moreover, there was a significant relationship between SE and SELF (r=.677, n=146, p=.000). Hence, it can be concluded that the relationships among the three variables of this study are all statistically significant.

In order to find out how much variability in the dependent variable (LOUT) can be explained by the independent variables (SE and SELF), regression analysis was used. Simply

Table 2

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SE	146	34	70	53.80	7.376
SELF	146	27	70	50.46	8.240
LOUT	146	30	47	38.52	3.112
Valid N (listwise)	146				

Note. SE=student engagement; SELF=self-regulation; LOUT=learning outcome

Table 3

Tests of Normality

	Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
SE	.054	146	.200*	.990	146	.349
SELF	.063	146	.200*	.989	146	.342
LOUT	.103	146	.001	.981	146	.038

Table 4

Correlations between SELF, SE, and LOUT

			ENG	SELF	LOUT
Spearman's rho	SE	Correlation Coefficient	1.000	.677**	.817**
		Sig. (2-tailed)	.	.000	.000
		N	146	146	146
	SELF	Correlation Coefficient	.677**	1.000	.771**
		Sig. (2-tailed)	.000	.	.000
		N	146	146	146
	LOUT	Correlation Coefficient	.817**	.771**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	146	146	146

*Note: **. Correlation is significant at the 0.01 level (2-tailed).*

put, the multiple linear regression was applied to determine which construct, student engagement or self-regulation, was a better predictor of students' learning outcomes, i.e., the third research question. Table 5 illustrates the results of running the multiple linear regression tests. It should be noted that the assumptions for running multiple regression analysis were checked. It was found out that the assumptions were met, so the data were proper for using multiple regression tests.

Based on Table 5, a statistically significant model was created by the regression analysis (F (2, 143) = 205.7, p = .000, AR^2 = 0.73), explaining 74% of the total variance. It was found that both student engagement (β = 0.548; t = 9.00; p =.000) and self-regulation (β = 0.380; t = 6.247; p =.000) were sig-

nificant predictors of learning outcomes. However, student engagement was a better predictor of students' learning outcomes.

DISCUSSION

The main purpose of this study was to explore the relationships of learning outcomes with student engagement and self-regulation. A secondary objective of the study was to determine which construct, student engagement or self-regulation, could be a better predictor of language learning outcomes. The results of correlation tests showed that there were positive significant relationships of learning outcomes with both student engagement and self-regulation, with

Table 5

Multiple Regression Analyses Predicting LOUT from SELF and SE

Model B	Unstandardized Coefficients		Standardized Coefficients		T	Sig. F	R	R²	ΔR²
	Std. Error	Beta							
(Constant)	18.848	.988			19.07	.000	205.72	.861	.742	.738
SE	.231	.026	.548		9.009	.000			
SELF	.143	.023	.380		6.247	.000			

student engagement having a stronger bond. Further, the regression analysis indicated that student engagement was a better predictor of language learning outcomes.

The findings of the present study were in line with those of several studies conducted by Choi et al. (2018), LeMay (2017), Ellis and Helaire (2018), Zhang et al. (2015), Finn and Zimmer (2012), Commissiong (2020), Pellas (2014), Mello (2016), and Moyer (2014). These scholars reported positive, significant relationships of learning outcomes with student engagement and/or self-regulation. Besides, the results of the regression analysis supported those found by Commissiong (2020), who reported that both student engagement and self-regulation predicted student success significantly. Likewise, Webber et al. (2013) found that higher levels of student achievement could be predicted by the subcomponents of student engagement. In contrast, Fong et al. (2017) and Rahal and Zainuba (2016) posited that learner engagement and self-regulation may not predict all aspects related to student achievement.

Correlation analyses showed that student engagement had a stronger relationship with learning outcomes than did self-regulation. Further, in regression analysis, student engagement was a better predictor of learning outcomes. Therefore, it can be inferred that student engagement seems to play a significant role in the students' academic success. This finding could be attributed to the close association of student engagement with learning motivation (Ghelichli et al., 2020; LeMay, 2017; Oga-Baldwin & Nakata, 2017). According to Oga-Baldwin and Nakata (2017), when students become more engaged in the learning process, their motivational levels increase. This increase in motivation makes students more interested in learning, which can in turn result in students' overall achievement (Beachboard et al., 2011; Taurina, 2015).

In addition, self-regulation was shown to be related to learning outcomes as well. This finding could be due to the idea that when students regulate their learning, they could be more successful. In other words, as Pintrich (2000) put, when language learners monitor their behaviors and modulate cognition for higher achievement, they apparently take responsibility for their own learning, which can lead to an increase in learner autonomy. Moreover, as learner autonomy is related to learner engagement, enhancement of student engagement could increase learner autonomy too. According to the SDT, learners with greater sense of autonomy demonstrate higher levels of academic engagement (Deci & Ryan, 2002). Consequently, as Üstünlüoğlu (2009) argued, increased learner autonomy has positive impacts on student performance and improves achievement rates.

The results of the current study could have pedagogical implications. Since student engagement is closely related to learning outcomes, its improvement can contribute to student achievement. One possible way of promoting student engagement and achievement is to increase teachers' interactions with their students (Collaço, 2017; Pianta et al., 2012). Pianta et al. (2012) believed that "Through instructional behaviors, conversations, and activities, teachers foster students' development" (p. 376). They, for instance, suggested teachers' providing feedback for the students on their efforts or performance as it increases such teacher-student interactions. Feedback, they added, is to be of high-quality, and teachers "provide frequent feedback loops or back-and-forth exchanges" (p. 377). Where high quality feedback has been observed, these interactions, according to Howes et al. (2008), were connected to achievements in language and literacy.

Since psychological needs can have impacts on learner engagement and learning outcomes (Reeve, 2012), meeting such needs will promote students' achievement. Based on the SDT, these needs can be satisfied by providing conditions in which students' needs for autonomy, relatedness, and competence are met. However, the setting which intends to improve students' progress and learning outcomes is to be created in such a way that their sense of choice, autonomy, and connectedness are considered (Pianta et al., 2012). By the same token, Appleton et al. (2006) also underscored the significance of the context where the indicators of the dimensions of student engagement are observed, for example, interactions with teachers and administrators at the educational setting, family members' encouragement, and peer support. Moreover, according to the SDT, learning environments, if taken seriously by the educators, can have positive effects on the students' motivation because such environments are capable of improving students' feelings of relatedness. And increase in social relatedness can have effects on student achievement (Beachboard et al., 2011).

Other implications predicated on the results of this study could be activities language learners need to implement, such as working with peers on school projects as extracurricular activities and involving in class discussions with the teacher and classmates. In addition, informed by agentic engagement, teachers are advised to involve students in the process of instruction (Reeve, 2012). In other words, teachers are suggested to do so by "allowing students to take part in making decisions in order for them to become invested in the learning experience" (Collaço, 2017). Finally, it can be concluded that engaging students in academic activities is not the responsibility of teachers alone because "engagement requires a broad-based commitment from many people across the institution that work together to shape expectations" (Webber et al., 2013; p. 607).

CONCLUSION

The current study investigated the relationship of learning outcomes with student engagement and self-regulation among Iranian EFL learners. The findings of the study showed that both student engagement and self-regulation had significant relationships with learning outcomes. Moreover, student engagement was shown to be a better predictor of learning outcomes. As this study focused on self-regulation and student engagement as global constructs and learning outcomes in general, future research can investigate the subcomponents of each. For example, such dimensions of student engagement as behavioral, cognitive, emotional, or agentic engagement could be explored in relation with learning outcomes. Alternatively, students' learning outcomes can be investigated in light of language skills or subskills, for instance, reading comprehension or students' knowledge of grammar or vocabulary. Besides, while this study used questionnaires as instruments to collect quantitative data, further studies can employ other types of instruments such as interviews, observations, etc. for data collection purposes. Similarly, the present study used a cross-sectional design; future studies can be done on student engagement using a longitudinal design by focusing on the dynamics of this construct. Finally, as the concept of student engagement is comparatively a novel area for further research in the realm of second or foreign language learning and teaching, this construct and/or its dimensions still merit more attention and investigation by the scholars in the field. In sum, the more research on student engagement is conducted, the more innovative ways of improving learning outcomes could be identified.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Yahya Ghelichli: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – original draft

Seyyed Hassan Seyyedrezaei: Conceptualization; Data curation; Investigation; Project administration; Resources; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing

Zari Sadat Seyyedrezaei: Conceptualization; Data curation; Investigation; Project administration; Resources; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing.

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APPENDIX A

Student Engagement Questionnaire (SEQ) (Hart et al., 2011; Reeve, 2013)

Dear language learner,

The aim of this survey is to inquire about your opinion regarding "**Student Engagement and Self-Regulated Language Learning**" in the EFL classroom and school. Please answer the following questions carefully. Remember there are no right or wrong answers; just answer as accurately as possible. All information will be kept confidential. We appreciate your cooperation in advance.

Age: under 15   16-18   19 and above

Gender: male   female

Years of learning English: 0-3   4-6   7 and above

Degree: High School Student   University Student   Graduated   other

Rating Scale:

1 = strongly disagree   4 = agree

2 = disagree   5 = strongly agree

3 = neither agree nor disagree

Dimension	No.	Item	1	2	3	4	5
Emotional	1	I am very interested in learning a foreign language.					
	2	I enjoy learning new things in class.					
Behavioral	3	In class, I work as hard as I can.					
	4	When I'm in class, I participate in class activities.					
	5	I pay attention in class.					
	6	If I have trouble understanding a problem, I go over it again until I understand it.					
	7	When I run into a difficult problem, I keep working at it until I think I've solved it.					
Cognitive	8	When I study, I try to understand the material better by relating it to things I already know.					
	9	When I study, I figure out how the information might be useful in the real world.					
	10	I make up my own examples to help me understand the important concepts.					
	11	I try to see the similarities and differences between things I am learning and things I know already					
Agentic	12	I let my teacher know what I need and want.					
	13	During the class, I express my preferences and opinions.					
	14	When I need something in class, I'll ask the teacher for it.					

APPENDIX B

Self-Regulated Language Learning Questionnaire (SRLLQ)

Dimension	No.	Item	1	2	3	4	5
Metacognitive Self-Regulation	1	When reading for the English class, I make up questions to help focus my reading.					
	2	When I become confused about something I'm reading for this class, I go back and try to figure it out.					
	3	If course materials are difficult to understand, I change the way I read the material.					
	4	Before I study new course material thoroughly, I often skim it to see how it is organized.					
	5	I try to change the way I study in order to fit the course requirements and instructor's teaching style.					
	6	I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying.					
	7	When I study for the English class, I set goals for myself in order to direct my activities in each study period.					
Time and Study Environment	8	I usually study in a place where I can concentrate on my course work.					
	9	I make good use of my study time for the English class.					
	10	I have a regular place set aside for studying.					
	11	I make sure I keep up with the weekly readings and assignments for this course.					
	12	I attend class regularly.					
Effort Regulation	13	I work hard to do well in class even if I don't like what I am doing.					
	14	Even when course materials are dull and uninteresting, I manage to keep working until I finish.					

Note: Adapted from "Reliability and predictive validity of the motivated strategies for learning questionnaire (MSLQ)" , by P.R. Pintrich, D.A. Smith, T. Garcia, and W. J McKeachie, 1991, Educational and Psychological Measurement, 53(3), 801-813 (https://doi.org/10.1177/0013164493053003024).   Copyright 1991 by Sage.

Exploring the Relationship between Language Attitude and Language Awareness towards World Englishes: A Case of Indonesian pre-service English Teachers

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ABSTRACT

Introduction: World Englishes (WE) is an important topic, especially regarding pre-service English teachers' attitude and awareness towards the plurality of WE in English language teaching (ELT) practices. Many previous studies have discussed language attitude and language awareness separately. In contrast, research into the relationship between language attitude and awareness towards WE, especially in the context of pre-service English teachers, has not been widely explored.

Purpose: This study aims to fill the gap by researching the relationship between language attitudes and awareness of WE among pre-service English teachers, and its implication for their teaching practice.

Method: This study employed a mixed-method approach using correlational and interview-based research. The research data was obtained from 62 respondents who filled out questionnaires from three universities in Jakarta and Tangerang, Indonesia. In addition, there were nine interviewees.

Results: The results showed a weak relationship between Indonesian language attitude and awareness of WE pre-service English teachers. Respondents indicated a positive attitude towards WE but had moderate awareness.

Conclusion: We concluded that pre-service English teachers view WE as an essential topic, but they tend not to teach WE because they have to obey the school curriculum.

KEYWORDS

language attitude, language awareness, pre-service English teacher, World Englishes (WE)

INTRODUCTION

English is a global language and its use has mushroomed in various countries in various fields such as education, business, tourism, and media (Crystal, 2012; Dewi & Setiadi, 2018). The spread of English throughout the world encourages the development of a wide variety of English, called World Englishes (WE). English is deemed owned not only by native speakers and, more widely, everyone globally (Morganna et al., 2020). A similar opinion was put forward by Hamid et al. (2022) who explained that the democratization of the English has given birth to global ownership. This makes it possible for non-native English-speaking nations to claim a stake in English.

WE is a crucial topic, especially with regard to pre-service English teachers. Their attitude and awareness towards the plurality of WE can be very relevant to all possible adjustments in English language teaching (ELT) practices (Vettorel & Corrizzato, 2016). They need to be aware that WE is a form of increasing plurality of English, and a form of actual language communication that can influence pedagogical practice in particular (Jenkins et al., 2011). WE is important for pre-service English teachers because there is a reality about the plurality of

English which aims to increase discussion on the challenges regarding "established ways of thinking" in the context of ELT (Widdowson, 2015).

Since pre-service teachers will soon become teachers, it is important to discuss WE from the point of view of language attitude in the context of teaching. Language attitude is a disposition towards language objects in favorable or unfavorable reactions (Garett, 2010). Ianos (2014) states that language attitude is a psychological tendency in a person reflected in evaluating favorable or unfavorable languages. Teachers are encouraged to keep themselves up to date on the development of English variations globally. They also need to have an adequate understanding of it, in order to accommodate the learning needs of students who are increasingly open to the global world in terms of communication across Englishes and culture (Canagarajah, 2014). Ahn (2015) argues that teachers and students who have a positive attitude towards WE would be motivated to learn more about English variations, in order to communicate better with people outside standard English-speaking countries.

Furthermore, teachers also need to consider the variations of WE in English learning in schools. Several previous studies rejected WE because it is seen as a waste of time and contrary to standard English (Marlina, 2014). Morganna et al. (2020) explained that a positive attitude towards intercultural language learning allows teachers to develop the multicultural nature of students to use their language to acquire the language being learned.

The response to WE from pre-service English teachers involves their personal attitude to language awareness in teaching in schools. Teacher awareness of WE is a crucial matter of discussion, since WE encourages acceptance of pronunciation, vocabulary, and grammar diversity in the classroom (Rezaei et al., 2018). Chan (1999) defines language awareness as a combination of a person's knowledge, attitudes, and perceptions of the language's nature and function. Specifically, teacher language awareness is knowledge about the system that underlies the language to allow teachers to implement effective teaching (Thornbury, 1997).

WE also encourages the awareness of English teachers with regard to the global and local needs of students who need to be accommodated in learning English in the classroom (Sadeghpour & Sharifian, 2017). Therefore, educational institutions need to adapt WE into the curriculum, test offerings, assessments, and teaching practice in the classroom. Pre-service English teachers require this awareness, since it can familiarize them with the evolving linguistic reality of English, in order to affect their teaching practice (Dewey, 2015; Widdowson, 2015). Policymakers in schools should evaluate the potential for the growth of diverse forms of English and endorse the notion of multilingualism and multicultural self-expression, taking into account the context of globalization (Pan et al., 2021).

Many previous scholars have researched language attitude. In particular, research on language attitude from students' perspective, as done by Saengboon (2015) who conducted a study of language attitude towards WE from the perspective of 101 Thai students majoring in various fields such as logistics, economics, and engineering. Rezaei et al. (2018) also examined the language attitudes of 140 Iranian students towards WE. Choi (2007) also conducted experimental research on the language attitude towards WE from 159 Korean students, most of whom majored in tourism. Similar to language attitude, research on language awareness is mainly applied to students. Rajprasit and Marlina (2019) studied the language awareness of 30 Thai students majoring in Finance. Besides, Saengboon's (2015) study of 101 Thai students majoring in various fields such as logistics, economics, engineering, etc., also examined language awareness towards WE.

Despite many previous studies regarding language attitude and awareness, few studies examine language attitudes and awareness towards WE in pre-service English teachers. In addition, research focused on the relationship between language attitude and awareness towards WE, especially in the context of pre-service English teachers, has not been widely explored. Therefore, this study aims to fill this gap by researching: (1) the relationship between pre-service English teachers' language attitude and awareness towards WE; and (2) its implication on their teaching practice. Thus, the hypotheses proposed in this study is:

H_0: There was no relationship between pre-service English teachers' language attitude and awareness towards WE.

H_1: There was a relationship between pre-service English teachers' language attitude and awareness towards WE.

LITERATURE REVIEW

This section discusses the theoretical basis and framework used in this study, including WE, language attitude, and language awareness.

World Englishes

The idea of WE was first put forward by Kachru (1990) due to the use of English in a diverse socio-cultural and international cultural context. WE refers to the variations of English in the world (Bolton, 2004), spoken by native speakers of English since birth and by speakers who have studied English in education (Saengboon, 2015). Furthermore, added other definitions of WE, namely the approach used to learn English in the world. The focus of WE is broad, including language identity and linguistic features of the existing variations of English (Kumaravadivelu, 2012), mutual intelligibility (Nelson, 2011), and pedagogical implementation in learning (Nielsen & Thorkelson, 2012).

Figure 1

Kachru's Concentric Circles

THREE CONCENTRIC CIRCLES OF ENGLISH

THE EXPANDING CIRCLE e.g.,

China	Caribean Countries	Egypt
Indonesia	Israel	Japan
Korea	Nepal	Saudi Arabia
South Africa	South America	Taiwan
CIS	Zimbabwe	

THE OUTER CIRCLE e.g.,

Bangladesh	Ghana	India
Kenya	Malaysia	Nigeria
Pakistan	Philippines	Singapore
Sri Langka	Tanzania	Zambia

THE INNER CIRCLE

| USA | UK | Canada |
| Australia | New Zealand | |

Note: From "The Other tongue: English across cultures," by Braj B. Kachru, 1992, Copyright 1992 by University of Illinois.

Figure 1 presents Kachru's concentric circle of the use of English around the world. The countries in the inner circle use English as their first language, while the countries in the outer circle are those which use English as their second language (Morganna et al., 2020). Finally, in expanding circles, some countries use English as a foreign language. In the English concentric circle model, Kachru divided categories for each circle: "norm providing" for countries in the inner circle; "norm developing" for countries in outer circles; and "norm dependent" for countries in expanding circles (Kirkpatrick, 2007a). American and British English are seen as the best models for countries in the inner circle, so they are categorized as "norm providing." However, this view often gives rise to the idea that other variations of English are "undesirable," so Kachru opposes this view Ahn (2017). For outer-circle countries, norm developing is nativized English (Ahn, 2017). As for developing circle countries, norm-dependent is often a variation of English influenced by external factors such as English lessons in schools and includes influences from the American and English varieties taught (Bruthiaux, 2003).

Language Attitude

Attitude is generally defined differently from the mentalist and behaviorist perspectives (McKenzie, 2010). From a mentalist perspective, this attitude is an "internal state of readiness" in a person which appears in the presence of stimuli. In comparison, from the behaviorist perspective the attitude is a response from an individual to certain social situations. Attitude can also be defined as a person's mental condition involving feelings and beliefs obtained from experiences which form a response to a stimulus in a particular object or situation (Latchanna & Dagnew, 2009). There is a similarity in these two perspectives. Both concur that attitude can arise due to a stimulus from an object or situation outside of oneself.

Specifically, language attitude is a disposition towards language objects in the form of favorable or unfavorable reactions (Garett, 2010). Ianos (2014) states that language attitude is a psychological tendency in a person reflected in evaluations of favorable or unfavorable languages. On the other hand, Getie (2020) explains that language attitude explores how a person reacts to their language interaction experiences, including evaluations of other people's language behavior that they observe. Language attitude is formed when someone influences a language object in such a way that a personal assessment of the language object is formed (Cluver, 2000).

Language attitude can be in the form of positive and negative attitudes. It will influence the behavior and how a person shows activities related to the object of the intended language (Burgos & Pérez, 2015). In the context of English as a foreign language (EFL), positive and negative attitudes will significantly impact the success of language learning because attitude will emphasize the learners' orientation towards language targets (Getie, 2020). Furthermore a negative attitude can hinder language learning (Riagáin, 2008; Wati, 2018).

Research on EFL teachers' attitude toward WE was conducted by Chan (2016), who examined the attitudes of teachers,

students, and professionals regarding variations in English, ELT, and language use in Hong Kong. The results showed that the participants, including teachers, tended to favor English from inner-circle countries. However, they still accept local English as normal if it does not lose clarity. A contradictory result was obtained from Ahn's (2015) study of South Korean teachers. He found that most teachers had a negative attitude towards these English variations and considered WE as broken English, with strange pronunciation.

Language Awareness

Teachers' language awareness is knowledge of the system that underlies the language to allow teachers to teach effectively. The language awareness of teachers is closely related to subject matter knowledge because it is the underlying system of language being taught (Andrews, 2001). Andrews (2007) explains two dimensions of language awareness of teachers: declarative and procedural. The declarative dimension focuses on the knowledge of language possessed by the language teacher. In contrast, the procedural dimension focuses on the language teacher's reflection on their knowledge of the language; their students' knowledge; and the relationship between language and knowledge possessed by the teacher's pedagogical practice. The declarative dimension of language awareness focuses on what the teacher "should know", including strategic competence, language competence, and subject-matter knowledge (Gök & Rajala, 2017). While the procedural dimension of language awareness focuses on what the teacher "should do", since this dimension is related to "knowledge in action" (Gök & Rajala, 2017).

Breidbach et al. (2011) divide language awareness into three dimensions: linguistic-systematic, cultural-political, and social-educational. In particular, in the social-educational dimension, language awareness focuses on the beliefs of teachers and learners, as well as their perspectives, and attitudes towards language and language learning (Breidbach et al., 2011). According to James and Garrett (1992), language awareness is an essential aspect of language learning, starting from the language awareness of teachers.

One of the previous studies regarding the language awareness of EFL teachers towards WE was conducted by Ates et al. (2015). The results showed that prospective English teachers must be aware of WE and communicate with WE speakers. He further explained that educational institutions must appreciate and validate the diversity of linguistics used by teachers and students. Another study on teachers' awareness towards WE was conducted by Sadeghpour and Sharifian (2017) towards 27 teachers from 10 countries in the Asia Pacific: China, Brazil, Thailand, Colombia, India, Vietnam, and South Korea, Japan, Taiwan, and Saudi Arabia. The results showed that teachers were aware of the use of English internationally which impacted the development of WE. However, the research also found that even though teachers were aware of WE, they still questioned the legitimacy of these English variations.

METHOD

Research Design

This research was conducted using a mixed-method approach: the quantitative model as the primary data using correlational study. This was then confirmed by qualitative data using interview-based study. The aim of this approach was to obtain relatively large amounts of data quickly through a questionnaire and accommodate direct and in-depth engagement with respondents (Dörnyei, 2007), thus producing retrospective prompts for respondents to explain their answers in the survey (Creswell, 2003).

Participants

Subjects in this study were pre-service English teachers at two private universities and one state university in Jakarta and Tangerang, Indonesia, also known as Alpha University, Bravo University, and Charlie University. The criterion for pre-service English teachers was students to have teaching experience after their teaching internship. For the questionnaire data collection, the number of research subjects was 62 Indonesian pre-service English teachers. Furthermore, there were 9 interviewees. The selection of the respondents for the interviews was based on purposive sampling. This was only conducted on subject representatives who meet the specified criteria (Dörnyei, 2007). The criteria for selecting respondents were based on the total score of respondents' answers to all the questionnaire items (the questionnaire used a scale of 1-5). The total score obtained was then grouped with three criteria: the highest, lowest, and middle scores. From each university, 3 people were selected according to these criteria, so that a total of 9 people were interviewed.

Assessments and Measures

The development of the questionnaire instrument was based on the theory of language attitude and language awareness, then derivated to be indicators. For language attitude variables, the following indicators were used: cognitive, affective, and behavioral (Ianos, 2014; Ladegaard, 2000; McKenzie, 2010). Meanwhile, the variable language awareness indicators used were language proficiency and subject-matter knowledge, metacognitive nature, and awareness of students' perspectives (Andrews, 2003). The researcher made 5 statement items for each indicator so that, in total, there were 15 items for each variable.

The questionnaire was piloted first to ensure that the instrument has passed the classical assumption test requirements: homogeneity, normality, validity, and reliability tests.

Table 1
Participant Profiles

	Criteria	Alpha University		Bravo University		Charlie University	
	N	%	N	%	N	%	
Sex	Male	0	0%	4	19.05%	4	14.29%
	Female	13	100%	17	80.95%	24	85.71%
Age	20	0	0%	0	0%	0	0%
	21	6	46.15%	18	85.72%	17	60.71%
	22	7	53.85%	1	4.76%	11	39.29%
	23	0	0%	0	0%	0	0%
	>23	0	0%	2	9.52%	0	0%
Grade level of teaching experience	Kindergarten	0	0%	0	0%	0	0%
	Elementary	3	23.08%	4	19.05%	2	7.14%
	Junior High School	3	23.08%	10	47.62%	22	78.57%
	Senior High School	7	53.85%	7	33.33%	1	3.57%
	Vocational High School	0	0%	0	0%	3	10.72%

Table 2
Interviewee Profiles

Pseudonyms	University	Age	Sex	Grade Level of teaching experience
Sara	Alpha University	21	Female	High School
Gea	Alpha University	22	Female	High School
Sandra	Alpha University	21	Female	High School
Sela	Bravo University	21	Female	Junior High School
Anggrek	Bravo University	21	Female	Junior High School
Kara	Bravo University	21	Female	High School
Hana	Charlie University	22	Female	Junior High School
Anggun	Charlie University	21	Female	Junior High School
Irma	Charlie University	21	Female	Junior High School

Respondents in the instrument pilot test were different people from the 62 respondents to analyze research results. Still, they came from the same study program and universities, so that the instrument trial represented the original research participants with the same background.

Based on the homogeneity test results, it can be concluded that the research data was homogeneous, since the significance result was 0.882, which was higher than 0.05. Based on the normality test results, it can be concluded that the distribution of answers for the variable language attitude and language awareness was normally distributed because the significance results were 0.259 and 0.147, which were higher than 0.05. Thirdly, the research instrument went through a validity test which is declared valid. if it can meas-ure the objective precisely. This is indicated by the statistical value of rcount higher than rtable with an alpha of 0.05 (Larson-Hall, 2010) . The number of samples for the validity test was 30. The validity test was compared with the value of rtable df-2, namely rtable 28, with a value of 0.361. The result showed that this research used 9 items of language attitude and 10 items of language awareness variable. Lastly, based on Cronbach's Alpha reliability test, it was found that the reliability level of the variable language attitude instrument obtained was 0.735, while for the variable language awareness instrument, the reliability level was 0.811. Based on the criteria for the reliability test results, a value > 0.7 means good reliability (Kline, 1993).

Data Collection

The data in this study was taken from primary sources, namely direct research objects, through questionnaires and interviews. The questionnaire is intended to provide a list of statements to gather participants' personal data, experience, knowledge of attitudes, or opinions (Dörnyei, 2007). Meanwhile, the interview was intended to directly study the respondent's phenomenon through regular conversation (Dörnyei, 2007). The questionnaire was distributed online via google form from March 10-24, 2021. Meanwhile, the interview was conducted individually using the semi-structured model on March 29-April 4, 2021, through the zoom platform.

Ethical Statement

In carrying out this research, a written permit was obtained from the Dean of each university Faculty. In addition, researchers also obtained informed consent from individual respondents for their willingness to be involved in research voluntarily. The respondents obtained sufficient and clear information regarding the purpose of data collection, namely for research and publication. The researcher guaranteed the confidentiality of respondent data where both individual and institutional names are replaced with pseudonyms.

Data Analysis

After the data from the questionnaire was obtained, it was analyzed descriptively and inferentially. Descriptive data analysis was carried out to see the frequency of distribution of answers and the average answer. The inferential data analysis was conducted using the Pearson product-moment correlation test with SPSS 25 software.

After the questionnaire data analysis results were obtained, it was continued with data collection by interview. After the interview data was obtained, the recorded data was turned into transcripts. The transcript data obtained was then analyzed through three steps following Strauss and Corbin (1990): (1) data coding; (2) data grouping; and (3) classifying the data based on the conceptual framework following the indicator of language attitude and language awareness. The data coding was intended to find themes related to language attitude and language awareness. The coding was done by using Nvivo software.

RESULTS

Correlation Based Study

Descriptive Statistics

Descriptive statistics in this study focused on the distribution of answers to the questionnaire. The intention was to show the tendency of respondents' answers with regard to the statement items distributed. Details of the distribution of respondents' answers are presented in Tables 3 and 4.

Table 3 shows the distribution of respondents' answers with regard to the language attitude variable. All items are presented in a positive attitude except for item 7, which is reverse coded. Overall, data obtained from the respondents

Table 3

Distribution of Language Attitude Answers

No Item	Statement	Answer Distribution (%)					TOTAL
		SD	D	N	A	SA	
AT1	A person's English accent can vary depending on their language background.	0	0	1.61	17.74	80.65	100%
AT2	WE is not bound by the rules and norms of standard English by native speakers.	4.84	4.84	30.64	32.26	27.42	100%
AT3	Improper grammar in speaking is not a mistake in speaking English.	9.68	16.13	29.03	30.64	14.52	100%
AT4	I am happy when hearing someone speak English with multiple accents.	0	8.06	11.29	27.42	53.23	100%
AT5	I like hearing various English pronunciations.	0	8.06	9.68	24.19	58.07	100%
AT6	I like the English style of people who are different from me.	0	1.61	16.13	30.65	51.61	100%
AT7	It annoys me when I hear people speaking English with a certain accent. (reverse coded)	38.71	33.87	14.52	11.29	1.61	100%
AT8	I am willing to learn the different accent variations in English.	1.61	0	20.97	20.97	56.45	100%
AT9	I like to observe English variations outside of native speakers.	1.61	9.68	8.06	46.78	33.87	100%

Abbreviations: SD, strongly disagree; D, disagree; N, neutral; A, agree; SA, strongly agree

tended to agree on items AT2, AT3, and AT9, and the rest showed a tendency to agree strongly.

Table 4 shows the distribution of respondents' answers with regard to the language awareness variable. The distribution of respondents' answers indicates variations in the answer tendencies of the statement items. In items AW2, AW5, and AW7, respondents have a neutral tendency or tend to be hesitant. While the items AW1, AW3, AW4, AW6 and AW10 respondents agreed to the items given. Specifically, on item AW8, the proportion of respondents' answers are balanced for neutral, agree, and strongly agree.

Inferential Statistics

Correlation calculations are performed in inferential statistics. Correlation calculations were carried out using the Pearson model with the help of SPSS software. The results of the correlation test are presented in Table 5.

According to the statistical correlation test results between language attitude and language awareness of pre-service English teachers against WE, the result was 0.355**. This suggests a relationship between the two. This result means that there was a positive relationship between the language attitudes of pre-service English teachers towards WE and their language awareness. This was established from the correlation value obtained which was positive at 0.355.

The relationship between language attitude and language awareness was weak because the correlation values is less than 0.4. Based on the correlational test results obtained, this study answers the proposed hypothesis presented in Table 6.

According to the results of hypothesis testing presented in table 4.4, this study rejects the null hypothesis and accepts the alternative hypothesis. This is because the correlation test results showed a value greater than 0 (r > 0). In addition, based on the significance value obtained, which was 0.01, the result of this study was declared significant or representative for the population studied.

Interview-Based Study

After the correlation test was obtained, interviews were conducted to confirm the results of the study. Based on the interview data, there are important themes related to language attitude and language awareness of WE from the perspective of pre-service English teachers. Several excerpts are presented to support these themes (see the appendix).

The Coding Results of the Language Attitude Themes

The results of coding on the language attitude towards WE produced several essential themes. In cognitive language attitude indicators, the respondents conveyed more pos-

Table 4

Distribution of Language Awareness Answers

No Item	Statement	Answer Distribution (%)					TOTAL
		SD	D	N	A	SA	
AW1	I understand the linguistic background of WE.	8.06	20.97	27.42	37.1	6.45	100%
AW2	I am capable of teaching WE to my students.	8.06	27.42	32.26	22.58	9.68	100%
AW3	I can answer questions given by students related to the WE learning topic that I teach.	4.84	16.13	33.87	38.71	6.45	100%
AW4	I am aware of the extent of my knowledge about WE.	6.45	3.23	24.19	33.87	32.26	100%
AW5	I am aware of the extent of my ability to teach WE in the classroom.	4.84	9.68	30.64	25.81	29.03	100%
AW6	I am aware of how well my background knowledge of WE is.	3.23	8.06	19.36	35.48	33.87	100%
AW7	I am aware of the extent of my ability to accommodate WE in my teaching planning.	3.23	8.06	32.26	25.81	30.64	100%
AW8	I understand the learning needs of my students towards the variety of English.	0	3.22	32.26	32.26	32.26	100%
AW9	I teach variations of English in my class according to the needs of the students.	6.45	11.29	24.19	27.42	30.65	100%
AW10	I understand the knowledge of the students I teach about WE.	6.45	9.68	30.64	37.1	16.13	100%

Note: Abbreviations: SD, strongly disagree; D, disagree; N, neutral; A, agree; SA, strongly agree

Table 5

Pearson Correlation Result

Correlations		Language Attitude	Language Awareness
Language Attitude	Pearson Correlation	1	.355**
	Sig. (2-tailed)		.005
	N	62	62
Language Awareness	Pearson Correlation	.355**	1
	Sig. (2-tailed)	.005	
	N	62	62

Note: Correlation is significant at the 0.01 level (2-tailed).

Table 6

Hypothesis Testing

Descriptive hypothesis	Statistic hypothesis	Correlation	P-Value	Decision
H_0: There is no any relationship between pre-service English teachers' language attitude and language awareness towards WE	r = 0	.355**	0.01 (2-tailed)	Rejected
H_1: There is relationship between pre-service English teachers' language attitude and language awareness towards WE	r ≠ 0	.355**	0.01 (2-tailed)	Accepted

Note: Correlation is significant at the 0.01 level (2-tailed).

itive rather than negative attitudes. This positive attitude was expressed in various explanations for respondents' understanding of several themes. The presence of WE was aimed at communication function, WE as an international language, English as the language of profession, linguistic background of WE, and variety of English. However, there was a theme of negative attitude on cognitive indicators, namely ownership of language. The respondents explained their understanding that English belongs to specific groups of countries (see Excerpt 1).

In the affective indicator, most respondents also showed a positive attitude by expressing feelings that the respondents had towards WE. The respondents explained that WE was unique and interesting to learn. Respondents also mentioned that when they found other various variations of English, they felt happy and received satisfaction. However, other respondents had a negative attitude towards WE, since they believe WE to be complicated (see Excerpts 2 and 3).

Finally, most of the respondents showed a positive attitude with regard to the behavioral indicator language. This can be explained by willingness to clarify, observe, and try to understand when they heard various variations in English. In addition, respondents were keen to learn WE through music and videos, travel abroad, and communicate with foreigners. However, some respondents had a negative attitude

which could be explained by questioning, gossiping, and correcting behavior when they heard the variations in WE they encountered (see Excerpts 4 and 5). The elaboration of each theme is discussed in the discussion section.

The Coding Results of the Language Awareness Themes

The results of coding on language awareness towards WE produced several essential themes. With regard to language awareness indicators of language proficiency and subject-matter knowledge, some respondents showed a high awareness in the linguistic aspects of the background of WE and an understanding of the origin of the WE and the speakers. The respondents explained that they were aware of the basis of WE. However, some respondents showed a low awareness of WE in the linguistic aspect of the background of WE and a lacked understanding of WE (see Excerpt 6).

In the metacognitive indicator of the nature of teachers' knowledge and teaching implication, they adhered to the basic knowledge of WE and were interested in WE. Therefore, they are optimistic about being able to teach WE. However, some respondents had a low awareness of the metacognitive indicators of the nature of teachers' knowledge and teaching implication in the aspects of lack of exploration of WE. They were less proficient in teaching WE, lacked knowl-

edge about WE, and were not confident in teaching WE (see Excerpts 7 and 8).

Some respondents showed a high awareness in the third indicator of language awareness, namely knowledge or awareness of students' needs. They saw that WE is important for students, since WE is part of rapid change, language for study, global era, and dynamic language. The respondents then indicated that students need to have basic knowledge of WE, so that teachers need to observe students' understanding of WE and provide integrative learning to accommodate WE. However, some respondents had a low knowledge or awareness of students' needs because WE is not too important for students. In addition, some respondents believed that the need (or not) for students to learn WE depended on the student's school/grade level. The respondents also stated that they did not accommodate WE because they followed the school requirements (see Excerpts 9 and 10).

DISCUSSION

The Weak Relationship between Pre-Service English Teachers' Language Attitude and Language Awareness towards WE

According to the quantitative results in this study, it can be concluded that there is a relationship between pre-service English teachers' language attitudes towards WE and their language awareness. This result is obtained from the correlation test results of 0.355 with a significance level of 0.01. There is a weak relationship between pre-service English teachers' language attitudes towards WE and their language awareness. The result of this study is a pioneer in studying the relationship between the two variables, namely language attitude and language awareness towards WE. Before the authors completed this research report, no previous research had been found that examined the relationship between these two variables to WE. On the other hand, another study examined the relationship between language attitude and language awareness towards other language objects, namely Netherlandic and Belgian Dutch (de Louw, 2013). Therefore, this research is considered to have novelty value and originality in terms of the research results.

The weak relationship between language attitude and language awareness of pre-service English teachers with regard to WE is reflected in the distribution of respondents' answers to the research questionnaire between language attitude and language awareness. On the language attitude questionnaire, respondents tended to show a positive attitude towards each item: with an average of 29.39% of respondents agree, and 46.06% strongly agree with the language attitude items. Meanwhile, on the language awareness questionnaire, respondents tended to be hesitant, as

shown from the questionnaire results on average, namely 28.71% of respondents were undecided about language awareness items. Therefore, the result of the correlation test shows a weak relationship.

Positive Language Attitude of but Moderate Language Awareness of Pre-Service English Teachers towards WE

In their answers to the language attitude statement items, respondents tend to have a positive attitude towards WE. Respondents cognitively understand that variations in English are formed from the influence of their (local) language background including the results of colonialism in the past (excerpt 1 and 6).The term WE is accepted as a result of the pluralism of the English language which continued to change due to the expansion of British colonialism (Schneider, 2018). This result is in line with Widdowson's (1994) view that post-colonial English will change and be localized to fit in with the local language context of each country and may differ from native English norms.

Respondents also understand that variations in English result in different accents and pronunciations. This result is supported by Selinker (1972) explanation that English pronunciation as L2 is strongly influenced by the assimilation of L2 and L1 loan words. A person will form a language system based on the stages of learning, including the transfer system. In the long run, when an adult studies English, that person could have entered the language fossilization stage so that L1 significantly affects the target language (Noobutra, 2019).

The respondents understand that WE results in different accents and different English writings. This view aligns with Choomthong and Manowong (2020) who explain that using English in various countries leads to different accents. Most of the respondents emphasize that even though it is different, it is still the same English. One respondent even said that he was happy to know the difference in pronunciation from various English languages (excerpt 2). This result aligns with the findings of a study conducted by Sung (2015), in which students appreciate the different accent variations of English from listening activities in learning. Sung (2015) further explained that the appreciation by students of the variations in English accents is due to the understanding that students have about the sociolinguistics reality of English today.

Although the research respondents cognitively explain their understanding of WE and its background, when respondents assess their awareness of the background of WE, there were varied answers and they tend to be doubtful. With regard to item AW1, the respondents agreed that they understand the linguistic background of WE. The respondents indicated that they had an awareness of the knowledge of WE. However, the number of respondents who are doubtful about their understanding of the linguistic background of

WE is in the second place, while respondents who disagreed are in the third place. Quite a few respondents do not quite understand the linguistic background of WE. Respondents' understanding of the linguistic background of WE is essential since language awareness emphasizes the importance of the relationship between the subject-matter knowledge of the teacher and its implementation (Bilgin, 2017). When confirmed through interviews, respondents explain that they had not been too exposed to WE so that their knowledge was still limited.

Respondents' doubts regarding the linguistic background of WE become more apparent when it comes to teaching practice. The respondents expressed concerns about the ability to teach WE to students, as presented in item AW2. Even when compared, the number of respondents who disagree and strongly disagree is more than those who agree and strongly agree. This result is in line with Bilgin's (2017) view that language awareness does not stop only at the subject-matter knowledge stage, but also how knowledge is conveyed to students in learning. Therefore, when respondents do not understand the linguistic background of WE on item AW1, it results in their inability to teach in the classroom, as in item AW2.

Variations in the respondents' answers about their understanding of WE and their knowledge self-assessment are a form of metacognitive awareness. Metacognitive is the ability to be aware of mental processes (Rahimi & Katal, 2012) or knowledge of one's thinking to produce better understanding (Mahdavi & JafarZade, 2014). With regard to item AW4, the respondents agree and strongly agree that they are aware of the extent of their knowledge about WE. Then, with regard to item AW5, they realize the extent of their ability to teach WE in the classroom. Most respondents agree and strongly agree. Furthermore, on item AW6, they realize how well their background knowledge of WE is.

Behaviorally, the respondents show a positive attitude shown from the answers to AT8 and AT9. Respondents state that they are willing to learn different accent variations in English and like to observe variations in English outside native speakers. It is in line with the findings in research conducted by Rajprasit and Marlina (2019) on the understanding of Thai students that accents in language are formed naturally by each person, if they are willing to learn variations of different accent in English. The methods of learning suggested by respondents varies. One is to travel abroad to gain exposure to foreigners. However, the most popular learning methods are through movies and music (excerpt 4). Learning method in English with movies is also researched and considered effective for building language skills and building cultural awareness (Albiladi et al., 2018). Brown (1995) also explained that watching movies using WE will help recognize various English variations.

Although most respondents show a positive attitude to learn WE, two respondents demonstrated negative behavioral attitudes. These two respondents chose to question and correct their colleagues, if they have different pronunciations (see Excerpt 7). One respondent also stated that she sometimes gossips about foreigners' English which she thinks is different and unclear (see Excerpt 5). This result aligns with Choomthong and Manowong (2020) research which found that participants prefer inner circle pronunciation, since they often face difficulties understanding the meaning of pronunciation of outer-circle countries. This condition illustrates the existence of linguistic imperialism where there is a view of superiority to English. The form of linguistic imperialism of some respondents is ideological in stigmatizing other people's English (Phillipson, 2013).

The Implication of Indonesian Pre-Service English Teachers' Language Attitude and Language Awareness towards WE in their Teaching Practice

According to the questionnaire and interview results, it was established that two respondents believed they would be able to teach WE to their students (see Excerpt 7). However, they emphasized that they still needed to learn more about WE. Apart from the two respondents who believe in their ability to teach WE to students, some respondents lack confidence in teaching WE. Respondents feel they do not have sufficient knowledge about WE (see Excerpt 8). This has an impact on low self-confidence in teaching WE topics to students. The low level of the respondents' confidence in this ability is a cognitive-behavioral process, where self-assessment impacts behavior in carrying out tasks, jobs, or challenges at work (Bandura, 1977).

With regard to language awareness of pre-service English teachers in the aspect of knowledge and awareness of students' need about WE, on item AW8, most respondents agree and strongly agree that they understand the learning needs of students to be taught variations in English. Understanding student learning needs will help teachers prepare for effective learning (Bilgin, 2017). Even though the number of respondents who agree, strongly agree, and are neutral is the same, in total, more respondents think that they understand the learning needs of students towards WE. From the respondents' answers to this item, it can be concluded that the respondents are active in obtaining information on the learning needs of their students related to WE.

Some respondents also viewed English as the language for work, as well as education. This view is in line with the research findings by Ting et al. (2017). They found that employers consider the importance of English language skills, especially marketing, mainly if the company is globally ori-

ented. Therefore, they believe it vital for students to study WE, since it is related to students ability to work in international companies or abroad. Respondents also see the possibility of students continuing their studies abroad. Respondents' view of the importance of WE for the students is in line with the explanation of Haberland and Mortensen (2012) that globalization has had an impact on increasing the globality of English as a reason for the great use of English in education and educational policies, including where English is the medium of instruction. In addition, respondents understand that by studying WE, students will be able to learn to appreciate the cultures, identities and variations of English in other countries when they continue to study or work abroad. This is in line with the view of Rajprasit (2021) who explains that the impact of implementing WE in learning includes increasing respect for cultural diversity and foreign identities, as well as fostering students' open mindedness towards international perspectives.

In implementing teaching practices, respondents tend to follow school regulations. If the school uses the national curriculum, the material taught will follow the guidelines of the government textbook and curriculum. If it is a private school, it will follow the type of curriculum and the selection of English determined by the school, whether American or British or other (see Excerpt 10). This respondent's opinion is in line with Brown (1995) that one of the challenges for teachers not to teach WE is that the curriculum determined by the school has pressurized teachers. A study by Harsanti and Manara (2021) also found that English teachers in one school in Indonesia prefer to use American English textbooks as the main reference in teaching rather than local books. Hence, WE is not a top priority.

Respondents tend to view that WE can be taught as a supplementary subject rather than a specific material. The respondents explain that they would teach WE topics in an integrated manner by inserting WE in the main subject matter (see Excerpt 10). This respondent's view is in line with the findings of Arrieta's (2017) study that teachers only provide WE exposure to students occasionally by showing several different dialects of English. Even though the respondents showed a positive affection for the variations in WE accent and pronunciation, some respondents still stated their preference for inner-circle English. That is, respondents appeared to put the inner-circle English as the main reference.

The present study has several limitations in its implementation. First, this research was conducted during the Covid-19 pandemic, so that data collection was conducted online using a convenient sampling technique. As a result, researchers could not meet respondents directly and could not reach the entire population. Therefore, this study had to rely on a sample. Another limitation is that this study involved English language education students from three different universities with different students, so the proportion of research respondents was different. For further research, it is recommended that researchers use proportional samples to provide more comprehensive results.

CONCLUSION

According to the results and discussion of this study, it can be concluded that there is a weak relationship between Indonesian language attitude and language awareness of pre-service English teachers towards WE. Respondents explain that WE is a variation of English which manifests itself in various accents, dialects, pronunciation, and writing. Respondents also understand that variations in English are formed due to the influence of the linguistic background related to L1. Respondents also show a positive attitude in an affective manner reflected in the feelings conveyed that they feel happy with WE and see WE as a unique and interesting topic. Behaviorally, respondents desire to learn more about WE through the internet, music, and movies.

Regarding language awareness, it was found that respondents have a moderate level of awareness. Some respondents indicated agreement, and some showed doubts about indicators of language awareness. Some respondents consider that they understand the linguistic background of WE and subject-matter knowledge of WE, but some are hesitant. Some respondents show a high level of metacognitive awareness, but some are low. However, with regard to the awareness of the learning needs of students related to WE, the respondents stated that they understand them.

Regarding the impact in the teaching practice, respondents admitted that they lacked confidence in teaching WE due to a lack of knowledge of WE. However, they were aware that WE needs to be taught to students, since they might continue studying abroad and work abroad, related to WE. However, the respondents reveal that they tend not to teach WE as the main topic in learning but only as supplementary material, since WE is not listed in the school curriculum. However, if the lesson's topic is related to WE, they will integrate WE in a topic to be taught to students. Based on their experience during teaching practices, the learning materials are based on the curriculum and textbooks determined by school administrators, which usually refers to American English.

Learning from the research conducted in Indonesia, this study has the potential to contribute to the implementation of English education in other countries categorized as "outer circle" or "expanding circle" where English is not the first language but a second or foreign language. The pre-service teachers who participated in this research acknowledged that students are increasingly exposed to globalization, providing them with opportunities to experience intercultural communication. Since students have a wide variety of opportunities to study and work abroad, multicultural communication skills and respect for the language and culture of the destination country are necessary. Unfortunately, the

pre-service teachers in this research lacked sufficient exposure to World Englishes (WE), resulting in a lack of understanding and confidence in teaching it. Therefore, faculties where prospective English teachers study must provide sufficient exposure to WE and ways of teaching it, in order to equip them with formal knowledge. Additionally, school policies and curriculum limit teachers from teaching WE, resulting in low student awareness of it. Hence, policy-makers should assess the potential for the growth of various types of English and promote the concept of multilingualism and self-identity that embraces diverse cultures in the context of globalization.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

HG Retno Harsanti: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Validation, Writing – original draft, Writing – review & editing.

Yassir Nasanius: Conceptualization, Supervision, Data curation, Formal analysis, Investigation, Methodology, Resources, Validation, Writing – original draft, Writing – review & editing.

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APPENDIX

Excerpt 1

… WE is … if I'm not mistaken … there are three parts, isn't it? There is Malaysia, they use English too, but they can't be said to be native English because that's not their first language, but maybe they are also former colonies of English, so perhaps they are in layer 2, isn't it?. [Sela – translated]

Excerpt 2

It must be fun when we meet different people then we realize oh that English. Specifically, English is unique. So, it's not the same way for people to pronounce 1 word. [Sela – translated]

Excerpt 3

It is complicated. Because my language is Indonesian and I'm at the age of no longer good at developing language. So, firstly it is because the language here is Indonesian. Next is that learning a foreign language is difficult and when we know there are many kinds of English, it's complicated because sometimes we don't know the meaning. Then sometimes we cannot hear the words, because they are mispronounced. [Sara – translated]

Excerpt 4

I can [Studying] British on Instagram, like from BBC English. And also from the Harry Potter movie and from Taiwan clips. So it will show how very different they pronounce the English….. Probably I will explore more about WE. Because usually I was just exposed by American and British. So I will learn from the Japanese how they speak. Probably from a *vlog*. [Hana – translated]

Excerpt 5

[*gossiping*] Only between us. My friend will ask me, "what is he talking about? I can't hear him ". Because probably I listen to what the foreigner is talking about. [Sandra – translated]

Excerpt 6

From what I remember, it's also because of the history of the place itself, like Nepal, India or Cambodia they have English. Still, it can be said that maybe it's not as perfect as in America or the English we learn today because that's the impact of colonialism. It is also because of the economy between countries. They absorb the words and use them, but they don't learn it like we learn English but are using it for their daily lives. [Kara – translated]

Excerpt 7

I am optimistic enough, so I rate myself as 7-8 [out of 10]. It is because I like something related to culture. So, if I learn more, I think it will be easier because I already have an interest in that field [WE]. So, I am optimistic that I can teach it to my students. [Kara – translated]

Excerpt 8

As for my current ability, I'm not confident in teaching it [WE]. Probably [my ability is rated as] 15 percent. If I have to teach WE, I will probably increase my intention to learn and try to get more exposure to teach it. [Anggun – translated]

Excerpt 9

I think it is necessary [to teach WE]. Because who knows in the future they will meet a lot of people in overseas schools. They will meet many people and have to speak English, because commonly English is the language for around the world. For example, if they go to Japan or Australia, they have to talk in English. And they also have to learn their local language. Even though they speak English, they have to get close to society to become the same as the local people and not be strange. [Sandra – translated]

Excerpt 10

We cannot make WE as teaching material to our students. Because we have to follow KI and KD (core and basic competencies set by the Ministry of Education and Culture), which we follow from the curriculum. [Kara – translated]

An Investigation into the Effect of Problem-Based Learning on Learners' Writing Performance, Critical and Creative Thinking Skills

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ABSTRACT

Background: In addition to mastering writing skills, university graduates are also expected to be able to develop two 21st-century skills: critical and creative thinking skills. These two skills play an important role so students can survive and compete in the disruptive era.

Purpose: Although there have been many experimental studies using the BL model in learning to write, the existing research is still inadequate in investigating the effect of PBL model on L1 writing performance, critical, and creative thinking skills.

Method: This study used a sequential mix-method design consisting of a quantitative method in the initial phase, followed by a qualitative method in the final phase. The participants of this study were students from the Islamic Banking Study Program at UIN Sultan Maulana Hasanuddin Banten, numbering as many as 61 students. By using a random sampling technique, researchers selected 2 groups of participants from 5 existing groups. The data was collected using questionnaires, essay writing tests, assessment rubrics, and interviews. Next, the researcher ran paired sample t-tests and one way ANCOVA, in order to analyze the data quantitatively. In addition, the researcher also analyzed data from semi-structured interviews using thematic analysis techniques.

Results: The results showed that students taught using the PBL model could significantly improve writing performance, critical thinking skills, and creative thinking skills when compared to conventional models used in the control class. In addition, the results from the interviews also strengthened the quantitative findings by showing that students had positive attitudes and perceptions of learning to write. In other words, students who were taught with the PBL model gave a positive response and attitude because they felt motivated to learn to write.

Conclusion: This research is expected to increase knowledge about how students can improve writing performance, critical thinking, and creative thinking. In addition, it is hoped that these findings can be an alternative in choosing writing learning methods.

INTRODUCTION

There are many factors which influence the current change in the direction and paradigm of education. These include the very rapid social and technological changes impacting educational orientation. The Industrial Revolution 4.0 and Society 5.0 have radically changed the face of world education as an aspect of human life. Thus, higher education today must equip its graduates with the various basic skills for this century. Previous studies stated that creativity is the primary skill that supports their students' future success (Leasa et al., 2021; Thomson, 2017). Creativity is one of the four primary skills in the 21st-century known as the four CS. They stand for critical thinking, creativity, communication, and

collaboration (Care & Kim, 2018; Partnership for 21st Century Learning, 2016; Saimon et al., 2022; Syahril et al., 2022; World Economic Forum, 2015).

At the present time, creative thinking skills are still rare in the main focus of university education and the learning process. Given the importance of these skills, universities must prioritize teaching creative thinking skills so that their graduates can compete in the world of work (Ritter et al., 2020). Most universities still emphasize the knowledge aspect and ignore learning creative thinking skills. Several studies claim that current university graduates do not have good creative thinking skills, so they have difficulty competing in the current era of society 5.0 (Catarino et al., 2019; Dilekci & Karatay, 2023; Tam, 2023; Yustina et al., 2022).

The importance of creative thinking skills has encouraged various groups in the education sector to integrate them immediately into the education system, especially at university level. Several studies have published their findings which state that creative thinking skills make a significant contribution to improvement in various aspects, such as business, development research, arts, science, and technology (Arifani & Suryanti, 2019; Ozdas & Batdi, 2017; Rauf et al., 2021). Creativity has received the attention of education experts due to the emergence of two key issues. There is a significant decline in human creativity, and the topic of creativity is not a matter of scientific study (Chen et al., 2019; Jones & Richards, 2015; Khodabakhshzadeh & Hosseinnia, 2018).

In addition to thinking creatively, university graduates must also master critical thinking skills. In the last few decades, the role of these skills has received outside attention from several interested parties, ranging from teachers, researchers, and stakeholders to educational observers (Helaluddin et al., 2023; Tam, 2023; Yustina et al., 2022). With these skills, students can apply their logic and reasoning appropriately to what they have to do through specific procedures (Lailiyah & Wediyantoro, 2021; Sarwanto et al., 2021). Ashfar et al. (2017) stated that critical thinking skills are the students' ability to think independently and systematically, indicating the perfection of their thinking. Furthermore, some experts agree on the definition of critical thinking skills as a form of mental activity, processes, and strategies for new concepts, make decisions, and solve problems (Cui & Teo, 2023; Onoda, 2022).

In the language teaching curriculum, critical thinking skills are essential to receive attention from teachers (Nold, 2017; Zhang, 2018). Critical thinking skills in language are related to students' understanding of language. This is seen as a semiotic source in analyzing, evaluating, and organizing communicative discourse (DeWaelsche, 2015; O'Hallaron et al., 2017). With critical thinking skills, students can evaluate

evidence and facts, test arguments and reasons, and make logical conclusions (Fisher & Frey, 2015; Mbato, 2019).

In addition to these two particular skills, university graduates must also be able to master general skills. In a global context, writing performance has become a competitive aspect with a fundamental essence in modern society. Writing performance is one of these general skills (Wu et al., 2019). The ability to write in this context includes foreign language skills and writing in the first language, Indonesian.

In achieving the three learning outputs (writing performance, critical, and creative thinking skills), teachers need immediately to address the selection and use of an appropriate learning model. Learning experts and practitioners recommend problem-based learning (PBL) models. Various works of literature claim that this learning model can be used to develop various skills such as: (a) critical thinking skills, (b) learning outcomes, (c) writing skills, and (d) other skills (Dastgeer & Tanveer Afzal, 2015; Ritter & Mostert, 2017; Sari et al., 2021; Sidauruk et al., 2020). This learning model can also provide real experiences or simulations for students to become autonomous and independent learners (Heuchemer et al., 2020).

When compared with other learning models, the two previous studies prove that the PBL model motivates students to lifelong learning and meaningful experiences (Bosica et al., 2021; Qondias et al., 2022). In the context of Education 4.0, the PBL model can encourage students to interact actively and intensely in class during the learning process (Aslan, 2021). Caires-Hurley et al. (2020) stated that the PBL model is closely related to integrating social issues into language learning, such as decolonization, multiculturalism education, equality and equity in education for the community, as well as social justice. In several previous studies, the PBL model has been shown to improve writing performance (Cahyaningrum & Widyantoro, 2020; Dastgeer & Tanveer Afzal, 2015; Handoyo et al., 2021; Sari et al., 2021; Sidauruk et al., 2020), critical thinking skills (Amin et al., 2020; Birgili, 2015; Fita et al., 2021; Hussin et al., 2019; Narmaditya et al., 2018; Orozco & Yangco, 2016), and students' creative thinking skills (Hidayah et al., 2021; Nulhakim et al., 2020; Rahman & Hendrawijaya, Seibert, 2021; 2020; Ulger, 2018). Although some of these studies have investigated the effect of the PBL model in improving the three aspects which are the topics of this study (writing performance, critical thinking, and creative thinking), some things have escaped the reach of researchers. In particular, there is still a research gap on the PBL model on students learning to write Indonesian (L1 writing). In other words, no research has investigated the impact of the PBL model on improving writing performance, critical thinking skills, and creative skills in learning to write in the first language (L1). Thus, the two formulations of the problem in this study are:

1. Compared to the non-PBL model, how effective is PBL in developing students' writing performance, critical thinking, and creative thinking skills?

2. What are the students' attitudes and perceptions of the PBL model in learning to write Indonesian?

LITERATURE REVIEW

Problem-Based Learning

The PBL model was introduced to the public in 1969 at McMaster University as a type of student-centred learning method. The model is based on a theory which states that students can acquire new knowledge by applying pre-existing knowledge (Idowu et al., 2016; Waite et al., 2020). This model seeks to generate student learning objectives by themselves using the case study method and sharing information with colleagues.

PBL aims to direct students to overcome their problems in the real world (Aslan, 2021). Therefore, the design of the PBL model allows students to face the problem through scenarios. The teacher designs the scenario in a simple, clear, and unstructured way for them to face. Several factors make PBL difficult to implement: (a) allocating time in preparing materials, (b) the difficulty of controlling more than one study group, (c) an inappropriate curriculum, and (d) difficulties in managing student information. for problem situations (Nicholl & Lou, 2012; Savery & Duffy, 1995). One of the PBL models that teachers widely use is the model put forward by Arends (2008). This consists of several stages, namely: (a) introduces various contextual problems to students, (b) regulates existing problems to students, (c) guiding students individually and groups, (d) making assignments from the teacher and presenting them, and (e) reviewing and considering ways to solve problems.

Writing Ability

Writing is a primary activity in everyday life and is one of the academic goals of language learning. In addition, writing is the most challenging skill to teach students because of the complexity involved in this activity. This means that writing activities involve various processes related to the use of language and cognitive aspects (Kim & Graham, 2021). Students who do writing activities bring up and synthesize ideas from their memory. Theoretically, writing is a very complex cognitive activity and consists of various cognitive components (Sarica & Usluel, 2016). This is caused by the many aspects that must be aligned in writing activities, such as language, genre, text, composition, and communication (Roscoe et al., 2020). In essence, writing is the same as a communication method used when talking to people. It is a form of expression, thought, experience, and others (Miller, 2010).

Critical Thinking Skills

In a range of academic literature, critical thinking is the most essential skill which must be taught to students as a provision to compete in the global era.

This means that schools and campuses as educational institutions need to implement the pursuit of these skills into their curriculum (Changwong et al., 2018 Critical thinking generally refers to a person's ability to use his thinking activities to produce better attitudes and behaviour (Mehta & Al-Mahrooqi, 2015). In addition, this skill is also likened to a vessel for generating new ideas obtained through analyzing, understanding, and synthesizing activities (Bouanani, 2015).

From the perspective of contemporary language teaching, writing activities and critical thinking skills can be integrated, especially in tertiary institutions when learning to write Indonesian. Nadri & Azhar (2016) provide arguments about the relationship between writing activity and thinking skills. In other words, students can freely express their thinking abilities using language media (writing). These findings are similar to the results put forward by Alidmat & Ayassrah (2017). They confirm that students' thinking skills can be maximized through learning to write since writing activities require good thinking skills. Finken & Ennis (2001) developed an instrument to assess critical thinking skills called the FRISCO model. There are six main components in the assessment model: (a) focus, (b) reason, (c) inference, (d) situation, (e) clarity, and (f) overview.

Creative Thinking Skills

Creative thinking is another basic skill belonging to 21st-century skills. Creativity is a form of interaction between personal mental activity and other contributing factors, such as motivation, knowledge, social and cultural environment, and problem-solving concepts (OECD, 2019; Suherman & Vidakovachi, 2022). Thus, it can be concluded that creativity refers to solving problems by thinking creatively. In simple terms, creativity is synonymous with the ability to solve problems (Forte-Celaya et al., 2021).

The definition of creative thinking is a mental process related to a person's interaction with their experience to understand aspects of a situation and decide on new solutions to the problems they face (Lin & Wu, 2016). Another definition of creative thinking is a very complicated individual mental activity used to find solutions or create new products. This creative thinking skill has several characteristics, namely cognitive, emotional, and ethical elements which form specific states of mind. Aldossari (2021) emphasized that creative thinking is synonymous with individual abilities to produce abilities such as intellect, flexibility, and originality.

Furthermore, these skills can generate as many ideas as possible about the problem. Eemerging ideas are closely re-

lated to a flexibility and originality which cannot be repeated. Although it has been the focus of the education sector to date, there has yet to be a consensus regarding the best method for teaching these skills in the Education curriculum (Zhang et al., 2022). These skills are mostly taught through an integrated course-learning process. One process is to integrate skills into learning to write, which is per se very closely related to the ability to think creatively.

METHOD

Research Design

Researchers used a mix-method design in response to the two research questions above. This design combines quantitative and qualitative research designs, in order to obtain holistic and comprehensive research findings (Creswell & Plano-Clark, 2007; Dawadi et al., 2021; Park et al., 2021). Specifically, researchers use a sequential mix-method design where qualitative findings are intended to strengthen previous quantitative findings (Berman, 2017; Rahimi & Fathi, 2021).

Participants

The study involved 61 students (28 males and 33 females) of the Islamic Banking Department at the Faculty of Islamic Economics and Business at UIN Sultan Maulana Hasanuddin Banten taking Indonesian Language Courses, especially in the sub-discussion of academic writing. The participants were grouped into two classes: the experimental class (30 students); and the control class (31 students). The control and experimental classes were determined randomly from 5 existing classes. Based on their writing ability, the participants had a level of ability that was at the lower middle level. Participants were first-semester students aged between 17 to 20 years.

Furthermore, in the qualitative phase, the researcher randomly selected ten students from the PBL model class to be interviewed. Interviews were not conducted with all participants in the experimental class, since qualitative research does not look for generalizations but for an in-depth perspective on the research theme. With a relatively small number of participants, it has the potential to explore more deeply and comprehensively.

Instruments

Essay Writing Test

This research uses a pre-test and post-test in the form of essay writing assignments to determine students' writing performance. The teacher assigned participants from both groups to write 300-450 word essays on Islamic banking in Indonesia. The essay theme was determined by the fact that the participants were students majoring in Islamic banking and already had basic knowledge through main competency courses. However, participants could also choose the same or different themes between the pre-test and post-test. The time allotted for each test was 90 minutes. In general, there are three main components in essay writing essay, as proposed by Oshima & Hogue (2006) namely: (a) the introductory paragraph, (b) the body paragraph, and (c) the concluding paragraph.

Writing Assessment Rubric

Assessment of an argumentative essay is another instrument in this study used to measure students' writing performance. In this study, the researcher is also a lecturer who teaches the L1 writing lesson. The rubric has four assessment aspects: task achievement, coherence & cohesion, lexicon, and grammatical accuracy (Winarti et al., 2021; Wu et al., 2019). In this rubric, researchers can give four as the highest score and one as the lowest. Thus, a student's highest possible total score is 16, and the lowest is 4.

In order to achieve instrument validity and reliability, researchers used inter-rater reliability, aimed at eliminating the subjectivity of the assessment, since it involves two or more raters (Conkin et al., 2020; Soemantri et al., 2021). In this measurement, there are two lecturers to participate in providing an assessment of student writing. A total of 10 student writings were randomly selected to be assessed. The measurement results using Pearson product-moment showed a score of 0.85. These results indicate that the scoring rubric used in this study is consistent.

Critical Thinking Skills in Writing Rubric

The third instrument in this research is the assessment of critical thinking in writing. This rubric measures students' critical thinking skills from various aspects based on the development of the Illinois Critical Thinking Essay Test (IC-TET) by by Finken & Ennis (1993). Thus, using this rubric, researchers can score 24 as the maximum and six as the minimum. In order to avoid subjectivity in the assessment, inter-rater reliability is carried out by involving two teachers as assessors. The measurement results using Pearson product-moment obtained r = 0.92.

Creative Thinking Skills in Writing Rubric

The next instrument in this research is the rubric of creative thinking skills in essay writing. This rubric was developed by researchers based on several aspects of the assessment proposed by experts (Abedi, 2002; Almeida et al., 2008; Kholisiyah et al., 2018; Seidinejad & Nafissi, 2018). There are four aspects of assessment in this rubric, namely: (1) fluency, (2) flexibility, (3) originality, and (4) elaboration. The highest score for each aspect is four, and the lowest is 1.

Thus, the highest score possible for students to achieve is 16, and the lowest is 4. Similar to the two previous instruments, the rubric for assessing critical thinking skills is also tested by running an inter-rater test. Reliability with Pearson Product-moment and resulted in a score of .90.

Semi-Structured Interview

Another instrument in this study was an interview with a semi-structured design with five questions relating to the application of the PBL model in teaching writing (Indrayadi et al., 2021; Roshanbin et al., 2022). The topic of the interview questions to the students relates to several aspects, namely: (a) students' general responses to the PBL model, (b) students' views of the PBL model, (c) the effect of the PBL model in improving writing skills, (d) other positive impacts of the PBL model apart from writing ability, and (d) how important the PBL model is to be applied in class.

Furthermore, the interview aims to explore the perspective of a person or group of people to understand and interpret the social reality around them (Pessoa et al., 2019). The type of interview chosen in this study is a semi-structured interview, since it allows researchers to explore students' experiences more deeply about learning to write with the PBL model. Some researchers recommend this type of interview because of several considerations, including: (1) the interview process is not rigid, (2) other questions can be added to confirm participants' answers, and (3) the atmosphere can be more relaxed because it resembles an ordinary dialogue (Ebadi & Rahimi, 2017; Guthrie, 2019; Lee et al., 2019; Pham & Usaha, 2016).

Data Analysis

Quantitative Analysis

In the quantitative analysis phase, the researcher analyzed data from the pre-test and post-test using SPSS 25.00. First, a paired sample t-test was run to investigate application of the PBL model to the three targeted aspects: writing performance, critical thinking, and creative thinking skills. Furthermore, the researcher also carried out the one-way AN-COVA test to find out the difference in the scores of the two groups in improving these three aspects.

Qualitative Analysis

In the qualitative phase, researchers used thematic analysis techniques to analyze data from interviews (Boyatzis, 1998). Data from respondents is converted into interview transcripts and then codified based on open thematic coding. In general, this type of coding aims to obtain information or main themes related to students' perceptions and attitudes about writing classes using the PBL model. The analysis technique consists of activities to find, identify, and interpret concepts and themes from the data that has been collected (Ghanbari & Nowroozi, 2022; Terry et al., 2017). The thematic analysis in this study consists of six steps, namely: (a) recognizing and identifying the data that has been collected, (b) making codes from the data, (c) searching for themes, (d) analyzing various themes that have opportunities more significant, (e) defining and interpreting the theme, and (f) making the result report (Braun & Clarke, 2006; Celik & Dogan, 2022; Percy et al., 2015).

Trustworthiness

In qualitative studies, trustworthiness is an important factor in supporting the data's quality and credibility. For this reason, researchers use member checking techniques to determine the accuracy of research findings (Creswell, 2008). The technique is done by submitting interview transcripts to the participants as a form of cross-checking the interview results. This aims to allow participants to determine whether the transcript is under what was conveyed in the interview session.

The aspect of consistency also determines reliability in this study. In order to achieve this level of consistency, the researchers involved other people as coders. Three coders were involved in this study who confirmed the assessments of the other coders. Thus, the three coders have the same view and interpretation of the data codes. The main requirement as a coder in this study is more than 10 years experience in language teaching.

Regarding data credibility, especially in qualitative studies, researchers also apply confirmability. That is, confirmability relates to all forms of research objectivity, describing the accuracy of the data obtained from the participants. In this case, a lecturer was appointed as an external auditor. The external auditor provides a comprehensive and objective assessment of the qualitative research findings. Thus, other parties are involved in assessing the research findings so that they are not biased and are not merely a researcher's perspective (Creswell, 2008; Lincoln & Guba, 1985; Polit & Beck, 2012).

Procedure

The procedure carried out in this study still relates to the sequential mix-methods design by prioritizing the quantitative design first, followed by the qualitative design. A qualitative design was carried out to explain, describe, and corroborate previous quantitative findings. In the quantitative phase, the research process lasted for nine meetings (9 weeks) with a meeting frequency of 1 time a week. The researcher allocated 100 minutes at each meeting according to the provisions in force at UIN Sultan Maulana Hasanuddin Banten, Indonesia. On the other hand, for the interview session, the researcher needed about 150 minutes, with an estimated in-

terview time of 15 minutes for each student. In general, the research procedure is shown in Figure 1.

In order to differentiate the forms of treatment of the two groups (experimental and control), the researchers designed the syntax or learning stages that the two groups had to go through. The following two tables summarize and present the complete syntax (learning stages) for both groups (experimental and control) during the treatment process.

RESULTS

As previously stated, this study uses a sequential explanatory mix-method design. Data collection and analysis activities are carried out using two methods: placing the quantitative method in the initial phase and the qualitative method in the final phase. The results of the study are described as follows.

Figure 1

Research Procedure

Table 1

Treatment Procedures in Experiment Class

Meeting	Stages	Problem-based learning model
1		Pre-test
2	Introducing students to problems	The lecturer introduces the scenario of learning to write Indonesian essays using the Zoom application;
		Lecturer conveys material about essays (definition, essay structure, purpose of essay writing);
		The lecturer displays several examples of essays in the field of Islamic banking.
3 & 4	Organizing students to study	The lecturer divides the class into several groups (each group consists of 5 to 6 students);
		The lecturer breaks down each group into a breakout room on the Zoom application;
		Each group is asked to choose one of the writing topics on Islamic banking and discuss what topics are interesting to be raised in the text;
		The lecturer asks each group to develop an outline of writing and continues by writing an essay collaboratively.
5 & 6	Presenting group work or artifacts	Each group presents their essay by adding pictures, videos, illustrations, etc;
		Students respond to other groups' writings (theme, language, arguments given).
7 & 8	Analyze and evaluate work	The lecturer provides input and suggestions to all groups in detail;
		Each group revises and edits the writing based on the responses given by other groups and the lecturer;
		Each group collects the revised results of their writings via WhatsApp Group or email.
9	Post-test	

Note: From "Learning to teach", by R.I. Arends, 2008. Copyright 1991 by McGraw-Hill.

Table 2

Treatment Procedures in Control Class

Meeting	Stages	Non-PBL model
1		Pre-test
2	Pre-writing	The lecturer introduces the scenario of learning to write Indonesian essays using the Zoom application;
		Lecturer conveys material about essays (definition, essay structure, purpose of essay writing);
		The lecturer displays several examples of essays in the field of Islamic banking.
3, 4, & 5	Main activities: write essays and present them.	The lecturer asks students to choose the topic of writing about Islamic banking in Indonesia;
		The lecturer randomly appoints students to present their writings;
		Lecturers give suggestions and comments after students finish presenting their writings.
6, 7, & 8	Revise, edit and present them.	The lecturer asks each student to revise and edit his writing based on the suggestions that have been given;
		The lecturer randomly selects students to present their revised writings.
9	Post-test	

Table 3

Descriptive Statistics

	Group	$\overline{X}$	N	Std. deviation	Std. error mean
Pre-Writing Performance	PBL	7.23	30	.679	.124
	Non-PBL	8.52	31	.926	.166
Post-Writing Performance	PBL	12.93	30	1.484	.271
	Non-PBL	10.00	31	.966	.174
Pre-Critical Thinking	PBL	12.57	30	1.832	.335
	Non-PBL	12.68	31	1.851	.332
Post-Critical Thinking	PBL	19.23	30	.335	18.55
	Non-PBL	14.48	31	.340	13.79
Pre-Creative Thinking	PBL	8.17	30	1.234	.225
	Non-PBL	7.68	31	.945	.170
Post-Creative Thinking	PBL	13.17	30	1.315	.240
	Non-PBL	9.90	31	1.248	.224

Quantitative Analysis

In the quantitative analysis phase, researchers must determine whether the instrument has the expected level of validity and reliability, so that the tool is suitable for data collection. In other words, measuring the instrument's reliability level ensures that this research instrument is feasible to use. The writing assessment rubric using Pearson Product Moment obtained a reliability level of 0.85, while the critical thinking rubric was 0.92. In addition, another instrument in the form of a creative thinking assessment rubric obtained a reliability level of 0.90.

Table 3 is the result of the t-test which shows that the difference in the average score in the pre-test session is slightly different. The initial abilities of the two groups are the same or tend to be homogeneous. On the other hand, in the post-test session, there was a significant difference between the mean scores of the two groups. This indicates that applying the PBL model in the experimental class is far more effective in improving these three aspects: writing performance, critical thinking skills, and creative thinking skills. The next step is to test whether the score is categorized as significant. In order to test the improvement in these three aspects, the researcher ran a paired sample t-test, as shown in Table 4.

Table 4 shows that there is a change in the average score on writing performance [t = -20.052, *p* < .00], critical thinking skill score [t = -18.205, p < .00]. The average creative thinking skill score [t = - 17.381, p < .00] was significant in the group using the PBL model. This indicates that the three skills (writing performance, critical thinking, and creative thinking) increased significantly from pre-test to post-test. Thus, these results also indicate a significant change in the average value of the three variables in the PBL model class from pre-test to post-test.

Furthermore, the researcher also ran another test, namely the one-way ANCOVA test, to investigate the differences between groups with PBL and traditional models in improving the three skills by controlling for covariates (pre-test). Before performing the one-way ANCOVA, the researcher also conducted a preliminary examination to ensure no violations such as normality, linearity, homogeneity of variance, regression slope homogeneity, and reliable covariates measurement. The inspection results showed no data breaches in some aspects and allowed for further analysis.

Next, Table 5 is the result of one way ANCOVA testing on student writing performance. This type of test aims to determine the level of difference in the scores of the two groups which apply treatment with different models. From Table

5, it can be concluded that there is a significant difference between groups with PBL and traditional models when it comes to improving writing performance [F = 46.434, p = .000, partial eta squared = .616]. In conclusion, the use of the PBL model has a potential effect in improving students' writing performance when compared to the conventional model. Furthermore, from Table 5, information can also be obtained that the partial eta squared value is 0.616. These conditions indicated that the PBL model contributed 61.6% to improving student writing performance.

Table 6 results from one-way ANCOVA testing for the second aspect, namely critical thinking skills. The test results indicated significant differences in the critical thinking skills aspect score when comparing the experimental and control groups [F = 55,520, p = .000, partial eta squared = .657]. Strictly speaking, the potential effect of the PBL model is greater than that of the conventional model. Regarding the partial ETA squared score, the researcher concluded that the PBL model contributed significantly to an increase in students' CTS aspects of 65.7%.

Furthermore, the researcher also ran the same test, in order to identify the magnitude of the difference for the third aspect, namely creative thinking skills. Table 7 shows that the groups with the PBL and traditional models differ sig-

Table 4

Paired Samples t-test

		$\overline{X}$	Std. deviation	Std. Error Mean	t	df	*p*
PBL	Pre- and Post Writing Performance	-5.700	1.557	.284	-20.052	29	.000
	Pre- and Post Critical Thinking	-6.667	2.006	.366	-18.205	29	.000
	Pre- and Post Creative Thinking	-5.000	1.576	.288	-17.381	29	.000
Non-PBL	Pre- and Post Writing Performance	-1.484	.996	.179	-8.298	30	.000
	Pre- and Post Critical Thinking	-1.806	2.400	.431	-4.190	30	.000
	Pre- and Post Creative Thinking	-2.226	1.746	.314	-7.099	30	.000

Table 5

ANCOVA: Investigated the Differences between the Two Groups in Improving Writing Performance

Source	Type III SS	df	*MS*	*F*	*p*	Partial eta squared
Group	137.299[a]	2	68.650	46.434	.000	.616

Table 6

ANCOVA: Investigated the Differences between the Two Groups in Improving Students' Critical Thinking Skills (CTS)

Source	Type III SS	*df*	*MS*	*F*	*p*	Partial eta squared
Group	360.642[a]	2	180.321	55.520	.000	.657

Table 7

ANCOVA: Investigate the Differences between the Two Groups in Improving Creative Thinking Skills

Source	Type III SS	*df*	*MS*	*F*	*p*	Partial eta squared
Group	162.438[a]	2	81.219	48.660	.000	.627

nificantly in improving students' creative thinking skills [F = 48.660, p = .000, partial eta squared = .627]. The partial ETA squared score of 0.627 indicates that using the PBL model contributes 62.7% to improving creative thinking skills. Thus, the selection of the PBL model in learning is very appropriate because it has a more positive impact when compared to the control class in improving students' creative thinking skills.

Qualitative Analysis

Based on the second research question, the purpose of this study is also to obtain an in-depth student perspective on applying the PBL model in learning to write. The use of a sequential explanatory mix-method in this study positions the qualitative findings as a support for the quantitative findings made in the initial phase. The quantitative findings stated that the group with the PBL model outperformed the traditional model group in developing writing performance, critical thinking, and creative thinking skills. Qualitative data collection and analysis were conducted with students in the PBL model group, in order to clarify the research findings through further semi-structured interviews.

Ten students were involved in the interview phase, randomly selected from the experimental group (the group that received treatment with the PBL model). Using thematic analysis techniques, the researcher designed five semi-structured interview questions, in order to find the main themes that emerged. The interview questions related to students' responses to the PBL model and the effects they felt during learning. In general, four main themes were found in this qualitative phase, namely: (a) motivation in writing, (b) confidence in completing assignments, (c) attention to detail, and (d) time or efficiency in writing.

First, students acknowledged an increase in motivation to learn to write after using the PBL model in learning to write. That is, the first central theme to emerge from these qualitative findings is the impact of using the PBL model on the enthusiasm and desire of students to learn. For example, a student of the Islamic Banking Study Program believed that the experience of learning to write using the PBL model made him feel comfortable studying together with his team. Answer P7 states that:

> "By learning like this, I feel comfortable and not burdened because I can work well with each other"

Another theme revealed from the results of the interview was the increasing confidence of students in writing essays. Students' self-confidence emerged after receiving support from their teammates when they discussed and carried out brainstorming activities. The students believed that the PBL learning model could reduce self-confidence and anxiety in writing. This is in line with the statement of participant 2 below.

> "I feel very happy because learning to write in this way can build self-confidence. In fact, I feel less pressured during learning to write" (P2).

> "I feel confident in giving advice to friends because I believe that by helping each other, I can produce much better writing" (P8).

The next theme that was revealed was related to detail attention. In this case, the students felt they had many benefits with the PBL model in determining various small details in writing. These small details include identifying the topic, organizing ideas, aspects of language, and others. Students were able to analyze their writing from the smallest (micro) to the largest (macro) aspects of writing. The macro level of writing is related to selecting themes, organization, and essay form. At the same time, the micro level of writing includes using punctuation marks, selecting words and terms, vocabulary, and others. The following statements from participants support this theme of detail attention:

> "My teammates helped a lot in correcting and providing suggestions on my draft. This makes me confident in the quality of the essays that I have written" (P10).

> "From the advice of my friends in the same group, I got additional knowledge about small things that I have been ignoring, such as the use of punctuation marks, choosing the right words to the title of the article" (P5).

The fourth theme of the interview analysis stated that the PBL model was able to help students better manage their time in writing. They were able to use their time more efficiently because the PBL model guides them in several more systematic stages. The following are excerpts of interviews with students who support this theme.

> "In my opinion, learning to write with this method saves time. Previously, I always had difficulty writing because it was difficult to come up with good ideas."

Overall, writing essays using the PBL model is very helpful for students in several aspects. In addition to improving the quality of writing, learning to write was also able to increase their motivation and confidence in writing. This is based on several activities in the PBL model that have been proven to help them learn to write better.

DISCUSSION

The main objective of this study ws to investigate the effect of the PBL model and the conventional model on three primary skills, namely: (a) writing performance, (b) critical thinking, and (c) creative thinking abilities. In addition, the second objective of this study wasto obtain a comprehensive and in-depth description of the attitudes and perceptions of students when participating in learning to write using the PBL model. As previously stated, this study applies a sequential explanatory mixed-methods design by conducting a quantitative analysis followed by a qualitative analy-

sis. First, the study results show that students, who receive treatment with the PBL model, experience higher scores on the three primary skills (writing performance, critical thinking, and creative thinking skills) than the conventional model. Furthermore, this study's second finding shows that students like learning to write with the PBL model.

The main results of this study provide additional empirical facts that the use of the PBL model can increase students' writing performance, critical thinking, and creative thinking skills. Indirectly, this study supports several previous studies that have investigated the impact of the same model on improving these three skills. In several previous studies, the PBL model has been shown to improve writing performance (Cahyaningrum & Widyantoro, 2020; Dastgeer & Tanveer Afzal, 2015; Handoyo et al., 2021; Sari et al., 2021; Sidauruk et al., 2020), critical thinking (Amin et al., 2020; Fita et al., 2021; Hussin et al., 2019; Narmaditya et al., 2018), and students' creative thinking skills (Hidayah et al., 2021; Nulhakim et al., 2020; Rahman & Hendrawijaya, 2020; Ulger, 2018).

In association with previous research, several researchers have investigated the application of the PBL model in teaching writing. Good writing performance is always associated with raising contemporary issues related to real life. In other words, students are expected to be able to improve learning outcomes and implement them in the contextual situations they experience (Awan et al., 2017).

As already mentioned in the procedure section, the treatment for the experimental class uses the PBL model developed by Arends (2008). There are five stages in the PBL model, namely: (a) introducing various contextual problems to students, (b) managing existing problems for students, (c) guiding students individually and in groups, (d) making assignments from the teacher and present it, and (e) review and consider ways to solve problems.

The PBL model has also been proven by previous research as an appropriate learning model for aspects of critical thinking skills. With the PBL model, students can improve their ability to express opinions by searching, processing data, thinking, working together, and communicating (Suarniati et al., 2019). With the PBL model, students have a more significant opportunity to be active in solving their problems (Alrahlah, 2016; Gorghiu et al., 2015). With the five syntaxes in the PBL model, students are guided to carry out various activities to analyze and evaluate as part of critical thinking indicators (Gholami et al., 2016; Samejima et al., 2015). Other studies also provide evidence that applying the PBL model in teaching writing can direct students to real problems and then create solutions to overcome these problems (Saputro et al., 2020; Tortorella & Cauchick-Miguel, 2018).

In addition, the PBL model is also categorized as an appropriate learning model used to improve students' creative thinking skills. In other words, this model can encourage students'

creativity because it has several learning activities, such as group discussions, teamwork, and presenting ideas (Ersoy & Baser, 2014; Talens, 2016). In addition, studi lainnya mengklaim bahwa penerapan model PBL dalam pembelajaran menulis bahasa Indonesia dapat meningkatkan keteranpilan berpikir kreatif mahasiswa karena menyajikan skenario permasalahan yang tidak mainstream yang berkaitan dengan dunia nyata

(Ulger, 2018). Compared to other types of problems, real-world problems can encourage students to use divergent thinking in solving problems through various investigations (Orozco & Yangco, 2016). In this learning scenario, teachers can direct their students to collect information, investigate problems, solve problems, and determine new solutions (Birgili, 2015).

In this learning scenario, teachers can direct their students to collect information, investigate problems, solve problems, and determine new solutions (Ozdas & Batdi, 2017). With these skills, students are accustomed to being flexible and able to see opportunities so that they can face challenges and changing times (Ritter & Mostert, 2017; Thomson, 2017).

Based on these findings, the researcher claims that using the PBL model in learning to write can improve students' writing performance, critical thinking skills, and creativity. This is reinforced by qualitative findings that indicate positive attitudes and perceptions towards implementing the PBL model in teaching writing. Thus, the researcher concludes that the research hypothesis (H1), which predicts the effect of implementing the PBL model on these three aspects, is accepted. Previous studies also support this finding by presenting their findings on the impact of the PBL model on writing performance, critical thinking, and creative thinking skills (Aslan, 2021; Birgili, 2015; Hannigan, 2015; Ulger, 2018). However, these four studies did not include a qualitative design in their study activities.

The researcher suggests that students work together in the PBL model through the Zoom application to develop their writing. With teamwork or collaboration, ideas and writing themes can be developed based on brainstorming activities to achieve their maximum level of writing ability. In addition, teachers are also advised to design a learning environment based on the PBL model to mediate and improve the three primary skills in this study, namely students' writing performance, critical thinking skills, and creativity. This finding also provides input for policymakers and lecturers of university Indonesian language courses. In other words, they can apply the findings of this study in developing various skills based on the PBL model.

Furthermore, there are several important recommendations for future research to explore further the impact of the PBL model to support skill improvements or other aspects, such as writing self-efficacy, writing motivation, communication

skills, and collaborative skills. Secondly, we also recommend a longitudinal study to explore improving writing performance, critical thinking, and creative thinking skills using the PBL model over a more extended period. Finally, further research is suggested in the use of other learning applications to investigate this PBL model's impact (besides the Zoom application).

The researcher also describes this study's limitations that need improvement. The limitation of this research is the use of one learning application (Zoom) not supported by other learning applications. Since this research was carried out at the end of the pandemic, Indonesian government policies still prohibited offline learning. In addition, researchers maximize the use of these applications by controlling each stage of learning intensely so that the research data is of good quality.Another limitation in this study is the number of samples: only 61 students. This number is persuasive. Of course, it is not easy to estimate this result for other populations. For this reason, more participants need to be involved, in order to increase generalization.

Despite all these limitations, of course, this research has several novelties. In the relevant previous studies, no researcher has investigated the PBL model in learning to write Indonesian, in order to improve writing performance, critical thinking, and creative thinking skills simultaneously. Most research on this theme has mainly been done on second language learning (English). Another novelty in this study lies in the clarity of aspects of the three learning outcomes that were investigated in more depth. Specifically, the four components of assessment in writing performance are (a) the existence of cohesion and coherence between paragraphs, (b) the completion of the tasks appropriately assigned, (c) lexicon, and (d) grammatical accuracy. On the other hand, this research also investigates six components of critical thinking skills in writing, namely supporting reasons, reasoning, focus, integration, and conventions. Furthermore, for creative thinking skills, four aspects that are explored more deeply are: fluency, flexibility, originality, and elaboration.

CONCLUSION

In addition to writing skills as a general skill, critical and creative thinking skills are muich needed by students in the modern era. These three skills can be developed simultaneously in learning to write using the PBL model. Several learning steps (syntax) in the PBL model are a determining factor in increasing critical and creative thinking skills. In general, this research aims to record facts about the impact of the PBL model on the four sub-sections of writing performance (task achievement, coherence & cohesion, lexicon, and grammatical accuracy). Students' critical thinking skills are also explored more deeply in six aspects, namely: (a) supporting reasons, (b) focus, (c) organization, (d) reasoning, (e) integration, and (f) conventions. Furthermore, in the aspect of

creative thinking, four sub-components are measured by researchers. They consist of (a) flexibility, (b) fluency, (d) elaboration, and (d) originality. Finally, this study explored students' perceptions and attitudes towards their experiences in writing class using the PBL model.

The research findings indicate that using the Zoom application-based PBL model has great potential to enhance the three aspects of the skills addressed in this study. Qualitatively, this study also shows that students positively respond to applying the PBL model in learning to write Indonesian. Compared to the conventional model, the application of the PBL model is more effective in improving these three skills. Furthermore, for future research, the researcher suggests that applying the PBL model can improve other aspects of education, such as writing self-efficacy, collaboration skills, communication skills, and others. Other recommendations relate to the number of participants and the duration of the study (longitudinal research), in order to fulfil the generalization aspect.

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DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Helaluddin: Conceptualization, Data curation, Methodology, Writing – original draft.

Misnah Mannahali: Formal analysis, Funding acquisition, Supervision.

Duwi Purwati: Funding acquisition, Software, Validation, Writing – review & editing.

Alamsyah: Project administration, Funding acquisition, Methodology, Writing – review & editing.

Hengki Wijaya: Funding acquisition, Visualisation, Supervision, Writing – review & editing.

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Attitudes towards the English Language among Agriculture Students: A Case Study

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ABSTRACT

Background: At the University of Agriculture in Peshawar, like at other professional institutions i.e., medical, law and engineering, all the core subjects are taught through English and all the exams (both oral and written) are conducted in English. Therefore, proficiency in English is an essential need of every student. Since a majority of the agriculture students perform poorly in the core subjects due to their weak English, this study was undertaken to explore the attitudes of agriculture students towards the English language and its four skills i.e., listening, speaking, reading and writing.

Purpose: The basic aim to this study was to examine the attitude among Agriculture students towards the English language and its basic skills. Moreover, the present study is also an attempt to establish the differences, if any, in the attitudes of the male and female students towards English.

Method: This study used a mixed-methods approach to find answers to the research questions. In order to obtain valid and reliable results, the researcher considered quantitative and qualitative approaches to be very appropriate for the collection and analysis of data for the present study. Quantitative data was collected by means of a five-point Likert scale questionnaire with 30 closed items and was analyzed using SPSS version 20.0. Qualitative data was collected through semi-structured interviews from 30 deliberately selected students and were analyzed using thematic analysis.

Conclusion: The findings revealed that the agriculture students had positive attitudes towards the English language and its four skills. The study also highlighted no statistically significant difference in the attitudes of students by their gender. However, female students displayed slightly more positive attitudes towards English as compared to their male counterparts. A majority of the students regarded writing in English as a hard task. Nevertheless, most students desired achieving high proficiency in all the four skills of English language.

KEYWORDS

Agriculture students' attitudes, English language skills, students' attitudes, case study, mixed-methods, questionnaire, interviews

INTRODUCTION

Since the English language is the medium of instruction at all Higher Education institutions in Pakistan, proficiency in English is thus a requirement for all university graduates. Agriculture students are no exception, if they are to survive in this highly competitive local, national and international market. According to Oroujlou & Vahedi (2011), it is an acknowledged fact that fluency in English is a gateway to success in life. Most international companies/organizations offer jobs to those graduates who can speak and write English well and face no problem in understanding instructions from their seniors and co-workers. Bearing this fact in mind, Coulby, as cited in Waseem (2015, p. 67) points out: "Families all over the world invest large amounts of money to ensure that their children will acquire competence in English". Bottery, as cited in Rukh (2014), sees a close

association between globalization and English language. According to Javed (2017), in Pakistan, English is the medium of instructions in educational institutions and plays the role of lingua franca. It is also considered as: a vehicle to modernization, liberalism, power and prestige (Rahman, 2007); a basic condition for getting white collar jobs (Hafeez, 2004); the language of power, prestige and a gateway to successful and bright future (Umrani & Bughio, 2017); a precondition for one's own progress and prosperity (Muftah, 2022).

Students' academic success throughout the world is judged by their ability to read, speak and write English well (Maldonado, 2018). Ahmad, et al (2021) and Rashid (2022) affirmed that proficiency in English language is critical for students' success in life, since it boosts their analytical ability. Chamcharatsri (2013) regarded English as necessary for social mobility, for sharing information and for interacting with others. Students' proficiency in a second language, to a great extent, is influenced by their attitudes towards it (Gardner, 1968). Gardner (1968) further states that learners acquire language easily and successfully, allowing them integration with the target language-speaking community. Holmes (1992) reiterated that attitudes have the potential to motivate the learners to initiate learning the language spoken by people they like.

Problem Statement

At the University of Agriculture in Peshawar, English is a basic requirement, since it is not only the mean of communication, but also the medium of instruction at all levels. Like other professional institutions i.e., medical, law and engineering, here too, all the core subjects are taught through English. All exams (both oral and written) are conducted in English. Hence, proficiency in English is an essential need for every student. The students (both male & female) here come from both the public and private college systems with different English backgrounds. A majority of these students display below satisfactory level performance in the core subjects due to their weakness in English. These students need to achieve proficiency in English since after graduation, they will try to find jobs in national/international companies and organizations where preferred candidates are those who are proficient in English along with expertise in their related field. A large number of these students (both male & female) will also try to seek admission in the universities of technologically advanced countries to pursue their doctorate and post-doctorate studies where English is the basic requirement for admission (Rahman, 2007; Waseem, 2015).

In Pakistan, several studies have been conducted at secondary, higher secondary and tertiary levels to examine students' attitudes towards English (Ahmad, et al, 2015; Ali, 2016; Asghar, et al., 2018; Khan, 2016; Rukh, 2014). Since no study exists in Pakistan to explore agriculture students' attitude towards English, this study was undertaken to obtain an in-depth understanding of what goes on inside students' mind with regard to the English language.

The basic aim of this study was to examine the attitude of Agriculture students towards English language and its basic skills. Unlike in the past, female students constitute one third of the student strength at the University of Agriculture in Peshawar. There is not a single discipline of agriculture, where females have no representation. Consequently, the present study is also an attempt to identify the differences, if any, in the attitudes of the male and female students towards English.

This study sought to answer the following questions:

1. What are the attitudes of students at the Agriculture University towards the English language and its skills (i.e., listening, speaking, reading, and writing)?

2. Are there any statistically significant differences between male and female agriculture students' attitudes towards the English Language and its skills?

LITERATURE REVIEW

In the present era, the importance of English has grown due to its significant use in all fields including business, tourism, science and agriculture. It is a major means of communication in this interconnected and interdependent world. Therefore, persons who are proficient in English have greater opportunities for white collar jobs. Trained professional graduates are the basic needs of any country that strives to expand its economical, educational, political, cultural, scientific and agricultural horizons. All this is possible when there is a continuous exchange of information, joint projects, discussion about the cultivation of crops, exchange of students and faculty among the nations of the world. All these require experts and skilled workforce not only in their related fields, but also outstanding competency in the English language to maintain effective communication with external organizations (Zhyltyrova et al., 2016).

Attitude and Its Importance in Language Learning

There is a general consensus among prominent scholars such as Gardner and Lambert (1972), McKenzie (2008b), Karahan (2007), Csizér and Dörnyei (2005) that learners' attitudes greatly influence their second language learning. A positive attitude towards language guarantees proficiency, whereas negative attitude impedes its learning. Gardner and Lambert (1972) and McKenzie (2008) argue that learners' linguistic behaviour is greatly influenced by their attitude towards English. Karahan (2007), Csizér and Dörnyei (2005), consider attitude as a basic element in acquiring a

second language. Nunan, cited in Bagheri and Andi (2015), argues that learners' achievement or failure, to a great extent, is influenced by his/her attitudes and skills. Students' attitude towards a second language is of vital importance since it motivates or demotivates a learner to learn the target language (Bagheri & Andi, 2015).

Attitude is one of the key factors in building students' perceptions towards the target language. A negative attitude can delay mastery of the target language even among outstanding learners. On the other hand, a positive attitude towards a certain language can guarantee the success of even less enthusiastic learners (Dörnyei, 2006). He further argued that learners with favourable attitudes towards a foreign language always enjoy its learning as they consider its learning as a joyful activity while learners with negative attitudes towards a second language always consider its learning as an onerous job. Young (2006) validates Dörnyei's view by stating that learners' like or dislike for and success or failure in a second language is determined by their attitudes towards that language. Gardner (1985) and Nunan (2000) regarded learners' attitude as a key element in learning and understanding a second language. Kara (2009) stated that students' positive perceptions help them develop a positive attitude towards life and their subject, which in turn leads to better performance and acceptable behaviour. He further states that students' positive attitudes promote good study habits amongst them and helps them develop problem-solving skills which they can easily utilize for academic development and in life.

Learners' attitudes are considered as decisive factors in acquiring a second language (Fakeye, 2010). Favourable attitudes motivate learners to attain an exhaustive knowledge of a foreign language and people's culture. Briggs (1987) also posits that students with negative attitudes always perceive language learning as a difficult and boring activity. They never put in serious efforts to improve their proficiency in it. Such students face difficulties in concentrating on foreign language learning and soon forget whatever is learnt in class. Holmes (1992) remarked that positive attitudes ensure successful learning of a new language. On the other hand, Gardner and Lambert (1972) and Ellis (1994) conclude that learners' negative attitudes always thwart the process of language learning. Csize´r et al., (2010) claim that learners' motivated behaviour stems from positive attitudes. Students' negative attitudes towards English language can hamper with their active participation in the learning process (Gömleksiz, 2010).

Related Studies

Much research work across the world has been carried out to establish students' attitudes towards English. The results of the most studies reveal that a majority of the students have positive attitudes towards English and its learning

(Ahmed, 2015; Ali et al, 2021; Anokye, 2022; Alkaff, 2013; Al Noursi, 2013; Iswahyuni, 2018; Karahan, 2007; Khalid, 2016; Khan, 2020; Ofran, 2020). The main reason for positive attitudes towards English was its instrumental function i.e., for finding good jobs in the national and international markets.

Students' learning of the second language is primarily dependent on their attitude and motivation towards the acquisition of that language. Noreen, Ahmad, and Esmail (2015) studied the role of attitudes, motivation, and anxiety of intermediate learners' acquisition of English in the Faisalabad District of Pakistan. Their findings indicated that the majority of the students had positive attitudes towards leaning English and showed keen interest in talking in English to improve their speaking skills. Similarly, Anokye, (2022) investigated the correlation between students' motivation/attitude towards the English language and their performance in the target language at Accra Senior High School, Ghana. The results indicated a close association between learners' motivation/attitude towards the English language and their performance in the subject of English. The results further displayed that the more the students are motivated and have a positive attitude towards the English language, the more their performance improves. In another study, Orfan (2020) studied the attitudes of 210 randomly selected undergraduate students of Takhar University, Afghanistan. Analysis of the data revealed students' positive attitudes towards learning English for integrative purpose. In their study, As Sabiq et al., (2021) found both genders highly motivated towards English to improve their academic status and get lucrative jobs.

A number of studies have been conducted to investigate professional students' attitude towards learning English and some have analyzed differences in gender perceptions about English. Pizzaro (2017) carried out a study to explore the anxiety, attitudes and motivations of engineering undergraduates towards English language at the University of the Balearic Islands. The findings of the study revealed that the students' overall attitude towards English was highly positive. The study also highlighted that engineering students had integrative motivation towards learning English. Nevertheless, the students also displayed a high level of L2 anxiety. Alharbi (2022) investigated Saudi health track students' attitudes towards learning English for specific purpose. A 5-point Likert-scale questionnaire was used to gather information from the respondents. Moreover, in order to verify the collected information, interviews were conducted with 25 participants. Findings showed that students had a moderately positive attitude towards the English language. Likewise, Soleimani and Hanafi (2013) carried out a research study to investigate Iranian medical students' attitudes towards learning English. Analysis of the results clearly indicated that a majority of the medical students had positive attitudes towards English language. The application of the independent sample t-test showed a difference in the atti-

tudes of the sampled students. Moreover, the attitudes of male students were reported to be more positive than their female counterparts. The results of Rahman *et al.* (2010) were similar, where male students showed higher level of motivation towards L2 learning than female students. Similarly, Pathan (2012), Shahbaz (2012), and Islam (2013) also examined the correlation between gender and learners' motivation/attitudes. Their results were contrary to those of Rahman *et al.*, (2010), Soleimani and Hanafi (2013), Noreen et al., (2015) and As Sabiq et al., (2021). In their studies, females were more motivated towards learning English than males.

As far as the investigator knows, no other study has explored agriculture students' attitude towards English. This study was therefore undertaken to fill the gap in literature by exploring the attitudes that agriculture students hold towards the English language and its four skills.

METHOD

Research Design

This study employed a mixed-methods approach. In order to obtain valid and reliable results, the researcher considered application of both the quantitative and qualitative approaches very appropriate to the collection and analysis of data for the present study. These two approaches were used to complement each other. Marshall and Rossman (2006) advocated that a qualitative approach be used to make the quantitative data more acceptable and reliable. Wallace (2002: 30) also recommends the combination of both the techniques of questionnaire and interviewing, "so that the strengths of both procedures can be exploited (e.g., by using questionnaire to elicit basic factual data and interviews to follow up on attitudes and experiences." Similarly, Best and Kahn (1989: 89-90) regard both types of research as "valid and useful". They further state that a researcher can utilize both methods for a single investigation.

Study Population and Sample

All the B.Sc (Honors) 1-8 semester students of the University of Agriculture in Peshawar enrolled in the Autumn Semester, 2019 constituted the population of the study. The total number of the enrolled students in the semester was 3000 (source - Director Teaching office). Out of these students, 162 students (104 males and 58 females) were selected as participants for the study. The participants were selected by using the simple random sampling technique. Almost all the students were majors in different fields of agriculture i.e. Agronomy, Agricultural Chemistry, Animal Health, Human Nutrition, Horticulture, Plant Breeding and Genetics, Plants Pathology and Weed Science. As all these subjects

are taught in English, therefore, the students are required to have full command over English.

Data Gathering Instruments

In order to collect quantitative data for this study, a close-ended questionnaire, based on 5-points Likert scale, comprising 30 items, was used to elicit information about Agricultural students' attitude towards English language at the University of Agriculture in Peshawar. The questionnaire was developed after a detailed review of the studies carried out by different authors to elicit respondents' attitudes towards the English language (Abidin et al. 2012; Eshghinejad, 2016; Karahan, 2007). Some of the questionnaire items were also adapted from these authors with minor changes.

Part one of the questionnaire highlighted respondents' demographic information whereas part two sought information about the perceptions of the students towards the English language and its various skills.

The questionnaire was developed according to the following format: 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Neutral (N) 4 = Agree (A) 5 = Strongly Agree (SA). The students had to tick one of the five options which they considered to be most appropriate.

Interviews with the Participants

Bearing in mind that respondents will not express their innermost feeling/attitude through a written questionnaire, the principal researcher conducted semi-structured interviews of 30 students in five groups (each consisting of 3 males and 3 females), in order to gain an insight into their views about English. According to Creswell (2014: 163), while conducting interviews for collecting qualitative data, the researcher should try to frame questions that are "open-ended, general, and focused on understanding the dominant phenomenon". These rules were strictly followed. All the interviewees were informed two days in advance about the nature of the questions to be asked, date, time and place.

Validity and Reliability

Both questionnaires were reviewed by a group of eight faculty members from Islamia College University and University of Peshawar, in order to ensure maximum validity and clarity of the tools. All the reviewers were experienced professors with expertise in the relevant field. They were asked to study the questionnaires thoroughly to establish that they were simple and understandable. They were given the freedom to revise and improve the statements where needed. In light of their comments and suggestions, some statements in the questionnaires were revised/rephrased or eliminated to ensure their clarity and comprehensibility. In the light of their opinions, 7% questions were deleted and

12% were modified. Reliability of the collected data was tested using Cronbach's Alpha coefficient (Cronbach, 1951). Internal consistency of the questionnaire was .861.

Data Analysis

In order to analyzs the quantitative data, the descriptive statistical procedure was employed to determine frequencies, percentages and mean of the data. An independent sample t-test was carried out to find out differences between the attitudes of male and female students. The significance level was set at 0.05. Similarly, the data gathered through interviews was analyzed qualitatively, using thematic data analysis approach.

As mentioned above, in order to analyse the qualitative data, a thematic analysis approach was used, It is an appropriate method for the analysis of qualitative data and provides intricate, rich and comprehensive accounts of data (Cassell, *et al.*, 2005; Braun & Clarke, 2006). Bryman (2012) prefers thematic analysis of data, since it focuses more on what is said by the respondents rather than how they said it. It also enables the researcher to revisit the data repeatedly, in order to 'make a sense of collective or shared meanings and expe-

riences….and to identify commonalities among the answers to a particular research question(s)' (Braun & Clarke, 2006).

Results and Discussion

This section presents the results and analysis of both the quantitative and qualitative data. These findings relate to the learners' attitude towards English and its various skills i.e., listening, speaking, reading, and writing. Table 1, 3 and 5 focus on students' attitudes towards English language and its skills, whereas, Table 2, 4 and 6 highlight the differences in male and female students' attitudes towards English and its skills.

All the items in Table 1 elicited agricultural students' attitudes towards English language. The mean score of items No. 1 to 3 clearly indicated that a large majority of the respondents (both genders) hold favourable attitudes towards English, listening to people speaking English, lectures delivered in English, use of English and Urdu in the classroom and listening to dialogues in English films, talk shows and English songs. However, 28(17.3%) respondents agreed or strongly agreed, 19(11.7%) students remained neutral, and 115(71%) respondents disagreed or strongly disagreed with the statement "I dislike English subject the most." Sim-

Table 1

Students' Attitude towards English

S#	Statements	SD N(%)	D N(%)	N N(%)	A N(%)	SA N(%)	MAS
1	I feel excited when I learn English.	11(6.8)	7(4.3)	6(3.7)	56(34.6)	82(50.6)	4.18
2	I practice English when I find an opportunity to do so.	10(6.2)	8(4.9)	12(7.4)	79(48.8)	53(32.7)	3.97
3	English is one of my favourite subjects.	19(11.7)	19(11.7)	14(8.6)	63(38.9)	47(29.0)	3.62
4	I think English is the most difficult language to learn.	32(19.8)	85(52.5)	16(9.9)	20(12.3)	9(5.6)	2.31
5	I think all University students should learn English.	50(30.9)	75(46.3)	13(8.0)	18(11.1)	6(3.7)	2.10
6	I dislike English subject the most.	62(38.3)	53(32.7)	19(11.7)	11(6.8)	17(10.5)	2.19
7	I feel embarrassed and uneasy when studying English.	10(6.2)	2(1.2)	13(8.0)	50(30.9)	87(53.7)	4.25
8	I don't consider learning English important.	58(35.8)	57(35.2)	16(9.9)	23(14.2)	8(4.9)	2.17
9	I learn English because it can help me in understanding other academic subjects.	13(8.0)	25(15.4)	16(9.9)	65(40.1)	43(26.5)	3.62
10	I want to learn English for getting a good job.	13(8.0)	21(13.0)	51(31.5)	68(42.0)	9(5.6)	3.24
11	I want to learn English to get maximum advantage of the modern technologies and internet.	11(6.8)	9(5.6)	13(8.0)	64(39.5)	65(40.1)	4.01
12	I want to learn English to help me in my University Education.	8(4.9)	9(5.6)	9(5.6)	64(39.5)	72(44.4)	4.13
13	I want to learn English to study abroad.	10(6.2)	9(5.6)	19(11.7)	55(34.0)	69(42.6)	4.01
14	Truly speaking, I want to learn English just to pass the exams.	10(6.2)	20(12.3)	25(15.4)	76(46.9)	31(19.1)	3.60

ilarly, in comparison to 31(19.1%) who agreed or strongly agreed and 16(9.9%) neutral respondents, more than 115(71%) respondents disagreed or strongly disagreed with the statements "I don't consider learning English important" and "I think English is the most difficult language to learn." These results strongly support the findings of Ahmed (2015), Alkaff (2013), Al Noursi (2013), Eshghinejad (2016), Iswahyuni (2018), Karahan (2007), Khalid (2016), Khan (2020) and Ofran (2020).

Students reiterated the findings of the quantitative data in their interviews also. They were very enthusiastic about learning English, since they regarded it a gateway to success in all walks of life. Two to three male students showed no liking for it, due to their weakness in grammar and speaking skills. They believed the school/college environment and teachers' incompetency to be responsible. However, they recognized the fact that "there was no escape from learning it". A majority of the male and female students strongly favoured English and considered it essential for all University students: "*Its knowledge enables us to compete in the job market and study abroad.*" However, most students advocated simultaneous use of English and Urdu by the teachers during their lectures: "*We like those teachers who deliver their lectures in both English and Urdu because when they do so, we easily follow them.*" Except two females and one male student, a majority of the respondents answered the interviewer's questions either in Urdu or in Pashto.

However, the results do not support the findings of Khan (2016), who explored Saudi students' attitudes towards learning English at Jeddah Community College. His results indicated that students' attitudes towards learning English was not encouraging. Similarly, the findings of this study also negate the findings of the study conducted by Asghar, *et al.* (2018). Their respondents were 63 male and 95 female students from three different departments i.e., Arts, Design, and Architecture at the University of Gujrat, Pakistan. The attitudes of the said University's students were negative towards English.

Statements 9 to 14 examine students' learning of English for instrumental purposes. The respondents' desire to learn English to help them in their university education is highest ranked (M= 4.13) followed by their desire to get maximum advantage of the modern technology (M=4.01) and to study abroad (M=4.01). A good number of respondents 77(47.6%, with M=24) wanted to learn English to get good jobs (M=3.24), whereas 107(66.0%, with M=3.60) wanted to learn English just to pass exams. These results corroborate with the findings of Moriam (2008) who identified that a majority of the Bangladeshi graduate and undergraduate students (both males and females) learn English to find access to good jobs, financial benefits, increased social status and to further their education. Strangely, statements No. 5 and 7 negate students' views about their liking for English language. These findings are contrary to the results reported

by Rahman (2008) where 86.1% students agreed or strongly agreed with the statement that English should be the medium of instruction at the graduate and post-graduate level of education in Malaysia. Similarly, the results are not in line with those of Zainol Abidin, *et al.* (2012) where Libyan secondary school students showed negative attitudes towards learning English.

The data in Table 2 clearly demonstrates that with the exception of statement No. 9 & 11, there is no statistically significant difference in the attitudes of males and females towards English. One possible reason for the positive attitudes towards English can be that both the genders are mature and are aware of the importance and use of English in their academic and social life (Ali, 2016). Similar findings were echoed in the study conducted by Bagheri & Andi (2015). The results reported statistically no significant difference in the attitudes of male and female medical students towards English language. These results also support the findings of the research conducted by Orfan (2020) in Takhar University, Afghanistan. He reported no significant difference in the attitudes of male and female students towards English.

The mean scores of the majority of the statements indicate that females are slightly more inclined towards learning English. These findings are in line with the results reported by Pathan (2012), Islam (2013) and Ali et al (2021). The results also corroborate Muftah's (2022) findings where female students demonstrated a more enthusiastic attitude towards the English language than male students. Dörnyei *et al.*, (2006: 59) have also endorsed the results of the study by stating that female students exhibit more 'commitment towards language learning when compared to their male counterparts.' Similar were the findings of Ahmad, Esmail and Noreen (2015).

However, the results are contrary to the findings of the study conducted by Asghar *et al.*, (2018), where the mean score of male respondents show that they are slightly more inclined towards learning English when compared to the mean score of their female counterparts. They consider females' limited exposure to the use of English outside the classroom as the major factor in negatively affecting their attitudes towards English.

Interestingly, female students appear ahead of their male counterparts in their responses to statements No. 12 & 13. The mean scores of female students (M=4.22 and 4.12) is higher than their male counterparts (M=4.08 and 3.95). This clearly indicates that in comparison to their male counterparts, female students are more aware of the fact that in this era of globalization and competition, efficiency in English can enhance chances of finding a job in the field of his/her choice and can help him/her enjoy a better social status. The findings are in consonance with those of Ali (2016), who found that the majority of female students were motivated towards learning English, since they associated proficiency

Table 2

Students' Attitudes towards English in terms of gender

	Statements	Group	Mean	SD	t-ratio	P-value
1	I feel excited when I learn English.	Male	4.08	1.138	-1.532	0.128
		Female	4.36	1.135		
2	I practice English when I find an opportunity to do so.	Male	3.88	1.168	-1.451	0.149
		Female	4.12	0.088		
3	English is one of my favourite subjects.	Male	3.56	1.364	-.779	0.437
		Female	3.72	1.268		
4	I dislike English subject the most.	Male	2.37	1.300	2.423	0.017
		Female	1.86	1.249		
5	I feel embarrassed and uneasy when studying English.	Male	4.27	1.072	0.348	0.728
		Female	4.21	1.104		
6	I learn English because it can help me in understanding other academic subjects.	Male	3.42	1.312	-2.863	0.005
		Female	3.97	1.059		
7	I want to learn English for getting a good job.	Male	3.30	1.023	0.959	0.339
		Female	3.14	1.017		
8	I want to learn English to get maximum advantage of the modern technologies and internet.	Male	4.01	1.235	0.054	0.957
		Female	4.00	0.991		
9	I don't consider learning English important.	Male	2.26	1.132	1.179	0.241
		Female	2.02	1.318		
10	I think English is the most difficult language to learn.	Male	2.40	1.111	1.410	0.161
		Female	2.16	1.056		
11	I think all University students should learn English.	Male	2.20	1.135	1.618	0.108
		Female	1.93	0.953		
12	I want to learn English to help me in my University Education.	Male	4.08	1.094	-.846	0.399
		Female	4.22	1.044		
13	I want to learn English to study abroad.	Male	3.95	1.202	-.925	0.357
		Female	4.12	1.061		
14	Truly speaking, I want to learn English just to pass the exams.	Male	3.63	1.080	0.440	0.661
		Female	3.55	1.187		

in English with teaching morality to their children, becoming good mothers and finding jobs of their choice.

Table 3 displays students' attitudes towards listening and speaking English. The mean scores of the responses to items 15, 16, 17 and 19 are more than 4, which clearly indicate that the students enjoy listening to people speaking English, understanding what others say in English, enjoying lectures delivered in English, and enjoying English songs, dialogues in films and talk-shows. However, a majority of the respondents (M= 3.75) showed a liking for lectures delivered in both English and Urdu. Item No. 20 revealed that as many as 35.8% students agreed and 37.7% strongly agreed that they felt reluctant and anxious when speaking

English. Contrary to this, the students negated their own statement while responding to the next item. As many as 42.0% respondents agreed and 22.8% strongly agreed with the statement: "I feel confident when interacting in English with my teachers and class fellows". The reason for reluctance and anxiety was explained by the students in their interviews with the interviewer. They disclosed that inefficiency in all the four language skills, a lack of speaking opportunity, limited vocabulary, syntax errors, peers' mockery and the fear of not responding correctly in English were the main causes behind their communication anxiety. They also regarded poor background knowledge of English, nonexistence of favourable learning environment in schools/colleges, lack of exposure to practice English and lack of motiva-

Table 3

Students' Attitudes towards Listening and Speaking

	Statements	SDA N(%)	DA N(%)	N N(%)	A N(%)	SA N(%)	MAS
15	I truly enjoy listening to people speaking English.	6(3.7)	7(4.3)	11(6.8)	54(33.3)	84(51.9)	4.25
16	I fully understand what others say to me in English.	5(3.1)	13(8.0)	17(10.5)	63(38.9)	64(39.5)	4.04
17	I greatly enjoy the lectures delivered in English.	5(3.1)	14(8.6)	7(4.3)	82(50.6)	54(33.3)	4.02
18	I like those teachers who use both English and Urdu while teaching us.	12(7.4)	23(14.2)	13(8.0)	59(36.4)	55(34.0)	3.75
19	I enjoy listening to English dialogues in films, talk-shows and English songs.	10(6.2)	9(5.6)	11(6.8)	62(38.3)	70(43.2)	4.07
20	I feel reluctant and anxious when speaking English.	15(9.3)	18(11.1)	10(6.2)	58(35.8)	61(37.7)	3.81
21	I feel confident when interacting in English with my teachers and class fellows.	12(7.4)	20(12.3)	25(15.4)	68(42.0)	37(22.8)	3.60
22	I wish to speak English fluently.	10(6.2)	7(4.3)	15(9.3)	48(29.6)	82(50.6)	4.14
23	I wish to convey my message to the listener Effectively.	10(6.2)	20(12.3)	25(15.4)	76(46.9)	31(19.1)	3.60
24	I wish to improve my English pronunciation.	8(4.9)	19(11.7)	30(18.5)	78(48.1)	27(16.7)	3.60

tion from English teachers responsible for their reluctance, anxiety and lack of confidence. This finding is in consonance with the results of Khan (2020) and Mohemad (2022) who explored that limited vocabulary, lack of the knowledge of grammar rules, poor spelling, exposure to the use of English inside and outside the classroom, motivation from English teachers was the major reasons for the participants' nervousness and anxiety. The results are in line with the findings of Bhatti, Memon and Pathan (2016) who found that a majority of the students reported anxiety, nervousness and communication apprehension when called to express their views in English in front of their classmates. However, the results are contrary to the findings of Ansarey (2016) whose study revealed that a majority of the Agricultural students in Bangladesh felt very confident in communicating in English.

The mean scores of item No. 22, 23 and 24 is M= 4.14, M= 3.60 & 3.60 respectively show students' strong desire to speak English fluently, to develop good communication skills and improve their English pronunciation, in order to convey their message effectively and properly. In their interviews, almost all the participants, with the exception of two, reiterated their desire to gain fluency and to improve their pronunciation skills, and to enable them to convey their message to receptors coherently and effectively. They stated:

Good communication skill is mandatory for doing business; for securing good jobs in local and international markets; for getting through competitive examinations (e.g., the Provincial Management Service and the Central Superior Service); for joining NGOs; and, for interacting with people from different countries of the world.

However, most participants wanted to improve their communication skills not at the cost of their cultural values and identities. In spite of repeated requests from the investigator to answer the questions in English, all the interviewees,

except two females, responded either in Urdu or in Pushto. This clearly indicated that most of the students lacked strong communication skills and showed a keen desire to improve it. This deficiency in communication skills and the desire to improve confirm the findings of Khan (2020) when analyzing intermediate students' proficiency in English. Similar findings were echoed in the research of Noreen, Ahmad & Esmail (2015) who found that most of the University's students were enthusiastic towards English just for promoting their communicative skills. The results also corroborate the findings of the study conducted by Ali (2016). His findings revealed that most of the University's Postgraduate students in Khyber Pakhtunkhwa, Pakistan were motivated towards English for both instrumental and integrative purpose. These findings do not substantiate the outcomes of Zainol Abidin, *et al.,* (2012) and Soleimani and Hanafi (2013) where a majority of the Iranian medical students and Libyan secondary school students did not consider English learning mandatory for them.

All the statements in Table 4 demonstrate that on the average, the attitudes of both male and female students towards listening to and speaking English are the same. When compared to males (with M= 4.17 & SD= 1.074; M= 3.93 & SD= 1.143; M=4.03 & SD=1.127), female respondents (with M= 4.40 & SD= 0.897; 4.22 & 0.839; M= 4.14 & SD= 1.146) were somewhat more inclined towards listening to people speaking English, understanding what others say in English, and, enjoying listening to English dialogues in films, talk-shows and English songs. These findings are contrary to the results reported by Javid *et al.* (2017) where females were not as interested in watching films as their male counterparts. No statistically significant difference was observed in the mean scores of males' and females' attitudes in response to state-

ments 20 and 23. As evident from the mean scores of both the genders, females seemed slightly more reluctant and anxious when speaking English. However, they were less eager to convey their message effectively as compared to their male counterparts. These findings confirm the results of Tristeza et al (2021) who found that female and non-working EFL learners had a higher level of anxiety than their male and working counterparts. However, the results of the present study are contrary to the findings of Hussain (2018), where a majority of the students reported a high level of apprehension about learning English. His findings further exposed that the anxiety level of the male students was higher than females. In the remaining three statements (i.e., 21, 22 and 24), the female participants (with mean scores M=3.84, M=4.24 and M=3.62) appeared ahead of their male counterparts (whose mean scores were M=3.53, M=4.09 and M=3.62).

While conducting interviews with the participants, the interviewer established a deep insight into the interviewees' views and attitudes towards speaking skills. The interviews confirmed the findings of the quantitative data, since a majority of the participants were reluctant and fearful to respond in English to the interviewer's questions. With the exception of two females and one male, all the interviewees used either Urdu or Pushto language in answering the questions. This clearly indicated their deficit in oral competency, despite the fact that they had studied English as a compulsory subject for 10 to 12 years. All the students acknowledged their lack of competency in all the four skills (listening, speaking, reading and writing) of the target language along with pronunciation problems, but were determined to improve it by all means. One male student had no wish to improve his English, responded: *"What's the need of learning English? What's its importance for me? Why not promote our native language instead of English"*?

Again, no significant difference was indicated in the mean scores of male and female attitudes while responding to statement "I feel confident when interacting in English with my teachers and class fellows". However, in comparison to their male counterparts, females seemed more confident when interacting in English with their teachers and class fellows. Both genders showed a strong desire to speak English fluently. Interestingly, here too, females with a mean score of 4.24 appeared head of their male counterparts with a mean score of 4.09. Similarly, no significant difference was reported between the attitudes of males and females when responding to statements 25 and 26. Both genders desire

Table 4

Difference in Male and Female Students' Attitudes towards Listening and Speaking

	Statements	Group	Mean	SD	t-ratio	P-value
15.	I truly enjoy listening to people speaking English.	Male	4.17	1.074	-1.414	0.160
		Female	4.40	0.897		
16.	I fully understand what others say to me in English.	Male	3.93	1.143	-1.855	0.066
		Female	4.22	0.839		
17.	I greatly enjoy the lectures delivered in English	Male	4.04	0.924	0.220	0.826
		Female	4.00	1.139		
18.	I like those teachers who use both English and Urdu while teaching us.	Male	3.85	1.245	1.240	0.218
		Female	3.59	1.298		
19.	I enjoy listening to English dialogues in films, talk-shows and English songs.	Male	4.03	1.127	-.584	0.560
		Female	4.14	1.146		
20.	I feel reluctant and anxious when speaking English.	Male	3.80	1.332	-.222	0.824
		Female	3.84	1.254		
21.	I feel confident when interacting in English with my teachers and class fellows.	Male	3.53	1.182	-1.099	0.274
		Female	3.84	1.178		
22.	I wish to speak English fluently.	Male	4.09	1.224	-.872	0.385
		Female	4.24	0.997		
23.	I wish to convey my message to the listener Effectively.	Male	3.63	1.080	0.440	0.661
		Female	3.55	1.187		
24.	I wish to improve my English pronunciation.	Male	3.59	1.067	-.199	0.843
		Female	3.62	1.040		

Table 5

Students' Attitudes towards Reading and Writing

	Statements	SDA N(%)	DA N(%)	N N(%)	A N(%)	SA N(%)	MAS
25	I like to read whatever is written in English.	7(4.3)	9(5.6)	14(8.6)	79(48.8)	53(32.7)	4.00
26	I like to read English newspapers, story books and magazines.	10(6.2)	15(9.3)	16(9.9)	79(48.8)	42(25.9)	3.79
27	Writing correct English is really a hard task.	13(8.0)	34(21.0)	21(13.0)	60(37.0)	34(21.0)	3.42
28	I feel very excited when writing in English.	9(5.6)	16(9.9)	23(14.2)	63(38.9)	51(31.5)	3.81
29	I wish I could write correct English.	10(6.2)	12(7.4)	14(8.6)	76(46.9)	50(30.9)	3.89
30	To attain proficiency in English is the basic goal of my academic life.	15(9.2)	11(6.8)	25(15.4)	51(31.5)	60(37.0)	3.80

good communication skills and to improve their speaking power along with pronunciation skills.

Table 5 shows that all the items scored more than 3, clearly indicating that all the students have positive attitudes towards reading and writing skills. They like to read whatever is written in English (M=4.00), they like reading English newspapers, story books and magazines (M=3.79). They feel excited when writing in English (M=3.81). They wish to write correct English (M=3.89), and consider proficiency in English as a basic aim of their academic life (M=3.80). These findings are similar to those of Hussain and Munshi (2011), who indicated that most Pakistani secondary school students showed their preference for reading religious books, novels, magazines and newspapers. However, the findings are contrary to those of Khan (2013) who identified that most of the postgraduate students considered reading textbooks a burden and failed to grasp the thoughts and contents of foreign authors. The findings are also not in line with those of Awais (2013) who indicated that most Pakistani students have a negative attitude towards reading and mostly give it secondary importance. Similarly, the results were also contrary to those of Paker and Erarslan (2015) and Sentürk (2015) who all reported neutral attitudes of Turkish students towards English.

However, a little more than half of the students (i.e., 58%) agreed or strongly agreed that writing correct English was really a hard task. "*We want to express our ideas in written form, but cannot, due to our weak writing skills*", they said. They also showed a strong desire for writing correct English because it guarantees their success in both professional and academic career. "*Without having good command of writing skills, we can neither get a good job nor can we advance our studies*", were the comments of most of the participants.

The results support the views of Arslan and Zibande (2010) who determined writing as an intricate skill. Silva, cited in Paker and Erarslan (2015) emphasized that the writing of the L2 writers is not as effective as that of the native speak-

ers. The results are also pursuant to the findings of Khan (2013) who revealed that for a majority of Pakistani postgraduate students academic writing is a dilemma, and that they face difficulties when expressing their views in correct English. Similarly, Akhtar et al (2019) found writing skill to be the most challenging job for ESL learners.

In their interviews, students confirmed that the main reason behind their difficulty in writing was their lack of vocabulary and applying grammar rules. Fareed, Ashraf and Bilal (2016) also attributed undergraduate students' difficulty in writing to the lack of appropriate knowledge of vocabulary, grammar rules, syntax and proper feedback; whereas, to Nik, Sani, *et al.*, (2010), the major issue in improving writing skills was lack of motivation on teachers' part.

All the items, except 27, in Table 6 show no statistically significant difference in the mean scores of male and female students' attitudes towards reading and writing skills. Interestingly, with regard to students' attitudes towards reading and writing English, the mean scores of male students are slightly higher than their female counterparts. The finding is contrary to the results of Gambrell and Marinak (2010) who concluded that females enjoyed reading more than males. They further state that girls read more to improve their writing skills. The findings of the study are also contrary to those of Sentürk (2015) whose study indicated no substantial difference in the attitudes of male and female students toward reading. Similarly, Iqbal and Shehzadi (2002) concluded on the basis of their findings that the study habits and effective reading skills of Pakistani female university students were inadequate..

Significant difference ($p<0.05$) was reported while analyzing the mean scores of male and female students' responses to the item: "Writing correct English is really a hard task". When compared to the mean score of male students (M=3.61 & SD=1.224), the mean score of female students (M=3.09 & SD= 0.997) clearly indicates that for the majority of male students writing correct English is harder when compared

Table 6
Difference in Students' Attitudes towards Reading and Writing

Statements	Group	Mean	SD	t-ratio	P-value
25. I like to read whatever is written in English.	Male	3.99	1.332	-.163	0.870
	Female	4.02	1.254		
26. I like to read English newspapers, story books and magazines.	Male	3.80	1.210	0.122	0.903
	Female	3.78	0.946		
27. Writing correct English is really a hard task.	Male	3.61	1.224	2.472	0.015
	Female	3.09	0.997		
28. I feel very excited when writing in English.	Male	3.85	1.242	0.559	0.577
	Female	3.74	1.327		
29. I wish I could write correct English.	Male	3.93	1.182	0.653	0.515
	Female	3.81	1.178		
30. To attain proficiency in English is the basic goal of my life.	Male	3.85	1.080	0.596	0.552
	Female	3.72	1.187		

to their female fellows. In her study, Yong (2010) concluded that the attitude scores of both males and females were the same. Nevertheless, females were slightly ahead of their male colleagues. Likewise, when investigating the reading habits/culture of male and female students, Shafi and Loan (2010) also discovered that female students were far advance in their reading habits/culture than males. Similarly, while comparing the attitudes of male and female students towards reading, Dilshad, Adnan and Akram (2013) found that the attitudes of female students towards reading were more favourable than their male companions.

CONCLUSION

The major aim of this research study was to examine the attitudes of students of the University of Agriculture in Peshawar towards the English language and its four skills. It can be concluded from this study that a dominant majority of both genders exhibited favourable attitudes towards English. The reason for the positive attitude could be attributed to the fact that students are aware that fluency in English is mandatory for their future career, higher education abroad and communicating with people from other cultures.

The results also displayed that a maximum number of the students of both genders were eager to learn English for utilitarian purposes i.e. to find good jobs; to enjoy maximum advantage of modern technologies; to access higher education; to study abroad; and, just to pass the exam.

The mean scores of the responses clearly indicated that the students enjoy listening to people speaking English, understanding what others say in English, enjoying lectures delivered in English, and enjoying English songs, dialogues

in films and talk-shows. A good majority of the students demonstrated that they felt reluctant and anxious when speaking English. They attributed their reluctance and anxiety to the lack of speaking opportunity, limited vocabulary, syntax errors and the mockery of peers Similarly, a dominant number of the students displayed encouraging attitude towards reading and writing.

On average, the attitudes of both the male and female students towards English were the same. The mean scores of both genders showed that female students had a comparatively more positive attitude towards English, its listening and speaking skill in comparison to their male colleagues. The students strongly believed that a good command of English can ensure their entry into white collar jobs, improve their social status and enhance their chances of going abroad.

Students' attitudes towards the English language could further be improved, f teachers in English classrooms began to highlight its unprecedented importance, use, and growth in this globalized world. This is possible when the English teachers are properly trained; are more friendly towards students; anduse effective methodologies for improving students' language skills.

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None declared.

AUTHORS' CONTRIBUTION

Kifayatullah Khan: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project adminis-

tration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

Yousaf Hayat: Data curation, Formal analysis, Methodology, Writing – review & editing.

Syed Munir Ahmad: Methodology, Formal analysis, Writing – original draft, Writing – review & editing.

Wasal Khan: Resources, Writing – review & editing.

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The Relationship between Perception and Knowledge of Academic Vocabulary among EFL and EMI University Students

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ABSTRACT

Background: Academic vocabulary is considered an essential component in the English language courses in higher education establishments. A number of studies have illustrated that the use of academic words in students' work alone cannot always promise high grades, since students' opinion about the importance of academic words can also have an influence on their knowledge and use.

Purpose: The research aims to determine the relationship between the vocabulary level of learners and their beliefs about the importance of academic words at the tertiary level.

Methods: For this study, the first and third-year students (N=440) in two Uzbek universities completed a beliefs questionnaire to rate their perceptions of the significance of academic words in improving reading, writing, speaking, and listening skills in academia. The participants were also administered a vocabulary knowledge test to estimate their receptive dimension.

Results: The findings demonstrate that EMI students scored higher on the vocabulary test than EFL students and show that students' perceptions of the significance of academic words changed in all four skills from the first to third year of study.

Conclusion: The article explores trends that emerged in the data and raises awareness for EAP teachers concerning the assumptions about students' needs for vocabulary development based on learners' perceptions and knowledge.

KEYWORDS

academic vocabulary, higher education institution, vocabulary knowledge test, students' perceptions, receptive dimension

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INTRODUCTION

Vocabulary as an important component of a language has always been recognized in English language education. Teaching academic vocabulary in higher educational establishments has been investigated broadly. Teachers of English for Academic Purposes find it challenging to make a decision about words that should be focused on "during valuable class and independent study time" (Coxhead, 2000, p. 213).

A growing body of research focuses on the investigation of receptive and productive knowledge of academic vocabulary (El-Dakhs, 2015; Köse & Yuksel, 2013; Malmström, Pecorari & Shaw, 2018). Only a limited number of them investigate the extent of the importance of academic words in different aspects of teaching and learning (Choo et al., 2017). Studies have also been conducted on vocabulary knowledge of English as Second/Foreign Language (ESL/EFL) (Csomay & Prades, 2018; Teng, 2017) and English for Academic Purposes (EAP) (Coxhead, 2012; Crossman, 2018). However, studies on the relationship between the perception and the knowledge of the academic vocabulary among the students studying in English as a Foreign Language and English-medium of instructions (EMI) are very limited.

A number of studies have also supported the importance of students' beliefs and perceptions in language learning and in particular vocabulary (Choo et al., 2017). Given the significance of academic words and due to the scarcity of studies on Eng-

lish language learners perception and knowledge of English vocabulary in Uzbekistan and in Central Asia, the purpose of this article is to focus on discussing the relationship between the students' receptive knowledge of academic words and their perceptions of the importance of academic vocabulary for their tertiary studies. It also investigates the differences and similarities between the learners' beliefs and knowledge in two Uzbek universities. The findings will help identify the needs for the development of academic vocabulary knowledge among the university students and as such can be beneficial for the English language instructors and material designers.

Academic Vocabulary

Academic vocabulary (AV) is an important constituent of academic studies in the curricular of higher institutions, and it is supportive in studies at higher institutions (Coxhead, 2012). Nation defined AV as words frequently used in academic texts which are "not so common in the non-academic text" (2001, p.189). AV includes words used in academic texts that serve to attain a high efficacy of the academic message. The knowledge of academic words plays an essential role in understanding written texts, and is also central to the academic success of both native and EFL students (Gardner & Davies, 2013). Studies also show that students understand how important academic vocabulary is (Choo et al., 2017; Coxhead, 2000; Csomay & Prades, 2018). In the study conducted by Choo et al. (2017), participants presume the knowledge of academic vocabulary as important for the development of the four language skills. Some other studies show a relationship between the use of academic words and the effectiveness of producing writing tasks (Brun-Mercer & Zimmerman, 2015; Csomay & Prades, 2018). It is noted that students are aware of what audience they are addressing and "its impact on their choice" of the academic words in their writings (Coxhead, 2012).

Academic vocabulary has been researched in the field of English for Academic Purposes (EAP) and English for Specific Purposes (ESP). Studies on AV represent a growing field, and many have focused on the use of academic words by students both receptively and productively. AV has been an important concept in the studies of Xue and Nation (1984), Coxhead (2000), Gardner and Davies (2013), and Browne, Culligan, and Phillips (2013) who have developed specific lists of the words frequently encountered in academic texts. The usage of AV has been the subject of several recent papers (Coxhead, 2012; Cribb & Wang, 2021; Csomay, 2020; El-Dakhs, 2015; Masrai & Milton, 2018; Qian, 2002; Teng, 2016). There is a growing body of literature that recognizes the importance of AV for university-level students and specifically the knowledge of academic words has been described as crucial in "high-stakes writing and assessment" (Coxhead, 2012, p. 137). The presence and correct usage of AV impact the academic performance of the learner. Santo's research (1988) has shown that "errors in vocabulary

use are "seriously unacceptable" (cited in Coxhead, 2012, p. 137). Csomay and Prades prove that there is a "significant relationship between academic vocabulary use and essay scores in some text-types" (2018, p. 107). Different teaching instructions and the level of preparedness of the students for tertiary studies have a high impact on their overall academic performance. Some studies show a low correlation between the coverage of academic vocabulary and the overall score in some language respects (Paribakht & Webb, 2016).

Studies in this field lead to the idea of the need for specific academic word lists that could be helpful for both educators and students. As a result, several lists of academic words have been developed with different purposes. A University Word List (UWL) (Xue & Nation, 1984) comprised the words analysed from among 301,800 words of Campion and Elley's word list (1971) from nineteen different university disciplines taught in New Zealand and 272,466 words from the American University Word List (Praninskas, 1972) from ten first-year university textbooks. These two lists were combined with the lists created by Lynn (1973) and Ghadessy (1979) from annotations written by EFL students (Xue & Nation, 2001).

The Academic Word List (AWL) considers the specialised occurrence, range, and frequency of words encountered frequently in academic texts, albeit in differing frequencies across several different disciplines (Coxhead, 2000, p. 221). Words in the AWL were selected from the material in the Academic Corpus, other academic texts not in the Academic Corpus, and non-academic texts. 570-word families have been identified as a result of the analysis of three different corpora. The most recent list of academic words is the Academic Vocabulary List (AVL) (Gardner & Davies, 2013), which consists of 120 million words from Corpus of Contemporary American English (COCA).

Measuring Vocabulary Knowledge

Few tests measure knowledge of academic vocabulary. Most of the existing tests assess the receptive dimension of words from the General Service List (GSL) originally developed by West in 1953 and later updated and expanded (Browne, Culligan & Phillips, 2013). They are designed for non-native speakers of English and are widely used by the language instructors for teaching and research purposes (Köse & Yuksel, 2013; Moon, 2017; Teng, 2016). For instance, the Vocabulary Size Test (VST), originally developed by Nation in 1983, and revised by Nation and Beglar in 2007, is a multiple-choice test of 140 items which measures written receptive vocabulary size from the 1st 1000 to the 14th 1000-word families of English. The authors believe that the VST helps to show what knowledge learners have as they "need to have a moderately developed idea of the meaning of the word, in order to be able to choose it from the four options" (Nation & Beglar, 2007, p. 11).

Another commonly used test is the Vocabulary Level Test (VLT) developed by Schmitt, Schmitt, and Clapham (2001). The test measures 2000, 3000, 5000, and 10000 frequency levels and, in comparison to VST, has a different format. A level test consists of ten clusters of six words with three definitions each. The researchers argue that "even a small amount of knowledge about a target word's meaning should enable a student to make a correct response" (Schmitt et al., 2001, p. 62). Apart from having a different format, VLT has an additional section which, depending on the version, presents either the University Word List or Academic Vocabulary level items. The latter is a reviewed version and has better coverage of academic texts.

Although both VST and VLT have been used to measure the knowledge of non-native and native speakers of English of different levels (from foundation to undergraduate and postgraduate), they are mainly focused on the receptive dimension of vocabulary (Köse & Yuksel, 2013; Saud, 2023, Warnby, Malmström & Hansen, 2023). The authors of both tests agree on the fact that the items do not give an opportunity to measure the productive dimension of the target words. Taking this into account, Laufer and Goldstein (2004) made a clear distinction between passive (receptive) and active (productive) vocabulary. Having considered the principles provided by Nation and Schmitt, they developed the Computer Adaptive Test of Size and Strength (CATSS). It has a monolingual and bilingual (Hebrew-English) version, 150 items, and measures five levels (including AWL) of vocabulary with 30 items for each level. What distinguishes this test from the VLT and VST is that "each word is tested in four modalities (active recall, passive recall, active recognition, and passive recognition)". It also gives a "more realistic picture of how well learners know the meaning of the tested items" (Laufer & Goldstein, 2004, p. 414).

Despite certain differences, Gyllstad et al. argued that such tests (VST, VLT, and CATSS) should be considered to be multiple-choice tests, since they consist of "an item stem with a target word and set of response options, typically three or more with one keyed as the acceptable answer and the remainder, the distractors, as unacceptable answers" (2015, p.279). Based on their study, the researchers suggest the learners should be administered the test(s) depending on the teaching and/or research objectives.

Since some recognized vocabulary tests might not meet all the requirements, teachers and researchers developed different items to measure both receptive and productive dimensions of academic words. The widely used passive vocabulary tasks are either Yes/No response tests (Roche & Harrington, 2013), filling-in-the-gap sentences (El-Dakhs, 2015), or checklist tests (Masrai & Milton, 2018) combining words both from GSL and AWL. The knowledge of productive vocabulary is usually tested through written assignments, such as short argumentative paragraphs (El-Dakhs, 2015) or longer written papers, such as essays (Brun-Mercer

& Zimmerman, 2015; Köse & Yuksel, 2013) or synthesis (Csomay, 2020). The researchers believe that adopting a multiple-test approach allows not only measuring the recognition (passive knowledge) but also the use of words (active knowledge) by non-native learners of English as well as giving a better understanding of learners' vocabulary development.

Importance of AV Knowledge for Skills Development

Nation (2001) highlighted that knowledge of "academic vocabulary is a high priority goal for learners who wish to do academic study in English" (2001, p. 197). A great number of studies have been carried out to find out how important it is to learn academic words and what kind of influence this knowledge has on the development of student's skills at the foundation and/or tertiary level (Choo et al., 2017; Csomay and Prades, 2018; Durrant, 2016; Köse & Yuksel, 2013; Malmström, Pecorari & Shaw, 2018; Saud, 2023; Teng, 2016).

Since writing is one of the most common ways to assess learners' knowledge and skills, the use of academic words in the written production of non-native English speakers has been widely researched. Several surveys have demonstrated the significance of lexical choice for EFL/ESL learners' university studies and their writing (Choo et al., 2017; Coxhead, 2012). Brun-Mercer and Zimmerman (2015) in their study among advanced-high students preparing to enter American Universities revealed that it is important for students to use AV in their written composition. However, most participants of the study tend to use academic words that they had already used effectively in their previous written assignments. Studies have also focused on the impact of academic vocabulary use on the students' scores in writing tasks. The results of the research by Roche and Harrington (2013) as well as Csomay and Prades (2018), have shown that there is a significant relationship between the use of academic words and the students' performance in writing.

In addition to writing, ESL/EFL learners need to read academic texts effectively. Therefore, several studies have examined the relationship between the knowledge of AV and students' reading proficiency. Qian (2002) demonstrated that the size and depth of vocabulary of a candidate are powerful predictors of performance in the TOEFL reading comprehension subtest. Similarly, Moon (2017) in the study conducted on Korean students identified that a knowledge of academic vocabulary has a significant relationship with reading. In contrast, the analysis of the AV coverage in reading/ listening sections of CanTEST and overall comprehension score, undertaken among Canadian students, has shown no meaningful correlation (Paribakht & Webb, 2016).

Several studies have also examined the role of vocabulary on listening skills. Vidal (2003), in her study among first-year Spanish ESP students, found a high correlation between lecture comprehension and vocabulary proficiency. Howev-

er, the study identified that the knowledge of technical and low-frequency words in comparison to academic vocabulary was more important for understanding academic lectures. Teng (2016) in the study among EFL Chinese students also realised that depth (meaning, collocation, and lexical building) and breadth (receptive size) of vocabulary is an important predictor of successful listening comprehension. However, there is a higher correlation between the depth rather than breadth of vocabulary knowledge and understanding of the academic lectures.

In comparison to other academic skills, so far, there has been little discussion about the relationship between AV knowledge and speaking. Cribb and Wang (2021) investigated the use of academic words in the oral presentations of Chinese students. The analysis of a 5-minute speech on a stipulated topic revealed no significant correlation between the use of academic words and the utterance length and coherence of students' monologues.

The use of academic words has also been investigated in corpus-driven studies (Coxhead, Dang & Mukai, 2017; Dang, 2018; Durrant, 2016; Hyland & Tse, 2009; Khani & Tazik, 2013; Malmström, Pecorari & Shaw, 2018). Much research has focused on the coverage of AWL across a corpus of university students writing, identifying that the use of academic words is quite high in certain university disciplines (Durrant, 2016; Hyland & Tse, 2007). Malmström, Pecorari and Shaw (2018) in their study adopted a corpus of BAWE (British Academic Written English), in order to determine the academic vocabulary which students use productively. In comparison to other researchers, Dang (2018) investigated the corpus of spoken discourse, specifically the use of AV in the hard and soft sciences. Through the analysis of academic speech, the study allowed producing a Soft Science Spoken Word List of 1,964 words.

As we have seen, academic vocabulary has been the subject of different studies around the world and has focused on the knowledge of receptive and productive dimensions, the use of academic words in students' written and oral assignments, and the importance of academic words for students' academic performance.

The aim of the current study is to contribute to the growing body of research on the knowledge of academic words among EFL students, guided by the following research questions:

1. What is the receptive knowledge of the general and academic vocabulary of the EFL and EMI students in two Uzbek universities?

2. To what extent do EFL and EMI undergraduate students in two Uzbek universities consider the knowledge of academic vocabulary significant for their studies at the university?

3. What is the relationship between the EFL and EMI university students' knowledge of and beliefs about academic vocabulary?

METHOD

Participants

This study was conducted at two higher education establishments in Uzbekistan: one national, the Uzbek State World Languages University; and one international, Westminster International University in Tashkent, Uzbekistan. The former has Uzbek and Russian as the medium of instruction, whereas the latter uses English as the medium of instruction. The main field at the national university is linguistics and foreign language teaching methodology, while in the international university, the students study business administration, economics, finance, information technology, and commercial law. These two universities were chosen because the researchers had access to the target population, and also the comparison of an EMI institution to a non-EMI institution had been rarely done in other studies.

440 students participated in the study: 219 from the national university and 221 from the international university. The students were divided into two groups: freshman and junior (see Table 1), representing almost all the regions and ethnicities of Uzbekistan including Uzbek, Karakalpak, Russian, Tajik, and Korean. A small number of students at the international university were of foreign origin (China, Afghanistan, and Turkmenistan). Similarly, most of the students speak Uzbek, Karakalpak, Tajik, and/or Russian. Students at the international university have an IELTS score of a minimum of 5.5 as required. Students at the national university are admitted on the basis of scores from the Uzbek State Testing Centre university entrance exam. The entrance score requirements are equivalent to a minimum B1 level on the CEFR scale. Most students at the national university were female but the majority of the students at the international university were male (see Table 1).

Procedures

The aim of the study was to measure the level of students' academic vocabulary and identify the relationship between the students' knowledge of AV and their beliefs about the importance of AV. In order to investigate the student's perception of the value of academic vocabulary, an adapted version of Choo et al. (2017) beliefs questionnaire was administered. It consisted of twelve questions measuring four constructs using a 6-point Likert scale (1=strongly disagree to 6=strongly agree) on understanding and engagement during lectures, reading academic texts such as textbooks, journal articles, and publications; better production of writing assignments; using correct words in academic presentations; feeling more confident in speaking during classes;

Table 1

Participants of the Study

University	Year 1	Year 3	Gender	Age	Level
Uzbek State World Languages University (EFL University)	112	107	F=170 M=47*	17-28	B1 CEFR
Westminster International University in Tashkent (EMI University)	113	108	F= 96 M=125	18-30	IELTS 5.5 (entrance requirement)

two participants did not indicate their gender

and participating in lectures in academic settings (see Appendix A).

Two tests were administered to measure students' vocabulary levels. The Vocabulary Size Test (Nation & Beglar, 2007) was employed to measure the knowledge of words from the GSL, and the Vocabulary Levels Test (Schmitt et al., 2001) was administered to include words from the AWL (see Appendix B). Both tests are widely available and have been used in several studies on students' receptive knowledge of vocabulary (El-Dakhs, 2015; Köse & Yuksel, 2013; Masrai & Milton, 2018; Saud, 2023). Prior to checking academic words, it is recommended to identify the knowledge of the first 2000 words of the general service list since they do not belong to the academic word list (Coxhead, 2012). Therefore, both VST and VLT were employed in the current study. An analysis was performed to assess the statistical reliability of combining two parts of the vocabulary knowledge tests. The reliability coefficient of 0.781 was identified (Cronbach's α), which suggests the test items have a relatively high internal consistency.

The first twenty items (10 for the first 1000 words and 10 for the second 1000 words of GSL) of multiple-choice questions were taken from the Vocabulary Size Test. The questions provided a short sentence with the word to be defined with four options given to choose from. The participants had to circle the answer they find the most appropriate:

jump: She tried to **jump**.

  a. lie on top of the water
  b. get off the ground suddenly
  c. stop the car at the edge of the road
  d. move very fast

The Vocabulary Levels Test included ten clusters of six academic words to be matched with three definitions for an overall 30 words. The participants had to write the number of that word next to its meaning:

1 achieve

2 conceive   __5__ change

3 grant   __4__ connect together

4 link   __1__ finish successfully

5 modify

6 offset

Data collection took place over two weeks of the first semester of the academic year. Since the first-year students at both universities might not have been familiar with academic vocabulary, the participants were provided with a definition of AV, then asked to fill in the beliefs questionnaire, followed by the knowledge test. This procedure was chosen to minimise the influence of the research tools on each other. Participants took between 15-30 minutes to complete both parts.

Analytical Tools

The collected data was analysed using JASP, a program for statistical analysis. The statistical calculations were performed in line with the research questions. Descriptive statistics were used to identify the receptive knowledge of general and academic vocabulary and to measure the students' beliefs about the importance of AV. In order to answer the third research question on the relationship between knowledge and beliefs, Spearman's rho was used.

RESULTS AND DISCUSSION

Receptive Knowledge of Vocabulary

The first research question was aimed at investigating the receptive knowledge of the general and academic vocabulary of the EFL and EMI university students.

EFL University Students

The third-year students scored lower compared to the first-year students. With a maximum of 10 correct answers, both year one and year three were scored in test one and test two. The average of both tests in two levels varied by 0,5 correct answers in favour of the freshmen. The analysis of the second 1000 GSL words showed a higher level of SD when compared to the first 1000 GSL words' results. The number of academic words placed correctly was lower than performed by the third-year students. The mean of the AW test was 20.89 correct answers out of 30 for the first-year students and 18.71 for the third-year students. This also illustrates a slightly lower result for the third-year students which could be explained by the difference in admission requirements for both generations (see Table 2).

EMI University Students

Comparative analysis of the receptive vocabulary of EMI university students revealed a difference in the knowledge of the first 1000 GSL words between the first and third-year students, with the upper-level students having slightly higher results (M=9.080 and M=9.231 respectively). In contrast, the results of the second 1000 GSL vocabulary were similar for students at both levels. However, the mean score was lower than that for the first 1000 (see Table 3). As for the AV knowledge, there was a considerable difference at one

point between the results of the first and third-year students (M=23.91, and M=24.91 respectively).

Students at both Universities

Comparative analysis of the results of the vocabulary knowledge test shows that the participants from both universities have a good knowledge (M=8.9 and 8.7, n=10) of the first 1000 words of GSL (see Table 4), with the international university students scoring only slightly higher than the national university students (First year M=8.723 and 9.080; Third year M=8.206 and 9.231 respectively). As for the second 1000 words of GSL (n=10), the mean score is lower for both universities (First year M=6.866 and 7.540; Third year M=6.290 and 7.556 respectively).

Also, as shown in Table 4, the mean score of AV knowledge (n=30) of the first-year students (M=22.19) is almost one point higher than the third-year students (M=21.82). Notably, the international university students scored significantly higher than the national university students (First year M=20.45 and 23.91; Third year M=18.71 and 24.91 respectively).

Overall, (n=50) there is a slight difference between the first and third-year students (M=38.29 and 37.47), but, again, a significant difference between the first-year students from the national (M=36.04) and international universities

Table 2

Descriptive Statistics for GSL and AWL (EFL Students)

Words	Year of study	N (valid)	M	SD	Min	Max
First 1000 GSL	first	112	8.723	1.435	1	10
	third	106	8.283	1.706	3	10
Second 1000 GSL	first	112	6.866	1.492	1	10
	third	106	6.349	1.937	1	10
Academic words	first	112	20.45	4.891	3	29
	third	107	18.71	6.326	2	30

Table 3

Descriptive Statistics for GSL and AWL (EMI Students)

Words	Year of study	N (valid)	M	SD	Min	Max
First 1000 GSL	first	113	9.080	1.036	4	10
	third	108	9.231	1.107	3	10
Second 1000 GSL	first	113	7.540	1.433	4	10
	third	108	7.556	1.349	4	10
Academic words	first	113	23.91	3.741	13	30
	third	108	24.91	4.552	7	30

Table 4

Vocabulary Knowledge Test

	First 1000		Second 1000		Academic words		Total score	
	M	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**
First-year students	8.902	1.260	7.204	1.498	22.19	4.676	38.29	6.486
EFL University (N=112)	8.723	1.435	6.866	1.492	20.45	4.891	36.04	6.950
EMI University (N=113)	9.080	1.036	7.540	1.433	23.91	3.741	40.53	5.111
Third-year students	8.721	1.619	6.926	1.828	21.82	6.311	37.47	8.828
EFL University (N=107)	8.206	1.877	6.290	2.023	18.71	6.326	33.21	9.185
EMI University (N=108)	9.231	1.107	7.556	1.349	24.91	4.552	41.69	6.008
All students (N=440)	8.814	1.448	7.068	1.671	22.01	5.532	37.89	7.722

(M=40.53) with similar patterns for the third-year students of national (M=33.21) and international university (M=41.69).

The findings of the vocabulary test showed that both EFL and EMI undergraduate students had similar knowledge of the first 1000 GSL words. This can be explained by the fact that the requirements of both educational institutions are quite high. Therefore prospective students spend several years studying grammar and vocabulary of the English language. In contrast, the knowledge of the second 1000 GSL words between the students of the national and international universities drops significantly and differs between the levels and universities. This could be explained by the fact that the EFL university learners undergo their studies in their native language (Uzbek or Russian) and only English lessons are conducted in English, whereas, at the EMI institution, the students study all their subjects in English. The findings are not compatible with the results of the study conducted by El-Dakhs (2015), who found quite a low level of vocabulary competence among first-year Arab EFL students and a much higher level of receptive vocabulary knowledge among second and fourth-level students.

As for academic vocabulary, the results of the study revealed a significant difference between the knowledge of EFL and EMI students. One of the reasons to explain this difference between the first-year learners of both institutions might be entrance requirements. The EFL university students are expected to have at least a B1 level of CEFR upon graduating from the secondary educational institutions, and also pass an entrance test, consisting of grammar, vocabulary, and reading items. The students at the EMI University are required to have at least 5.5 Band in IELTS with no less than 5.0 in the writing section. This means they should have some knowledge of academic words while preparing for the different sections of the exam.

The results of the study revealed that the academic vocabulary knowledge among the third-year students at both uni-

versities differs significantly. This might be explained by the exposure to the learning materials, i.e., Uzbek/Russian in the EFL University and mostly English in the EMI University. Another possible explanation is that most students in both higher education institutions apply the knowledge obtained before entering university and increase the number of terms specific to the field of study rather than academic words. Similar results were observed in the study of Köse and Yuksel (2013), who identified an increase in the size of vocabulary knowledge from the first to the second year of studies, but a decrease in the third year of studies among Turkish students. In his investigation, Saud (2023) also observed heterogeneous results in the AV knowledge among master's degree students in Nepal. This can be explained by the influence of previous studies at the bachelor's level and students' reluctance in learning new academic words. However, the findings of the current study are not in line with the study of El-Dakhs (2015) that identified high results of AWL among upper-level students in comparison to first-year students.

Overall, the findings of the study show that the receptive dimension of the GSL and AWL is generally high among the Uzbek students of both EFL and EMI universities, since the majority of the learners scored much higher than the average. Only a few showed quite low performances in the vocabulary knowledge test.

Students' Beliefs about AV

The second research question was aimed at identifying the perception of the students concerning the importance of academic vocabulary for the EFL and EMI university students' skills. The beliefs questionnaire used a Likert scale (1=strongly disagree to 6=strongly agree), in order to identify students' perceptions of the importance of academic vocabulary in their tertiary studies. Regarding the role of AV for all aspects of listening, the findings showed interesting results. The beliefs of the participants from both EFL and EMI institutions with regard to the significance of academic words for listen-

ing decreased from the first to the third year. The students at both universities considered AV to be significant for other skills' development.

EFL University Students

Students' beliefs about the importance of AV vary at two levels. The upper trend can be seen at year one students in all four skills (see Table 5). Both the first and third-year students agree that AV is very important for their reading (5.219 and 4.838 respectively). However, they have different views about the significance of academic words for their listening comprehension. Year one students agree and strongly agree (μ=4.844) about the importance of AV while the participants from year three only slightly agree (μ=4.290). The majority of the first-year students believe that a knowledge of academic words is important for their writing assignment (μ=5,016), and they agree and strongly agree that the knowledge of these words is critical when they use them in writing (μ=5,209). Third-year students do not show similar results concerning all four writing aspects while they agree on the significance of academic vocabulary in their writing (μ=4,953). Third-year participants agree about the importance of AV for producing effective sentences (μ= 4,642).

EMI University Students

Statistical analysis of the EMI university students' beliefs about the importance of AV knowledge for skills development revealed no major differences between the levels (see Table 6). The mean scores showed that both groups of students believe the knowledge of academic words is least important for lecture comprehension (μ=4.599 and μ=4.407 respectively). Students at both levels believe that knowledge of AV is slightly more important for effective communication than understanding the lectures at the university (First year μ= 4.767 and Third year μ= 4.699). In comparison to speaking and listening skills, the knowledge of academic words is indicated as the most significant for the development of reading and writing skills.

Students at both Universities

Overall, participants of both universities agree that academic vocabulary is important for their studies, but the significance of AV for each skill varies (see Table 7). The participants viewed AV as most important for reading (μ=5.045) and

Table 5

EFL Students' Perceptions

Skills	Year of study	N (valid)	M (μ)	SD
Speaking	first	111	4.922	1.093
	third	106	4.570	1.125
Listening	first	112	4.844	1.1445
	third	105	4.290	1.281
Reading	first	112	5.219	0.890
	third	106	4.838	0.749
Writing	first	110	5,016	0.9459
	third	107	4,804	0.9812

Table 6

EMI Students' Perceptions

Skills	Year of study	N (valid)	M (μ)	SD
Speaking	first	112	4.767	1.128
	third	108	4.699	1.065
Listening	first	111	4.599	1.222
	third	107	4.407	1.266
Reading	first	112	5.085	0.934
	third	108	5.034	0.968
Writing	first	113	5.177	0.947
	third	107	5.218	0.868

writing (μ=5.056). Interestingly, students' perceived importance of AV decreased from the first year (Listening μ=4.733; Speaking μ= 4.844; Writing μ=5.099; Reading μ=5.149) to the third year (Listening μ=4.349; Speaking μ= 4.635; Reading μ= 4.938; Writing μ=5.012) for all skills.

Most EFL first-year students found AV significant. However, the number decreased noticeably by the third year when they slightly agreed with it. In order to be specific, EFL students of both years agreed with more importance of AV for understanding lectures, rather than when being engaged during them. A probable reason for this could be the large number of students during the lectures. Thus students are not

exposed to discussions, and it could be a result of teaching styles when a teacher-centred approach is dominating in the class. Also, students may be finding academic content challenging during their lectures that make their understanding difficult. With regard to EMI institution students, the findings do not demonstrate a considerable difference between the levels. However, it can be observed that the responses vary from the years of the study indicating the decreased pattern among year three students**.** This might be explained by the fact that all the lectures are available to the EMI students on the learning management system This means that there is an opportunity to watch/listen to the video lecture any time they want or need. In their first year of study, the students

Table 7

Beliefs Questionnaire Results

Skill	Sub-skills	M (SD)			μ		
		Year 1 students (N=225)	Year 3 students (N=215)	All students (N=440)	Year 1 students	Year 3 students	All students
Listening	understanding lectures	4.897 (1.01)	4.432 (1.30)	4.67 (1.18)	4.733	4.349	4.545
	being engaged in lectures	4.568 (1.25)	4.265 (1.27)	4.42 (1.27)			
Speaking	using words in speaking	5.022 (.99)	4.840 (1.06)	4.934 (1.03)	4.844	4.635	4.743
	being confident in speaking	4.821 (1.14)	4.730 (1.11)	4.777 (1.13)			
	communicating effectively	4.691 (1.14)	4.335 (1.21)	4.517 (1.19)			
Reading	understanding reading material	5.289 (.81)	5.047 (.93)	5.17 (.88)	5.149	4.938	5.045
	being confident in reading	5.018 (.94)	4.874 (1.05)	4.948 (.9975)			
	reading effectively	5.141 (.92)	4.893 (1.02)	5.018 (.98)			
Writing	using words in writing	5.336 (.87)	5.151 (1.01)	5.246 (.94)	5.099	5.012	5.056
	being confident in writing essays	5.094 (.98)	5.061 (.96)	5.078 (.97)			
	writing effective sentences	5.032 (.96)	4.835 (.99)	4.935 (.98)			
	producing better writing	4.932 (.98)	5.000 (.96)	4.966 (.97)			

do not use these opportunities, but they access the electronic system more often when they become upper-level students.

The importance of academic vocabulary for the development of speaking was perceived differently by EFL and EMI students. The first-year students at the national university found AV to be vital. This differs significantly from the beliefs of the third-year learners of the same higher educational institution. EMI students of both levels did not consider academic words important for the speaking activities at the university. Such insignificance of the use of academic words for effective communication in both universities can be ascribed to the possibility of being prepared for oral presentations. Based on the findings, Cribb and Wang (2021) explained that there is no direct relationship between the use of academic words and coherence and length of presentations among Chinese third-year students. In contrast, Choo et al. (2017) in their research found that the knowledge and use of AWL are beneficial for Malaysian university students' effective communication.

Participants in the current study found the knowledge of academic words to be significant for the improvement of reading skills. Overall, there is a slight difference between the first and third-year students of the EFL university and almost no difference among the students of the EMI university. The first-year learners of both HE institutions believe that knowledge of AV is important for understanding academic materials and being effective in reading. However, the beliefs of the third-year students are not consistent. They find it more important to understand the meaning rather than to be confident in reading. Warnby, Malmström and Hansen (2023) explain that apart from vocabulary knowledge, students'

reading proficiency might be conditional on different factors including strategies used for reading or subject knowledge. Therefore, students' perception of the important of AV and reading ability can vary among the levels of study and learning contexts.

The findings suggested that knowledge of academic words was considered to be the most significant for the development of writing skills in both universities. However, the level of importance varies among the levels and universities. Students at both levels in the EMI institution believe that it is very important to use AV in their writing and to produce better writing. This might be explained by the fact that all the written assignments are produced in English and the use of academic words is one part of the assessment criteria. Academic words are perceived slightly less important by the first-year students at the national university, while AV was found to be unimportant for the development of writing by the third-year students. A possible reason for such a difference in the perceptions of academic words among the EFL and EMI students might be dissimilar written tasks and requirements set by the university subjects.

Relationship between Knowledge and Beliefs of AV

The final research question was aimed at exploring the relationship between the students' knowledge and beliefs of academic vocabulary. Since the data was not normally distributed, for the analysis of these findings, Spearman's rho was applied. In order to identify the statistical significance of the relationship between the knowledge and beliefs of academic words, each sub-skill of the four main language skills

Table 8

Relationship between Beliefs and Knowledge

Skill	Spearman's rho	p-value
understanding lectures	-0.006	0.894
being engaged in lectures	-0.068	0.156
using words in speaking	-0.015	0.758
being confident in speaking	-0.039	0.415
communicating effectively	-0.008	0.872
understanding reading material	0.151**	0.001
being confident in reading	0.108*	0.023
reading effectively	0.050	0.297
using words in writing	0.251***	< .001
being confident in writing essays	0.105*	0.028
writing effective sentences	0.090	0.060
producing better writing	0.165***	< .001

*Note. Significant at * p < .05, ** p < .01, *** p < .001*

(speaking, reading, writing, and listening) was analysed separately (see Table 8).

The Spearman's rho results indicated that there is a statistically significant correlation between the knowledge of academic words and being confident in reading (r_s= .108 p < .05) and understanding the reading material (r_s= .151 p < .001). Analysis indicated the most significant relationship between the AV knowledge and using the words in writing and producing better writing (r_s= .251 p < .001 and r_s= .165 p < .001 respectively). A significantly negative correlation was found between the knowledge of academic words and being confident in speaking (r_s= -.039), and being engaged in lectures (r_s= -.068).

The beliefs questionnaire revealed that students at both universities consider the knowledge of academic vocabulary to be vital for developing their reading skills. The finding supported the results of earlier findings on the critical role of AV for reading. Moon's research (2017) found that vocabulary size and vocabulary knowledge might have a vital role in reading. However, the findings also showed a decrease in the beliefs for both universities' students. While the beliefs of EFL students vary significantly, the results of EMI University show slight changes across the years. Specifically, both year one and year three EMI students believe that the knowledge of academic words will help them to understand reading material. On the other hand, the results fell from the first to the third year for EFL university students. One possible explanation may be a continued exposure to reading material in English in EMI University. This is different for EFL students due to the introduction of different disciplines during the consequent years of studies which require reading materials in Uzbek and Russian languages. The other reason behind this result could be probably explained by students' motivation to prepare quickly for their exams. During this time students usually limit themselves to skimming and scanning material without focusing on difficult and unknown vocabulary. By doing this they generally ignore challenging academic words and try to only grasp the gist of the reading material.

Although there is a slight difference between the perceptions of EFL and EMI students, a positive correlation was found between the use of AWL and students' written production. These findings are consistent with the results of Coxhead (2012) and Choo et al. (2017), whose studies revealed that university students deem it important to use appropriate academic words to express their ideas in writing. As the studies clearly indicate that there is a relationship between the uses of academic words in writing and students' performance (Brun-Mercer & Zimmerman, 2015; Csomay & Prades, 2018; Roche & Harrington, 2013). This implies the potential to develop students' vocabulary knowledge for better academic achievements. In order to ensure application of AV in students' writing, Csomay (2020) has suggested explicit teaching of academic words to non-native speakers of English, since they are not exposed to the target language on a regular basis in their learning contexts.

The current study aimed at investigating the relationship between students' beliefs about the importance of academic words and the knowledge of students of one national and one international university. The findings of the present study revealed that perceptions of the importance of academic vocabulary for the development of language skills among the levels of EFL and EMI universities vary.

Limitations and Further Research

The current study has a number of limitations that should be noted. First, the study investigated the beliefs and knowledge of the students of EFL and EMI universities, enrolled in different disciplines, so the requirements for academic vocabulary may also vary. It is also important to mention that year-one EFL university students had slightly higher admission requirements in comparison to third-year students. Therefore, it will be relevant to further explore the knowledge of academic words among EFL first-year students when they become third-year students. Thirdly, although the study sample comprises 440 participants, the study was conducted only in two Uzbek universities. In order to ensure better generalization, a larger sample should be sought in other universities of Uzbekistan and Central Asia. In addition, further studies might assess the knowledge of academic vocabulary among the ESP students at the universities in the region. Fourthly, the present study aimed at examining receptive knowledge of vocabulary. More research is needed on both receptive and productive vocabulary as it might give a better insight into the students' knowledge. Finally, the current study was limited to two vocabulary knowledge tests (Nation & Beglar, 2007; Schmitt et al., 2001). It would be beneficial to examine the students' knowledge through other test items (e.g., gap-fill sentences or cloze tests), which might provide a slightly different perspective. Future research can also be conducted to investigate the relationship between the students' beliefs about the importance of academic words and their productive knowledge (e.g., through the written and/or oral assignments at the universities).

CONCLUSION

The aim of the research study was to identify the correlation between the EFL and EMI students' beliefs about AV and the receptive knowledge of general and academic vocabulary in Uzbekistan. The findings of the vocabulary knowledge tests revealed that the students of the international institution scored higher in the vocabulary knowledge test in comparison to the students of the national university. Overall, the students at both universities achieved high results in the first 1000 of GSL. However, the receptive knowledge of the second 1000 of GSL words was lower among the students at both universities. Analysis of the belief's questionnaire in-

dicated that the learners of both national and international universities consider the knowledge of academic words to be more important for the development of reading and writing skills in comparison to listening and speaking skills.

Based on the findings, one of the major implications of the current study is that English language teachers should identify the learning goals and provide explicit academic vocabulary teaching for the EFL and EMI university students. Since the receptive knowledge of the second 1000 of GSL is much lower than the first 1000 of GSL among the students of the national and international universities, another implication is for the English teachers to consider including more material, such as academic articles and lectures, containing higher level words. EAP teachers can also advise on general and academic vocabulary activities that students could do, in order to improve their knowledge of vocabulary. This study shed light on students' perception and knowledge of general and academic vocabulary. The present study contributes to the existing knowledge on the importance of academic vocabulary for tertiary studies, and the findings confirm students' needs for vocabulary development. The results might not be conclusive and further research is recommended, in order to investigate the students' productive vocabulary and academic performance.

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AUTHORS' CONTRIBUTION

Liliya Makovskaya: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

Ijobat Juraeva: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

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Novice Russian Research Writing: Prepositions and Prepositional Phrases

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ABSTRACT

Background: The research writing of novice Russian authors tend to be markedly different from that of expert academic writers from other countries. More specifically, Russian student writing has been characterized as wordy, difficult to comprehend, syntactically complex, and excessive in terms of nominalisation. One of the main manifestations of these characteristics is the deployment of a large number of prepositions and prepositional phrases.

Purpose: The purpose of this paper is to investigate the causes of this excessive use of prepositions in Russian student writing and to provide suggestions for improvement.

Methods: The quantitative analysis evaluates two self-compiled corpora using the computational linguistics tool Gramulator. The first corpus consists of published research papers written by international scholars of radio engineering. The second corpus comprises first drafts of research papers written by Russian graduate and postgraduate students majoring in radio engineering. The final qualitative analysis focuses largely on the student corpus.

Results: The seven most common writing features identified were as follows: excessive *of*-phrases, nouns/verbal nouns instead of gerunds, nouns instead of infinitives of purpose, nominalized structures instead of relative clauses, 'strong noun + weak verb' structures instead of 'strong' verbs, grammatical errors, and repetitions. Each of these features is discussed and followed by suggestions that may help both reduce the excessive number of prepositions and prepositional phrases and improve other important features of the text.

Implications: The results of this study are of interest to academic writing instructors as well as the developers of teaching materials and automated evaluation tools.

KEYWORDS

Research writing, expert writers, student writers, prepositional phrases, Gramulator, Auto-Peer

INTRODUCTION

The increasing use of nouns, nominalizations, prepositional phrases as post-nominal modifiers, and phrasal style in general has been a distinguishing feature of informational written discourse for at least the past two centuries (e.g., Banks, 2008; Biber & Clark, 2002; Biber & Finegan, 2014; Biber & Gray, 2011; Halliday & Martin, 1993/1996). This tendency is likely to occur because of the "communicative demands and production circumstances" (Biber & Gray, 2011, p.248) of the register, possibly caused by an increase in information and a reduction of expression (Croft, 2000; Hopper & Traugott, 2003). We suggest that there should be a careful balance between the amplitude of such information reduction and the text readability since disturbing this balance may result in increased difficulty of comprehension. Novice non-Anglophone writers may not be aware of this balance and so produce texts that can be difficult to understand, or ambiguous, or far from the expectations of their discourse community. According to Gosden (1992), reviewers and editors find that the research writing of non-native English authors tends to feature a lack of coherence in topic progression, unclear argument, awkward constructions and choice of wording. As a result, the characteristics of the student-written rhetoric may seriously affect publication opportunities (Min & McCarthy, 2013).

Numerous challenges have been identified in the academic writing of Russian

university students. As reported by Dobrynina (2015; 2019) and Shpit and Kurovskii (2020), Russian novice research writers, tend to employ higher rates of nominalization, a higher density of *of*-phrases, as well as higher syntax similarity and repetition. In addition, according to Terenin (2020), students' choice of wording and syntax often results in excessive and ambiguous writing. Such choices are made manifest in wordy and excessive details, ambiguous placement of words in a sentence and problematic use of function words (e.g., personal and relative pronouns). Furthermore, Russian students significantly underuse hedging devices and anaphoric expressions when compared to international academicians (Smirnova, 2019; Smirnova & Strinyuk, 2020). In sum, the language of Russian novice authors has been described by Korotkina (2018, p. 316) as "obscure, with excessive nominalization, ambiguous impersonal structures and complicated, sometimes erroneous syntax." As such, there is a need to improve academic writing instruction approaches so as to make the scientific texts of Russian student writers better able to meet the conventions and expectations of the target discourse community. Accordingly, this paper focuses on approaches to identify and subsequently mitigate the causes and excessive use of prepositions and prepositional phrases.

The remaining sections of the paper are organized as follows. *Motivation for the study* provides details as to the problem of prepositional usage. The section leads into the research questions that guide the current study. The *Hypotheses* section discusses the possible educational and cultural roots of the problems. *Methodology* considers the resources employed in the quantitative and qualitative analyses conducted in the study. The findings of these analyses are presented in the *Results* section. *Pedagogical implications* summarise the results with respect to their application in academic writing instruction courses. The research implications are presented in *Conclusion*.

MOTIVATION FOR THE STUDY

In this study, we use the word 'preposition' to refer to all words that take the form of a preposition, even when they may sometimes more accurately be termed 'particles.' This terminology is necessary as the current study relies on the Coh-Metrix (McNamara et al., 2014) and Gramulator (McCarthy, Watanabe et al., 2012) automated Charniak parser, which makes no distinction between the types. The decision of Charniak (2000) to simplify the terminology is indicative of the complexity and nuance of English prepositional deployment. As such, it is perhaps unsurprising that numerous investigations report that non-native English speakers encounter multiple challenges in constructing clauses or selecting the most appropriate preposition (e.g., Hendricks, 2010; Jarvis & Odlin, 2000; Mukattash, 1984; Schumann,

1986). Such research acknowledges that the challenge of English prepositions is not only their inherent complexity, but also the numerous differences between their form, function, and structure in native and target languages.

According to Shpit and McCarthy (2022), the multiple differences between engineering student research writing and expert writing are likely to stem from the same causes. Furthermore, many of these differences are likely to result in the excessive deployment of prepositions. This over-deployment can be problematic for novice Russian student-writers as the more than 200 prepositions in the English language[1] fulfil a wide variety of forms and functions. That is, English prepositions include prototypical, intransitive, conjunctive, complex, and postpositional forms. Many of these prepositions are also polysemous and their use may vary from British to American Englishes as well as in regional and social varieties of English. As they are typically short, unstressed, and softly-pronounced (Hendricks, 2010), English prepositions are a consistent element in the top ten errors of English learners, with even advanced learners often facing challenges in their deployment (Lennon, 1991).

Based on such research, and in accordance with Shpit and McCarthy (2022) and Pennebaker (2001), we suggest that high prepositional phrase density may be an indicative feature of Russian novice research writers. For example, consider the following sentence from a research paper manuscript written by a Russian student in Engineering.

> "For the numerical estimation of potential threats associated with passage of interfering signals through the power supply circuits, the calculation of N-norms has been implemented [10]."

The statistics of the above sentence are as follows: 14 content words (9 nouns, 1 main verb, 1 participle, and 3 adjectives) and 11 function words (2 auxiliary verbs, 6 prepositions, and 3 articles). In addition, the sentence features some syntax patterns typical of the research writing of novice Russian scholars, such as the use of *for*-phrase to denote purpose (*For the numerical estimation of...*), or the choice of a nominalised structure (*the calculation of...has been implemented*). Regarding the first pattern, generally, or more frequently, international experienced writers employ an infinitive of purpose (*To numerically estimate...*). As for the second pattern, a 'strong' verb may be more appropriate (*...N-norms have been calculated*). Thus, a possibly more English-like version could be as follows:

> "To numerically estimate potential threats associated with interfering signals passing through the power supply circuits, the N-norms have been calculated [10]."

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[1]   List of English prepositions - https://en.wikipedia.org/wiki/List_of_English_prepositions#cite_ref-Aarts76_2-105

The statistics of this modified sentence are as follows: 13 content words (6 nouns, 1 main verb, 1 infinitive, 2 participles, 1 adverb, and 2 adjectives) and 7 function words (2 auxiliary verbs, 2 prepositions, 1 particle, 2 articles). Accordingly, we can argue that making changes to the above-mentioned patterns reduces the number of function words, including prepositions, as well as the sentence length in general. In addition, the variety of content words increases.

The current study builds on the findings of Shpit and McCarthy (2022). In that study, the authors used a discriminant analysis to provide a model that distinguished Russian student writing from that of their expert counterparts. The model included measures that assessed writing for such features as noun phrase density, genre purity, word age-of-acquisition, and variance in sentence length. Although the accuracy of the model was impressive, the authors concluded that future research is needed to investigate the corpus more fully at a broader qualitative level. This issue was of importance because the quantitative evaluation of student-written texts alone could not fully inform instructors, materials designers, and computational systems developers of the specific instances and types of language deployment that non-native student writers are likely to face. As such, using the same corpora, we analyse and assess actual linguistic patterns behind the excessive use of prepositions and prepositional phrases in Russian student writing. Thus, through the combined use of the Coh-Metrix and Gramulator tools, we provide a novel approach to comparing specific rhetoric patterns in the discourse of students and experts.

Our research questions are the following:

1. What are the distinctive linguistic and/or rhetorical deviations that yielded significantly higher values for prepositions and prepositional phrase density in the writing of Russian engineering students?

2. How could these deviations be addressed in a writing instruction course?

HYPOTHESES

We hypothesise that there will be multiple linguistic and/or rhetorical deviations in students' research writing. These deviations can be primarily explained by three factors.

First, most Russian engineering university students are likely to have a relatively low language level of proficiency (mainly survival and/or sub-threshold levels), with only 5-15% having reached high or advanced levels (Kogan, 2020). These data may be explained by a lack of extensive English language instruction at secondary schools as well as an insufficient number of credit hours assigned to EFL classes at the tertiary level. In addition, many Russians are often situated at a considerable distance from the centres of international communication. As such, they are likely to have relatively little opportunity to communicate with native English speakers.

Second, the ease of exposure to academic interaction in the Russian language may negatively impact young scholars' desire to improve their English academic writing and speaking skills. In addition, the Russian academic rhetoric norms often become deeply ingrained in students' minds. Meanwhile, the Russian scientific style is generally characterised as being impersonal and formal, with many sentences characterised by embedded structures and nominalised clauses (Kolesnikova, 2002; Korotkina, 2018; Lapteva, 1995). As a result of the dominant exposure to the Russian scientific register and only the occasional engagement in English communication, Russian student writing may feature considerable language transfer issues (Grigor'ev, 2018; Dobrynina, 2015, 2019; Korotkina, 2018; Smirnova, 2019; Smirnova & Strinyuk, 2020; Terenin, 2020). This characteristic of student writing correlates with the theory of cross-linguistic influence, which traces the inverse relationship between the degree of language recency and exposure in communication on one side and the extent of language transfer issues on the other (e.g., Jarvis & Pavlenko, 2008; Neuser, 2017; Williams & Hammarberg, 1998).

Third, the many differences between the Russian and English languages may be a factor in producing higher rates of prepositions for Russian student writers. For example, as Russian is a synthetic language (while English is analytic), Russian academic writers may choose to include full information about a subject in one sentence. As a result, the sentence may contain many prepositional post-modifiers rather than several clauses or sentences. Thus, whereas a Russian writer may write *The estimations of the influence of width and length changing of conductors of a meander line on the power frequency dependences were obtained for each type of loss*, a native English speaking counterpart may instead write *We estimated how geometrical parameters of the conductors in a meander line influence the power frequency dependences. To do so, we changed the widths and lengths of the conductors and simulated each type of loss*. An additional difference between the languages is that Russian does not feature certain grammar phenomena used in English. These phenomena include articles, gerunds, and noun pre-modifiers. This difference may also result in forming structures that involve prepositions. For example, a Russian may say *language of programming* instead of a fixed specialist term such as *programming language*. Such a tendency is especially noticeable with the preposition *of* (Dobrynina, 2019; Shpit & Kurovskii, 2020; Vinogradova et al., 2020). Finally, there are many differences between verbs that are/are not followed by particles in Russian and English (e.g., in Russian, *influence* should be followed by a particle, whereas the English *listen to* does not require a particle in Russian). Even when both languages include a particle after the verb, the particle may differ (e.g., English uses *depend on* whereas a Russian may choose *depend from*).

As a result of these (and many similar) factors, the academic writing of novice Russian authors is often characterized by numerous questionable linguistic, rhetorical, and stylistic choices. Consequently, many Russian researchers report that the scientific texts of novice (and even experienced) Russian authors tend to be wordy, obscure, and ambiguous, with heavy nominalisation, cumbersome structures, and an overuse of passive voice (e.g., Dobrynina, 2017, 2018, 2019; Grigor'ev, 2018; Korotkina, 2018; Terenin, 2020). Thus, we hypothesise that there will be multiple deviations in Russian engineering student writing from international expert writing, and that some of these deviations are likely to manifest as a high density of prepositions and prepositional phrases.

Our second research question addresses some of the specific socio-cultural differences that should receive particular attention in writing instruction courses. We suggest that non-Anglophone novice scholars (or, more accurately, those not specialising in English) are often unaware of the multiple differences in how international writers articulate their ideas. These English L2 authors may reasonably believe that their writing should only be formal, persuasive, logical, and terminologically accurate. At the same time, they may lack appropriate understanding of why their grammatically and compositionally correct and content filled manuscripts have been rejected (e.g., Alharbi & Swales, 2011; Fazel, 2013; Flowerdew, 2007). Such people may not understand that, because of the linguistic, rhetorical, and cultural differences between English and their native language, they have failed to organize their ideas in a way that is sufficiently easy to read and comprehend (e.g., MacKenzie, 2015). That is, they may fail to meet the rhetoric norms and conventions of their discourse community. This very topic, we argue, should be emphasised in writing instruction courses by actively employing a discourse-analytical approach (e.g., Fairclough, 2003; Huckin, 2003; Hyland, 2018). As such, a thorough analysis of the specific rhetorical choices of novice writers may help to identify the socio-cultural roots of inappropriate linguistic choices. Consequently, through such an analysis, appropriate remedies can be devised and deployed.

METHOD

Selecting the Tool

The current study builds on Shpit and McCarthy (2022). In that study, the authors revealed that student research writing features significantly more prepositional phrases ($F = 172.655$, $p < .001$, $\eta p^2 = .501$). Indeed, of the 45 discourse features assessed in the Shpit and McCarthy study, prepositional phrase density generated the second largest effect size of all measures. To obtain the results, Shpit and McCarthy relied mostly on the computational tool Coh-Metrix (McNamara et al., 2014), to quantitatively measure text features. As such, the study could not provide extensive examples and evaluations of actual rhetoric within the texts. More specif-

ically, Co-Metrix is somewhat restrictive in that it does not allow researchers to identify the most frequent rhetorical patterns containing prepositions, it does not distinguish between the correct and erroneous use of prepositions or particles, and it does not provide an approach to study specific lexico-grammatical items defined by a user. Consequently, as a novel approach, this study employs Gramulator (McCarthy, Watanabe et al., 2012) to combine quantitative and qualitative analyses of the corpora. Gramulator has a rich history for such analysis, having been used to distinguish (among many other aspects) the linguistic features of L1 and L2 scientific writing styles (e.g., Min & McCarthy, 2013), the differences between counter-arguments and support arguments in argumentative papers (McCarthy et al., 2022), genre-specific text features (e.g., Haertl & McCarthy, 2011; Rufenacht et al., 2011; Terwilleger et al., 2011), and the features of deceptive and truthful discourse (McCarthy, Duran et al., 2012).

The Two Corpora

As a full description of the corpora and their pre-processing cleaning can be found in Shpit and McCarthy (2022), we provide here only the details that are critical to the current study. Accordingly, both corpora refer to the same discipline - Electromagnetic Compatibility (EMC). The expert corpus (ExC) comprises 94 texts written by international researchers. The mean length of a text is 3,175 words with all of the texts being scientific papers published in international journals between the years 2000 and 2019. In total, 59% of the texts were written by authors affiliated by institutions in English-speaking countries, and 41% by authors from 39 other countries (none of which included Russia). Meanwhile, the student corpus (StC) is compiled from 80 texts written between the years 2018 and 2021. The mean length of a text is 1,840 words. The texts in StC, all authored by Russian graduate and postgraduate students majoring in EMC, were written for the purpose of submitting to English-language journals. None of the student authors had any dedicated academic English writing instruction; however, there is the probability that they had read research papers in English, and/or they may have received some feedback on their manuscripts from the proof-reader or their scientific supervisor. Both corpora were cleaned to make them appropriate for processing in the computational tools used.

The difference in sizes between the two corpora may seem to be an issue since many text features depend on the length of sentences, paragraphs, and the text as a whole. However, the study by Shpit and McCarthy (2022) relied only on those measures for which text length differences are not problematic. Similarly, in the current study, we use Gramulator, the analysis and measures of which are not affected by inconsistencies in text length and corpus size. Indeed, the rich history of Gramulator includes a large number of studies that feature contrasting corpora of differing sizes (e.g., Haertl & McCarthy, 2011; McCarthy et al., 2022; Cho-Min &

McCarthy, 2010; Wen et al., 2013). Such analysis is made possible as Gramulator processes frequencies relative to such textual differences (McCarthy, Watanabe et al., 2012). As such, the differences in text length and corpus size in the current study are in line with similar previous research.

Quantitative Analysis

Gramulator (McCarthy, Watanabe et al., 2012) provides researchers with multiple resources (or modules) for both quantitative and qualitative analyses of corpora. For example, in this study, we use the Evaluator module, which provides built-in keyword lists but also allows users to create their own lists. Accordingly, the texts in the corpora were analysed by compiling keyword list that feature the Paqout Academic Keyword List (2010). More specifically, we compiled an array of nouns (665 items, both singular and plural) and an array of verbs (948 items, of the following forms: bare infinitive, third person singular, past simple, present and past participles). Both corpora were evaluated for all lists, and the results were assessed with both the built-in Gramulator *t*-test and SPSS statistics tool. The use of nouns and verbs was evaluated both by *value* and by *type*. 'Value' refers to the ratio of the key words in the index relative to the text length, while 'type' refers to the diversity of key words of the index employed in the text. For example, each text in the corpus was analysed for the degree to which it is composed of prepositions. In such a case, 'value' is the numerical proportion of prepositions relative to the entire text, while 'type' is the number of different prepositions found in the text.

Qualitative Analysis

Our qualitative analysis builds on research from two areas. The first deals with studying the English academic discourse produced by Russian novice authors (e.g., Dobrynina, 2017, 2018, 2019; Grigor'ev, 2018; Korotkina, 2018; Terenin, 2020). The second lies within the theory of language transfer (e.g., Jarvis & Pavlenko, 2008; Neuser, 2017; Williams & Hammarberg, 1998). By examining the majority of students' texts, the seven most typical issues were identified. Six of these issues are associated with chains of nouns with numerous function words that typically accompany such nouns. The seventh issue refers to the erroneous use of prepositions.

To be clear, the current study does not claim to cover all challenges associated with novice Russian research writing. Moreover, we acknowledge that both students' and experts' texts are homogeneous in terms of articulating ideas. That is, students do exhibit patterns that experts employ, and experts have examples that are typical of students' texts. As such, we merely claim that students more often use rhetorical patterns that are not typically met in expert writing. Some of these patterns are illustrated in the following section.

RESULTS

To assess the use of prepositions, the corpora were analysed through the Evaluator module of Gramulator using the built-in list of 42 most common English prepositions. The results are in-line with the findings of Shpit and McCarthy (2022) and suggest that student texts feature significantly more prepositions (t (1.172) = 11.09, $p < .001$, $d = 1.76$). According to Sawilowsky (2009), such effect size can be described as "huge." To look more closely at the use of function words in general, both corpora were analysed using the Gramulator built-in list of 495 function words. The results suggest that, in general, students' texts feature significantly more function words (t (1.172) = 6.071, p < .001, d = .981), with such effect size described as "large" (Cohen, 1988).

As the use of prepositions and function words in general is very closely connected to the use of nouns, we also used the Evaluator module to analyse the deployment of nouns and verbs across both corpora. As mentioned above, the lists of nouns and verbs were compiled from the Magali Paqout Academic Keyword List (2010). With reference to nouns, the results demonstrated that by *value*, there is no difference between the corpora; however, by *type*, the results suggest that experts employ a significantly wider range of nouns (F = 55.148, $p < .001$, $\eta p^2 = .243$). Together with the data for prepositions, these results suggest that students may lack the skills of using pre-modifying nouns and tend to make chains of single nouns linked by prepositions. Meanwhile, the results for verbs produced significant differences both by *value* ($F = 28.868$, $p < .001$, $\eta p^2 = .144$) and by *type* ($F = 102.366$, $p < .001$, $\eta p^2 = .373$). These results suggest that students prefer to deploy nouns rather than verbs and often resort to word repetition.

To further analyse the use of prepositions and prepositional phrases, we isolated seven groups of common errors. These groups include issues associated with: 1) the difficulty in building noun groups with nouns in pre-modifying position (*Excessive of-phrases*); 2) the tendency to have nouns or verbal nouns where gerunds would be more appropriate (*Nouns and verbal nouns instead of gerunds*); 3) the tendency to nominalise the infinitive of purpose (*Nouns instead of infinitives*); 4) the tendency to use multi-element noun phrases where clauses may sound more appropriate (*Nominalising a clause*); 5) the preference for 'strong noun + weak verb' phrases instead of 'strong' verbs ('*Noun + verb' collocations instead of verbs*); 6) the grammatical errors in using prepositions (*Grammatical errors*); 7) the repetition of chunks of text (*Repetition*). Note that all examples below from the corpora are provided in their original form.

Excessive of-Phrases

Extremely high incidence of *of*-phrases and long chains of noun phrases in research writing by Russians may be caused by the characteristic that the Russian language does not

normally have nouns in a pre-modifying position. This difference means that, in Russian, if a noun is used as a modifier, it is typically positioned after the head noun. As such, in English, this often results in a prepositional phrase rather than a pre-modifying noun. Therefore, in situations where English-speaking writers would have noun groups with several noun pre-modifiers, Russian writers would prefer to have chains of multiple nouns coupled mostly by the preposition *of* (Table 1). In fact, English noun groups with noun pre-modifiers that are familiar to students from their educational, scientific, or professional experience could result in a deployment that is similar to English-speaking writers. These groups include terms or frequently used collocations. However, unfamiliar noun groups pose a considerable challenge, which ultimately results in long prepositional chains or incorrect noun groups. It seems evident that some long chains could be rewritten as noun groups with two or three noun pre-modifiers (see Sentences 1-3), thus reducing the number of prepositions and articles. This said, some words in a long chain cannot be grouped at all (see Sentence 4).

Nouns and Verbal Nouns Instead of Gerunds

Gerunds form another grammar issue that is absent in the Russian language (there being no specific morphemes in Russian that distinguish gerunds from nouns or verbal nous). As such, without sufficient practice, Russian writers may often simply opt to use nouns (Table 2). More problematic are chains of multiple noun-like words for which students do not distinguish between gerunds, verbal nouns, and nouns. To reduce the number of prepositions and possibly to sound more like a native English writer, 'noun + *of* + noun' collocations could be replaced by gerunds (e.g., *to the*

improvement of modal filtration would sound more natural with a gerund, i.e., *to improving modal filtration,* Sentence 1). The suggested improvements for Sentences 2 and 3 (see below) include some other modifications. For example, in both sentences, we changed the voice, thus reducing the number of words before the main verb. In their study, Shpit and McCarthy (2022) showed that students' texts have significantly more words before the main verb than experts ($F = 27.008$, $p < .001$, $\eta p^2 = .136$). Such long chains of noun phrases coupled by multiple prepositions before the main verbs may reduce text readability. In Sentence 3, we also combined the words into a noun group *ESD amplitude attenuation*.

Nouns Instead of Infinitives

In English, three common ways to express purpose are with an infinitive (e.g., *To calculate*...), with a gerund (e.g., *For calculating*...), and with a noun (e.g., *For the calculation of*...). Since Russian scholars tend towards nominalisation, they frequently choose a noun phrase. In fact, the incidence of infinitives in expert writing is significantly higher than in student writing ($F = 32.385$, $p < .001$, $\eta p^2 = .158$). This tendency does not mean that student writers do not use infinitives or gerunds to express purpose; instead, they tend to simply choose '*for* + noun.' Table 3 provides some examples showing the use of '*for* + noun' at the beginning of the sentence and in the middle. Such a choice significantly increases the number of function words, including prepositions. These choices may also sound unnatural and difficult to perceive if the chain is long (Sentences 2 and 3). By contrast, with the infinitive of purpose, the number of words will be reduced as many verbs used in the academic prose are followed by direct objects without any particles.

Table 1

Dealing with Of-Chains

	Examples from StC	Suggested Improvements	Examples from ExC
1	This criterion is important to prevent the overlapping of pulses of an MF output, and, as a consequence, the growth of the total amplitude of the decomposition pulses.	This criterion is important to prevent the pulse overlapping at an MF output, and, as a consequence, the growth of the total decomposition pulse amplitudes.	The low-frequency regime of RCs is characterized by a limited number of resonant modes overlapping [36], typically resulting in field distributions across the RC ...
2	The sets of numbers of chromosomes and populations of the GA and it multiplication, which determine the total number of calculations of the fitness function are shown in Table III.	The sets of numbers of GA chromosomes and populations and their multiplication, which determine the total number of fitness function calculations, are shown in Table III.	The block diagram in Figure 19 summarizes the overall design process, which can be divided into two main steps: static field management and resonance parameters calculation.
3	Thus, the experimental results confirm the possibility of decomposition of the initial pulse at the end of the active conductor into a sequence of pulses of lower amplitude.	Thus, the experimental results confirm the possibility of the initial pulse decomposition at the end of the active conductor into a sequence of pulses of lower amplitudes.	This method uses singular value decomposition of the matrix before solving the linear set of equations for the coefficients of the fitting curve.
4	The square root of the eigenvalues of the product of these matrices determines the values of the per-unit-length delays (τ) of the modes propagating in the lines.		Fig. 5 shows the growth curve fit to the overall data as an illustration of the original assumption of the shape of the resulting curves.

Table 2
Activating Gerunds

	Examples from StC	Suggested Improvements	Examples from ExC
1	As a result, a new approach to the improvement of modal filtration through the use of reflection symmetry was proposed [8].	As a result, a new approach to improving modal filtration by using reflection symmetry was proposed [8].	The statistical energy or power balance (PWB) approach to analyzing the average electromagnetic (EM) field inside electrically large cavities has been used for many years …
2	As a result of simulation of the time response of the structure with the weak coupling, the decomposition pulses with close amplitudes were obtained.	As a result of simulating the time response of the structure with the weak coupling, we obtained the decomposition pulses with close amplitudes.	Section 4 reports on experimental tests for solving the linear systems using the iteratively computed incomplete factorizations as preconditioners.
3	Meanwhile, the estimation of the possibility of additional attenuation of the ESD amplitude because of optimization of the cross-section parameters, for example, by the increasing of the coupling between the half-turns, has not been done.	Meanwhile, there are no studies estimating the possibility of additional ESD amplitude attenuation achieved by optimizing the cross-section parameters, for example, by increasing the coupling between the half-turns.	This can be achieved by maximizing the electrostatic field at the desired location during the charging time.

Table 3
Activating Infinitives

	Examples from StC	Suggested Improvements	Examples from ExC
1	Chosen parameters provides the geometric mean of the even (Z_e) and odd (Z_o) modes impedances to be equal 50 Ω for the reflection minimization and also correspond to the real capabilities of PCB manufacturers.	Chosen parameters provide the geometric mean of the even (Z_e) and odd (Z_o) modes impedances to be equal to 50 Ω to minimize reflections and to correspond to real capabilities of PCB manufacturers.	These functions can be tailored to minimize edge transients by windowing appropriately if required.
2	The paper presents the results of development of a TEM cell with a working volume of 30×30×5 mm³ for measurement of radiated immunity and electromagnetic emissions of low-profile integrated circuits.	The paper presents the results of developing a TEM cell with a working volume of 30×30×5 mm³ to measure radiated immunity and electromagnetic emissions of low-profile integrated circuits.	A constrained linear least squares synthesis technique has been used to experimentally generate a prescribed array pattern and simultaneously limit the coupling to a nearby antenna.
3	For proper design of the systems having a lot of parameters a computer-aided design based on comprehensive mathematical models is necessary.	To properly design the systems having a lot of parameters, it is necessary to apply a computer-aided design based on comprehensive mathematical models.	To ensure the proper operation of the power converter under the external magnetic field, the electromagnetic compatibility of these components is analyzed.

Nominalising a Clause

Nominalisation is the style of writing in which the authors tend to deploy nouns instead of verbs or adjectives. This style of writing seems another critical issue that increases the number of prepositional and noun phrases in English texts written by Russian novice writers. In fact, high nominalisation is actively encouraged in Russian academic interaction (e.g., Kolesnikova, 2002; Lapteva, 1995; Pryadilnikova, 2016[2]). As a result, Russian students may transfer the norms of Russian academic style into their English texts. Table 4 demonstrates some examples of nominal writing style in student writing, and how these patterns can be rewritten as clauses. First, Sentence 1 is relatively short and syntactically simple, so nominalisation may not produce any difficulty in comprehension. By contrast, Sentences 2, 3, and 4 contain awkward syntax and may require higher cognitive efforts from the reader. As such, presenting an extended nominal phrase as a clause may be justified. To further improve reading ease, some sentences can be divided into two or three separate ones (see Sentence 4).

'Noun + Verb' Collocations Instead of Verbs

Nominalisation can also appear in a wide use of 'strong noun + weak verb' structures instead of 'strong' verbs (e.g., *to perform the analysis* instead of *to analyse*; or *to carry out*

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[2] Pryadilnikova, N. V. (2016). Practical functional stylistics of the Russian language. A study guide (part 2). Samara University Publishing.

simulation instead of *to simulate*). Unlike the Russian scientific register, English traditions emphasise the importance of verbs (Harvey, 2003; Khrabrova, 2016). This emphasis is evidenced in significantly higher values for verb incidence and verb phrase density in expert writing (Shpit & McCarthy, 2022). By contrast, the preference for 'noun + verb' collocations inevitably increases the number of nouns and function words, including prepositions (Table 5). Sometimes, this increase may result in a large number of words before the main verb (see Sentences 2 and 3). Consequently, the cohesion between the subject and the main verb may be lost and comprehension may be affected. The sentences could be improved by using 'strong' verbs instead of 'noun + verb' collocations, as shown in the suggested versions. Sometimes, it may also be worth employing active voice so that cohesion can be improved (see Sentences 2 and 3).

Grammatical Errors

Lexical and syntactic transfer can cause numerous grammatical errors (e.g., Jarvis & Pavlenko, 2008; Lindqvist & Falk, 2014). Some of these errors can be identified in the use of prepositions/particles by non-native English speakers (Table 6). With regard to their causes, these errors were divided into three groups. The first group comprises errors that may occur in using a wrong preposition or particle. For example, the Russian equivalent for the verb *depend* is followed by a particle that more closely translates to *from* rather than the English choice of *on* (see Sentence 1). The second group are errors that occur because of the erroneous adding of prepositions or particles (see Sentences 2 and 3). This adding may occur because Russian equivalents for these verbs or phrases require particles. For example, Russian equivalents for the verbs *affect, influence,* and *impact* are followed by parti-

Table 4

Dealing with Long Nominal Phrases

	Examples from StC	Suggested Improvements	Examples from ExC
1	Due to the localization of energy at one point, the probability of malfunctions in sensitive areas increases significantly [8].	Since the energy is localized at one point, the probability of malfunctions in sensitive areas increases significantly [8].	However, since the geometry of the differential signal pair is imbalanced, radiation also occurs as the wave propagates through the connector [10].
2	In the first case, it was made in the place of coverage of the positive branch of the power bus bar.	In the first case, it was made in the place where the positive branch of the power bus bar is covered.	Fortunately, these parameters define the geometric regions where the analytic solution for the potential distribution is known…
3	The study of the effect of the cascade configuration of the multiconductor MF, in differential and common-mode operation involves …	The study of how cascade configurations of the multiconductor MFs act in differential and common modes involves …	Section 4.5 demonstrates how sparse triangular solutions can also be performed efficiently in parallel for these problems.
4	However, the analysis of the results showed the coincidence of some values of the per-unit-length modal delays, which means the simultaneous arrival of the modes at the active conductor end and, as a result, the imposition of pulses.	However, the analysis of the results showed the coincidence of some values of the per-unit-length modal delays. This means that the modes arrived simultaneously at the active conductor end and, as a result, the pulses were imposed.	The loss function is smooth and it does not show the resonances as the standard cell shows at frequencies below 3 GHz. This indicates that the suppression of higher order modes is functioning.

Table 5

Strengthening the Main Verbs

	Examples from StC	Suggested Improvements	Examples from ExC
1	Calculation of parameters and waveforms has been performed using the quasistatic approach in TALGAT system [4].	The parameters and waveforms have been calculated using the quasistatic approach in the TALGAT system [4].	From the solution of the static field in the gap between the conductors, the charge distributions are calculated on the inner core and outer vessel of the SWO.
2	An evaluation of the SE for the enclosure of ABB FOX515 multiplexer used at electric power enterprises was also performed.	We also evaluated the SE for the enclosure of ABB FOX515 multiplexer used at electric power enterprises.	The effect of modified TEM cell on suppressing TE modes is evaluated by using the full wave simulation tool CST Microwave Studio.
3	The optimization of duration of the differential-mode excitation of ultrashort pulse on PS bus was carried out.	The next step was to optimise the duration of the differential-mode excitation of an ultrashort pulse on a PS bus.	The parameters of the segments are optimized for a given field distribution, …

cles that translate to *on* (as in Sentence 2). A further example of adding (see Sentence 3) illustrates how some students erroneously add the preposition *in* when discussing tables or figures. Such errors may occur when student writers resort to word-for-word translation of frozen expressions in the native language. The cause of the third group of errors is most likely simply the result of insufficient proficiency in the English language. For example, Sentence 4 has errors in using the phrasal verb *take into account* and the phrase *falling out* (which is derived from the same phrasal verb). The latter example, in this context, is supposed to convey the meaning *failure;* however, the choice of *falling out* is incorrect as it does not communicate the target meaning and does not belong to the academic style.

Repetition

Repetition is a further problem contributing to considerably higher values of prepositions and prepositional phrase density in student writing. First, repetition is evidenced in quantitative data for nouns and verbs. As mentioned above in the Gramulator results, students and experts do not differ in their over-all frequency of use of nouns (i.e., by *value*). However, by *type*, meaning the variety of nouns selected, experts significantly outperform students (F = 55.148, p < .001, ηp^2 = .243). As such, the lower diversity for student writers indicates higher noun repetition. Moreover, noun repetition is likely to lead to repetition of the associated function words, i.e., the entire chunks of text (see an example in Table 7). This apparent characteristic of novice academic writers suggests that students may have a lower level of language proficiency. Another explanation is that these novice academic writers may be still developing their research and writing styles and are currently choosing to stick with more familiar linguistic patterns rather than experiment with those that are less familiar. In either case, the more students practice writing, the better their writing skills are likely to become.

Pedagogical Implications

The overall results demonstrate that Russian novice scholars produce writing that significantly differs from international expert writing. More specifically, the analyses of what may underlie high preposition incidence and prepositional

Table 6

Errors in the Use of Prepositions

	Examples from StC	Suggested Improvements	Examples from ExC
1	As opposed to dielectric losses, radiation losses extensively depend from w, which is clearly seen from the dependences of the losses power shown in Fig. 11a.	As opposed to dielectric losses, radiation losses extensively depend on w, which is clearly seen from the dependences of the power loss shown in Fig. 11a.	The actual pulse driven into the antenna cable from E1 HEMP would depend on many parameters, including details of the antenna and the incident E1.
2	However, the change in w affects only on the frequencies of maximum values, but does not affect on the average value of the losses power…	However, the change in w affects only the frequencies of maximum values, but does not affect the average value of the power loss …	This might affect the signal integrity of a nearby signal.
3	In Fig. 7 shows the voltage amplitudes of the main and additional pulses with an increase in R3 or R4 from 0 to 1000 Ohms.	Fig. 7 shows the voltage amplitudes of the main and additional pulses with an increase in R3 or R4 from 0 to 1000 Ohms.	Fig. 7 and Fig. 8 show the SE at 702 MHz which is the first cavity resonance.
4	Failure to take into account of EMC requirements can lead to unstable operation and even complete falling out of the electronic equipment.	Failure to take into account EMC requirements can lead to unstable operation and even complete failure of the electronic equipment.	Such effects can range from momentary loss of function of a system to catastrophic failure of the system due to component damage.

Table 7

Repetition Example

Example from StC	Frequency
It was found that an increase in the radius of the conductor 3 and the radius of the dielectric around it leads to a slight decrease in the amplitude of pulse 2. An increase in the dielectric constant of the dielectric around the conductor 1 leads to an increase in the amplitude of pulse 2 and a slight decrease in the interval between pulses 1 and 2 and a significant increase in the amplitude of pulse 2, and also to a decrease in the time interval between pulses 2 and 3. An increase in the dielectric constant of the dielectric around conductor 2 leads to an increase in the amplitude of pulse 1, a significant decrease in the amplitude of pulse 2, and a slight decrease in the amplitude of pulse 3.	decrease in the amplitude of pulse - 3 times; increase in the amplitude of pulse - 3 times; the dielectric constant of the dielectric around the conductor - 2 times; decrease in the interval between pulses - 2 times

phrase density revealed numerous stylistic, linguistic, and rhetorical differences between the two discourses.

With regard to the first research question, most common linguistic and rhetorical deviations in student writing are likely to be caused by three factors. The first factor is multiple differences between the two languages (e.g., gerunds or noun groups with noun pre-modifiers). The second is related to insufficient proficiency in the English language (e.g., errors in the use of prepositions). This second factor is also considered to be a significant negative predictor of language transfer issues (e.g., excessive nominalisation or underuse of verbs). The third factor is a lack of English-language academic writing competence. The lack of competence may result in challenges in choosing appropriate rhetoric structures (e.g., infinitive of purpose or repetition) or constructing meanings that are easy to comprehend.

In response to the second research question, the pedagogical implications of the results are summarised below. These implications are considered from two perspectives: linguistic and rhetoric. The first perspective covers the characteristic patterns of student writing that are related to grammar issues. Meanwhile, the second perspective is related more to the student rhetoric choices.

Linguistic Perspective

The most challenging grammar issues in a foreign language are probably those that are associated with grammar phenomena that are absent in the native language. Accordingly, with respect to excessive use of prepositions and prepositional phrases, these phenomena include the absence of gerunds and noun pre-modifiers. We suggest that in the classroom, such linguistic phenomena should be emphasised, carefully explained, and frequently practised.

With reference to nouns in a pre-modifying position, the tasks on constructing noun groups with noun pre-modifiers can be practised by analysing examples from the students' texts, both in the native language and in English, as well as examples from the expert writing. In addition, students should learn that noun groups with one or more pre-modifiers can also be specialist terms. Therefore, these terms should be simply learnt, by, for example, reading discipline-specific texts. Through such an approach, students are more likely to become accustomed to such structures and become familiar with many of the terms that are relevant to their research interests.

Turning to gerunds, students should learn that the *–ing* ending is a distinctive feature not only of gerunds, but also present participles and verbal nouns. For a non-expert, this feature may be confusing. Therefore, such situations should receive specific and systematic attention. For example, instruction can include tasks on distinguishing between the

forms, converting noun phrases into gerunds as well as reverse or back translation. Numerous examples of non-prototypical patterns can be found in student writing, while prototypical examples can be provided by expert writing.

One further grammar issue is related to the erroneous use of prepositions. The examples of such use include the deployment of both incorrect prepositions/particles and their erroneous adding. Some of these errors can be explained by language transfer (e.g., Lindqvist, 2010; Neuser, 2017; Tremblay, 2006; Williams & Hammarberg, 1998). However, other errors are likely to be simply a lack of proficiency. This observation emphasises the need to consistently develop general English competence along with specific academic competences, as well as to focus on issues that arise through language transfer.

Rhetoric Perspective

Rhetoric issues seem to be challenging because of some differences in the scientific register between the two languages. With respect to high values for preposition incidence and prepositional phrase density in student writing, these challenges include non-typical word choice for purpose, excessive nominalisation, underuse of strong verbs, and high repetition issues.

Turning to the '*for* + noun' structures to express purpose, these structures may not only increase the number of function words but are also likely to reduce ease of reading if the entire expression of purpose is lengthy. In the classroom, students need greater practice with paraphrasing skills to deal with this rhetoric choice. For instance, students could be encouraged to formulate their thoughts in Russian with verbs rather than nouns. Through such an approach, students may more accurately translate their purposes and intentions into English. Alternatively, if students employ machine translators, they can be more confident that the resulting text will convey correct meanings using appropriate rhetoric patterns. In addition, the instruction could include focusing on the infinitives of purpose in mentor texts. The actual examples of expert rhetoric choice may develop a firmly-established model of articulating this idea.

With reference to excessive nominalisation, instruction should ensure particular attention to this issue. Although nominalisation and phrasal style are characteristics of academic prose (e.g., Banks, 2008; Biber & Clark, 2002; Biber & Finegan, 2014; Biber & Gray, 2011), the student writers often lose balance between register norms and the expectations of the discourse community. Higher rates of nominalisation in Russian student writing can be explained by the fact that this highly nominal style stems from Russian academic traditions and firmly-established models of articulating ideas in the academic community. These traditions and models are passed down through generations, and modifying them

means modifying a way of thinking. Therefore, the instruction should include not only explaining the issue, but also practising some avoidance techniques. For example, students should be discouraged from constructing long sentences and should be made more aware of inconsistencies in their lengths. This issue of sentence length builds on recommendations from publishers such as Springer Nature[3], who advise authors to have 20-25 words in a sentence. In addition, the tendency of novice Russian engineering writers to demonstrate high inconsistencies in sentence length was revealed in Shpit and McCarthy (2022). The inconsistency means that student writing features significantly more sentences that are either too long or too short (sentence length standard deviation: $p < .001$, $\eta p2 = .110$). If students are encouraged to break up longer sentences, they will also have to divide up their long and complex propositions. As a result, student texts are more likely to feature more verbs and fewer prepositional and noun phrases, thus becoming easier for an international audience to read and comprehend. As such, during academic writing instruction courses, Russian novice writers should be encouraged to be more reader-responsible (Hinds, 1987; MacKenzie, 2015; Scollon et al., 2012; Wallwork, 2011). Since the target audience may well have various English language experiences and cultural backgrounds, students, and even expert Russian writers, should choose clearer, more concise, and more straightforward rhetoric. Note that we do not suggest avoiding nominalisation completely; instead, we encourage a balance between scientific register norms and text readability.

With respect to 'strong' verbs, the instruction should emphasise the importance of verbs in academic writing in the English language. This emphasis could be supported by appropriate examples from the ExC and intensive practice in paraphrasing sentences based on 'noun + verb' structures. Employing 'strong' verbs instead can improve various aspects of writing by reducing 1) the number of nouns and noun phrases, 2) the number of function words, and 3) the sentence length. Other techniques include reverse translation and peer review. These techniques may aid in making students active participants of the learning process.

The final issue is that of repetition. Student awareness needs to be raised in terms of the words and phrases that should be repeated (and by the same token, those that should not). Those that should be repeated often refer more to the specific terminology of a given paper, but they can also refer to strategies that maintain cohesion. Those that should not be repeated relate to the issues of lexical and syntactic diversity, which may determine the perceived quality of writing style. Such skills in these types of diversity are likely to improve by increasing language proficiency by, for example, practising paraphrasing tasks.

Limitations

We acknowledge that the current study has certain limitations. First, students' texts may have linguistic mistakes, for instance, in the use of articles or punctuation. These mistakes might have interfered with the automated processing results. Nevertheless, the qualitative analysis is unlikely to be affected by this shortcoming. A second limitation is that the analysis included texts from only one discipline. Therefore, we acknowledge that further research is required so that the results can be validated beyond the current scope of Radio engineering. This having been said, given the factors in Section III, we suggest that many findings are likely to be useful for a broader range of science and engineering students.

CONCLUSION

The approach presented in this paper to conducting complex comparative evaluation of written discourse patterns can motivate a wide range of further research. First, it is important to investigate other quantitative data from the study by Shpit and McCarthy (2022) since many other challenging issues in Russian student writing can be identified. Second, since the current corpora were limited to only one engineering field, it would be useful to identify the patterns that distinguish the writing of experts from various other engineering fields. Finally, it would be helpful to analyse the writing of experienced Russian scientists and their international counterparts so as to provide a wider range of data for Continuing Education Courses for academic scientists. Taken as whole, the approach presented in this study allows for a wealth of research that could be particularly important for practical implementation. Such research could significantly contribute to the theory and methodology of academic writing courses in Russia by meeting the needs of motivated writers. This approach could also be of interest to writing instructors from various non-English speaking countries, whose researchers strive to publish in international journals.

A further direction is related to computational resources, particularly those resources that are designed to automatically assess, evaluate, and provide formative feedback to written samples. In this regard, of primary interest are free online resources such as Auto-Peer (McCarthy et al., 2021). Auto-Peer was created to equip novice academic writers with knowledge on multiple aspects on research writing. The tool also provides evaluations of student texts as measured by these aspects. Auto-Peer may well be the most appropriate resource to develop from the findings of this study as its primary audience is non-Anglophone college/university level student writers. That is, Auto-Peer already

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3   Author Tutorials - https://www.springernature.com/gp/authors/campaigns/writing-in-english

features several algorithms that identify, explain, and offer advice on non-prototypical writing issues. Extending such algorithms to identify a variety of linguistic issues highlighted in the current study would seem appropriate to the goals of the software. Thus, we suggest that Auto-Peer (and related systems) consider the interests of international audiences and the differences between their native languages and English.

To conclude, this study presented insight into several rhetorical patterns from Russian student research writing that underlie high density of noun and prepositional phrases. Those patterns may well be explained by linguistic and socio-cultural differences in the two languages. The study also provided suggestions as to how to reduce the number of prepositions and prepositional phrases. These suggestions may also help to improve other text features, for example, sentence length or verb incidence. In turn, these improvements may help to guide student writers towards the conventions of their respective discourse community. The findings can also be used to improve or develop teaching materials, and to inform automated writing evaluation tools.

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None declared.

AUTHORS' CONTRIBUTION

Elena I. Shpit: Conceptualization, Formal analysis, Investigation, Methodology, Resources, Visualization, Writing – original draft.

Philip M. McCarthy: Formal analysis, Funding acquisition, Investigation, Methodology, Resources, Software, Supervision, Validation, Writing – review & editing.

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Modeling the Association between EFL Instructors' Foreign Language Teaching Enjoyment and Humor Styles

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ABSTRACT

Background: Positive psychology in the field of applied linguistics has recently shifted its focus from L2 learners to L2 teachers as teachers have been revealed to be a pivotal external affordance for the emergence of learners' positive emotions such as enjoyment. Exploring the link between teacher-related constructs can provide deep insights into L2 teachers' emotional agency within L2 classroom context.

Purpose: The current study seeks to examine the association between English as a foreign language (EFL) instructors' enjoyment of foreign language teaching (i.e., personal enjoyment, student appreciation, and social enjoyment) and humor styles (i.e., self-enhancing, affiliative, aggressive, and self-defeating humor styles).

Materials and Methods: In order to examine this association, 244 (151 males and 93 females) Turkish EFL instructors voluntarily completed self-report scales measuring their foreign language teaching enjoyment and humor styles.

Results: Results of the structural equation modeling (SEM) indicated that higher levels of student appreciation and social enjoyment are correlated with higher levels of affiliative and self-enhancing humor. In addition, greater degrees of personal enjoyment, student appreciation, and social enjoyment are correlated with lower levels of aggressive humor, while self-defeating humor was unrelated to any of the enjoyment indices. There was also no significant gender difference for any humor styles.

Conclusion: The findings are discussed in view of implications for teacher well-being.

KEYWORDS

Foreign language teaching enjoyment, humor styles, L2 teacher well-being

INTRODUCTION

The field of educational research was for a long time dominated with the study of negative emotional orientations such as anxiety (Marcos-Llinás & Garau, 2009), and by virtue of the emphasis on cognitive aspects of second or foreign language (L2) learning, the functions of emotional dispositions have generally been disregarded in L2 research (Richards, 2020). With the rise of the positive psychology (PS) in the late 1990s, there has been a growing surge of interest in positive emotions in domain-general education and consequently in domain-specific field of L2 education (Bigelow, 2019; Derakhshan, Greenier et al., 2022; Li, 2021; MacIntyre & Gregersen, 2012).

Emotions abound in the L2 classroom. L2 students at one end of the spectrum and the teacher on the other constitute the major emotional stakeholders in L2 classes. Notwithstanding a wealth of research on psychology of L2 learning, there remains a scarcity of research on L2 teacher emotions in general (Fan & Wang, 2022; Frenzel et al., 2016; Greenier et al., 2021; Keller, et al., 2014). While the significant role of the positive mindset of L2 teacher in teacher well-being and classroom functioning is taken for granted, there is a clear imbalance regarding work on L2 learner and teacher psychology (Mercer, 2018). However, it is noteworthy that, over the last decade, the pendulum has swung from predominantly language learner psychology to

both L2 teacher and teacher psychology. Thus, the field of L2 teaching psychology has increasingly become well-established in SLA studies (Derakhshan, 2022; Mercer, & Kostoulas, 2019).

Over the last decades, classroom enjoyment is one of the affective variables that has gained attention in L2 research (e.g., Boudreau et al., 2018; Li et al., 2022; Tahmouresi & Papi, 2021). Nonetheless, the recent research on this emotional construct has mainly focused on L2 learners, neglecting the investigation of L2 teachers and their specific experiences of teaching enjoyment (Proietti Ergün & Dewaele, 2021). A few studies which have scrutinized the phenomenon indicate that L2 teacher immunity factors such as well-being and resilience, and L2 grit as a personality trait are predictors of FLTE (e.g., Derakhshan, Dewaele et al., 2022; Proietti Ergün & Dewaele, 2021). In other words, it appears that happy, resilient, gritty L2 instructors are more likely to have a higher levels of teaching enjoyment in their classes. Given that previous L2 research has primarily concentrated on L2 learners' foreign language enjoyment (FLE), further endeavors in SLA with the focus on L2 teacher's professional enjoyment would be help achieve a better understanding of what shapes their foreign language teaching enjoyment (FLTE).

Meanwhile, many scholars (e.g., Derakhshan, Fathi et al., 2022; McDonough et al., 2013; Shakki, 2022; Tomlinson, 2010, 2013) advocate the premise of emotional engagement in language acquisition for effective and durable learning. Specifically, despite the bulk of studies that argue in favor of humor as a facilitating construct in educational settings, few studies to date have considered the effect of humor on positive mindset, particularly enjoyment, of L2 teachers. Moreover, although exploring the association of individual differences and humor has gained attention for personality research in recent years (Heintz & Ruch, 2019), there are few studies on teachers' humor styles (Liao et al., 2020) which could give a better understanding of how this construct can be linked to affective variables. Hence, the present research is the first investigation into the association between L2 teachers' FLTE experiences and humor styles.

LITERATURE REVIEW

Foreign Language Teaching Enjoyment

Identified as the most prominent (Frenzel, 2014) and the most frequent positive emotion in academic environment settings (Goetz et al., 2014), the construct of enjoyment is generally defined as the feeling of satisfaction and fulfillment elicited from the activity and/or the positive outcomes of the activity (Ainley & Hidi, 2014). Teacher's teaching enjoyment along with anxiety and anger are the most common emotional orientations in the practices of teaching in the class (Frenzel et al., 2016). Specifically, FLTE refers to L2 teacher's positive joyous emotional experience in the practice of teaching which may result from teacher-external (e.g., students, colleagues, and working environment) and/or teacher-internal (e.g., personality traits and attitudes toward profession) factors.

A wealth of domain-general studies has indicated that FLTE is associated with learners' experiences of learning enjoyment (Frenzel et al., 2018), quantity and quality of instruction (Russo et al, 2020), teaching mindset (Frondozo et al., 2020), and success (Stupnisky et al., 2019). Although teacher enjoyment has been thoroughly scrutinized in educational research, there is a small set of empirical studies concentrating on FLTE and its associations with psychological and personality-related variables, stemming from three major publications. The first is from Proietti Ergün and Dewaele's (2021) seminal work on the conceptualization and measurement of FLTE. In their study, EFL teachers' resilience and well-being were predictive of FLTE, with resilience being the stronger predictor. The findings highlight the prominence of L2 teacher well-being in shaping their FLTE. In their study, Proietti Ergün and Dewaele (2021) also developed a reliable and valid scale (see Instruments) for assessing language teachers' FLTE. In a second study, Derakhshan, Dewaele et al. (2022) studied 450 Iranian EFL teachers' teaching enjoyment so as to identify the contribution of resilience, well-being, and L2 grit on FLTE. Results established that all three personality-based and psychological variables were strong predictors of FLTE, concluding that EFL instructors' personality trait and well-being possess a major impact on fostering their FLTE in the class. Indeed, the findings of the former study are substantiated in the latter, indicating that FLTE is susceptible to L2 teacher immunity factors and personality traits. In the third study with a cohort of 296 Iranian EFL instructors, Fathi and Naderi (2022) explored the predicting effect of FLTE and L2 teacher resilience on teaching engagement. While both L2 resilience and FLTE significantly influenced L2 teachers' teaching engagement, FLTE exerted a stronger influence than resilience. All in all, studies have indicated that FLTE is highly susceptible to psychological and personality-related factors.

Drawing on emotional transmission theory, L2 teacher's FLTE seems to influence the way s/he interacts and socializes with the learners in the class. In other words, L2 teacher with higher levels of enjoyment can adopt different speaking styles when communicating with learners. In fact, teachers' teaching enjoyment can influence their emotional orientation towards their students and their relationships with them, which can boost students' engagement and motivation (Martin, 2006). More specifically, stemming from his/her professional enjoyment, the way the L2 teacher uses humor while interacting with the learners might correlate with FLTE.

Teacher Humor Styles

Humor is a multi-dimensional construct which possesses significance and purpose in the field of L2 learning and teaching (Neff & Dewaele, 2022). McNamara (2004) underlines the significance of teacher humor in creating a collaborative learning environment and fostering interactions in the class as it creates an encouraging academic environment for the learners (Booth-Butterfield & Booth-Butterfield, 1991). Indeed, humor can be used to effectively foster learning through creating a pleasant and enjoyable learning climate in the classroom (Bolkan & Goodboy, 2015). Additionally, the teaching profession demands emotional labor (Liao et al., 2020). In other words, L2 teachers' success in regulating their positive emotional state and establishing closer emotional relations with the students can foster their FLTE.

There has been a surge in interest in the psychology of humor over the last few decades (Martin & Ford, 2018), and it has been revealed to positively contribute to life satisfaction (Heintz et al., 2020), mental health (Schermer et al., 2019), well-being (Jiang et al., 2020) and physical health (Kuiper & Nicholl, 2004). Based on individual differences, Martin et al. (2003) classified the functioning of humor styles into four: self-enhancing, affiliative, aggressive, and self-defeating. The self-enhancing humor style generally aims to enhance the self, so as to feel better through maintaining a humorous outlook, and finding amusement in life's inconsistencies, even in unpleasant situations. Affiliative humor aims to benignly reinforce the individual's social bonds without being detrimental to oneself or others through, say, cracking jokes, narrating humorous remarks, or engaging in spontaneous witty conversations to entertain others. These two humor styles are hypothesized to have a positive impact on individuals' psychological and social well-being. In contrast, the aggressive humor style refers to malicious uses of humor, including ridiculing, excessively teasing, alienating, or belittling others, albeit generally being disguised with a playful fun, through which the self is enhanced at the expensive of others. Excessive utilization of aggressive humor style is likely to be harmful to the relationships and can appear to be potentially malicious to well-being (Martin et al., 2003). Self-defeating humor style points to excessively self-belittling or denigrating oneself by saying or doing funny things, so as to gain or maintain the approval of others. This humor, similarly, if used excessively, is detrimental to well-being since it involves downgrading the self and excluding individual emotional requirements (Martin et al., 2003).

Research on these four humor types have indicated that there are significantly positive correlations were found between benign humor and different psychological variables, inclusion empathy (Hampes, 2010), happiness (Ford et al., 2016), emotional intelligence (Karahan et al., 2019), mental health (Schneider et al., 2018) and life satisfaction (Dyck & Holtzman 2013). They have also found to negatively correlate with personal distress (Hampes, 2010), neuroticism (Plessen

et al., 2020), and depression (Dyck & Holtzman 2013), On the contrary, aggressive and self-defeating humor have been acknowledged to be positively correlated with depression (Tucker et al. 2013) and loneliness (Schermer et al. 2017), while being negatively associated with social wellbeing (Kuiper & Nicholl, 2004), and happiness (Ford et al. 2016).

Among a sample of 1456 trainee teachers, Karahan et al. (2019) found that self-enhancing and affiliative humor types are closely associated with problem-solving skills, while it exhibited a negative relationship with the other two humor styles. In their study, women exhibited a higher tendency to use benign rather than detrimental humor styles. In a different study on teacher's well-being, Ho's (2016) study with 539 K12 schoolteachers and Tümkaya's (2007) exploration with 283 university instructors similarly indicated that self-enhancing and affiliative humor styles were negatively associated with depersonalization and affective exhaustion, while positively linked with accomplishment. In Tümkaya's (2007) study, aggressive and self-defeating humor styles were positively related with burnout. Kuiper and McHale's (2009) study with middle school teachers indicated the facilitating role of affiliative humor style in building social support network. Echoing the results of the above-mentioned studies, in a meta-analysis study of subjective well-being, benign humor was found to improve subjective wellbeing (Jiang et al., 2020). Clearly, the studies highlight the strong relationship between the teacher's humor style and their psychological wellbeing.

While a wealth of research in the literature exists on students' FLE and its association with in-class humor (Neff & Dewaele, 2022), L2 achievement (Gomez et al., 2010; Jin & Zhang, 2018), willingness to communicate (Lee, 2020), thinking skills (Boardman, 2004), learner attitudes (Dewaele & Proietti Ergün, 2020), and teacher characteristics (Dewaele et al., 2019), research on L2 teachers' teaching enjoyment remains scant (Proietti Ergün & Dewaele, 2021). Although teachers' perceived humor styles have been investigated in association with their positive mindset such as emotional labor (Liao et al., 2020) and emotional intelligence (Karahan et al., 2019), the studies on the affinity of L2 teachers' humor styles and FLTE is lacking (Frenzel, 2014; Keller et al., 2014; Proietti Ergün & Dewaele, 2021). Thus, in the present study, we sought to explore the relationship between L2 teachers' FLTE and their senses of humor.

Hypothesizing the Associations between FLTE and Teacher Humor

The interplay between FLE and humor is indicated in Neff and Dewaele's (2022) study, in which FLE and L2 learners' preferences of humor strategies were found to be closely correlated. In their study, FLE and perception regarding the utilization of humor were indicated to possess a major impact on L2 learners' learning strategy preferences. Although this study explored the construct of FLE, not specifically FLTE,

humor was indicated to be correlated with L2 enjoyment. Given than teachers' psychological well-being and positive emotions appear to be related to teaching effectiveness (Ruzek et al., 2016), their individual humor styles also seem to be relatively associated with their psychological well-being (Liao et al., 2020). Teachers' positive emotions are, in fact, linked to the effectiveness of their instruction (Hagenauer & Volet, 2014). Being positively related to self-esteem and psychological well-being (Martin et al., 2003), in the present study, L2 teacher's self-enhancing and affiliative humor styles are firstly hypothesized to be positively correlated with teacher enjoyment in the classroom.

Secondly, language teachers who do not (hypothetically) enjoy their profession are more likely to adapt aggressive humor styles which may appear to be face-threatening to L2 students. A student's emotional dissonance (see Jansz & Timmers, 2002), which is a feeling of unease as a result of a threat to his or her identity, seems to be a potentially unavoidable consequence of aggressive humor. The frequent use of this malicious humor type through teasing, belittling or ridiculing students in the classroom is not only malicious to well-being (Martin et al., 2003), but more importantly can lead to devastating effects on students' perception of teacher support and can thereby negatively influence classroom enjoyment (see Jin & Zhang, 2018). In contradiction to loving pedagogy (see Wang et al., 2022), a teacher's aggressive humor style, such as destructive modification of speech style, may result in lower levels of student enjoyment, as well as teacher enjoyment in the class.

Thirdly, a teacher's self-defeating humor style is hypothesized to positively correlate with teacher's FLTE. The teacher's excessive reliance on self-belittling or denigrating himself by saying or doing funny things, so as to gain or maintain the approval of students not only can be harmful to well-being (Martin et al., 2003), but also can exhibit teacher's coping attempt to ameliorate any negative feelings s/he possesses. This type of detrimental-to-self humor style can be regarded a self-defense mechanism (Freud, 1960) aimed at protecting the self against negative emotional feelings, such as anxiety. Hence, this type of teacher humor can make the teacher feel useful and might hypothetically lead to a higher level of teaching enjoyment. However, given that this humor involves downgrading the self, it can threaten a teacher's professional identity. Underlining the close interplay between identity and the self, Beauchamp and Thomas (2009) identify self as one of the key-issues associated with professional identity. At the beginning of their professional journey, teachers engage in the process of identity formation, which involves developing a sense of self and establishing a connection between their identity and the external context of their classroom or school environment (Beauchamp & Thomas, 2009). Thus, teachers who excessively use self-defeating humor to make students laugh may succeed in potentially increasing the enjoyment levels of the learners but at the expense of jeopardizing their professional identity

development! Finally, an increasing consensus of findings on gendered speech and interaction suggest that female tend to be more careful in terms of socialization, since they are more cognizant of social status and more sensitive to how others may judge them (Yule, 2015). Hence, in the present study, it is also hypothesized that male L2 teachers are more likely to utilize, if any, aggressive and self-defeating humor styles in relation with their FLTE. In general, the hypotheses are summarized below:

Hypothesis 1 (H1): Higher levels of foreign language teaching enjoyment would be associated with greater use of self-enhancing and affiliative humor styles.

Hypothesis 2 (H2): Levels of foreign language teaching enjoyment would be negatively related to aggressive humor style.

Hypothesis 3 (H3): A positive pattern of relationship would be evident between foreign language teaching enjoyment and self-defeating humor style.

Hypothesis 4 (H4): There would be a significant gender difference for FLTE and teacher humor styles.

METHOD

Participants

The research sample was 244 (151 males and 93 females) Turkish EFL university instructors in Istanbul in the autumn 2022 (2021-2022 academic year). They were general English instructors teaching at the English preparatory schools of Turkish universities in Istanbul. At first, a corpus of more than one thousand email addresses from the university websites was randomly collected and the online questionnaire that consisted of two scales measuring their FLTE and humor styles was administered to them. At the beginning of the questionnaire, we explicitly mentioned that participation was voluntary, and their demographic information would remain confidential. We also obtained the informed consent of the participants.

Instruments

FLTE Scale

The EFL teachers' teaching enjoyment was measured by Proietti Ergün and Dewaele's (2021) adapted 9-item FLTE scale. The questionnaire consists of three components, namely, Student Appreciation (3 items), Personal Enjoyment (3 items), and Social Enjoyment (3 items). The items are rat-

ed from 1 to 5 on a Likert's scale. The internal consistency of the measure was high (Cronbach alpha = 0.85).

Humor Styles Questionnaire

The EFL teachers' humor styles were assessed by Martin et al.'s (2003) 32-item Humor Styles Questionnaire, which measures individuals' self-focused or other-focused benign as well as detrimental humor styles. The components of the scale include affiliative humor (8 items), self-enhancing (8 items), aggressive (8 items), and self-defeating (8 items) on a 5-point Likert's scale. The results indicated high reliability of .83, .78, .73, .81 for the four components, respectively. The other studies also indicated a satisfactory internal consistency of the measure (Vrabel et al., 2017).

Data Collection

The scales were shared in the form of a single Google Form through an email to the cohort of EFL university instructors for voluntary participation. After filling in the demographic information, the participants filled in the scales assessing their humor styles and ELTE. It is notable that the participants were asked to complete the questionnaires by self-evaluating their holistic emotional experiences in their teaching practices at university. The data collection continued for three whole months. After data collection, some incomplete responses were removed. As a result, a total number of 244 responses (93= 38.1 % males & 151= 61.9 % females; mean age = 28.3 years old) remained, which constituted an approximate rate of 94 %

Data Analysis

Mplus 8.4 was used for the analyses of the hypotheses. In order to address the non-normality of the data, a maximum likelihood estimator with robust standard error was utilized (Muthén & Muthén, 1998-2017). The exploratory SEM was generated using existing literature and theories (see Figure 1). The researchers decided to use SEM to analyse the data since it provides for variable latent modelling while accounting for measurement error (Ullman & Bentler, 2012). Consequently, the aspects could be studied particularly with the focus on the larger predictors and outcomes (Figure 1), with unbiased estimates, offering a richer understanding of the associations between constructs (Ullman & Bentler, 2012).

In order to assess the fitness of the model, we employed various goodness-of-fit indices, including Tucker-Lewis index (TLI), comparative fit index (CFI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA). To achieve a satisfactory model fit, TLI and CFL values of .90 or higher, SRMR value of .08 or lower, and SRMR value of .05 show sufficient and strong fit indices. Furthermore, we examined McDonald's non-cen-

trality index (NCI) and Gamma hat metrics (see McDonald, 1989; Steiger, 1989) as they are not affected by sample size and complexity of the model (Cheung & Rensvold, 2002). The literature recommends NCI ≥ .90 and Gamma hat ≥ .95 as cut-off values (Hu & Bentler, 1999). Lastly, when examining measurement invariance across different genders, we considered the following metrics as indicators of invariance: $\Delta\chi2$ p > .05, ΔCFI ≤.010, ΔRMSEA ≤.015, ΔSRMR ≤.03 (Wang & Wang, 2020), ΔGamma ≤ 001, and NCI ≤. 02 (Cheung & Rensvold, 2002).

RESULTS

## Preliminary Analysis: Descriptive Statistics and Correlation Coefficient

Table 1 indicated descriptive statistics and Pearson correlation coefficient matrix for two constructs and their subfactors.

Main Analysis: SEM

The model achieved sufficient fit ($\chi2$(df) = 211.453 (12), $p < 0.05$; CFI/TLI = 0.943/.924; RMSEA = 0.045; SRMR = 0.051; Gamma=.964; NCI= .915). The results indicated that some hypothesised pathways in the model were statistically insignificant. However, regarding the exploratory nature of this research, this is not an unexpected finding. The first hypothesis was partially supported. That is, there were statistically significant correlations between FLTE, self-enhancing and affiliative humor styles. The affiliative humor style was positively correlated with both student appreciation enjoyment ($r = .46$; $p < .001$) and social enjoyment ($r = .41$; $p < .001$). The self-enhancing humor style was also positively associated with both student appreciation enjoyment ($r = -.31$; $p < .001$) and social enjoyment ($r = .52$; $p < .001$). However, personal enjoyment was uncorrelated with affiliative and self-enhancing humor. Hence, it could be concluded that the FLTE and teacher humor style are co-dependent in the language classes.

Figure 2 also indicates the associations between the three measures of FLTE and aggressive and self-defeating humor. As expected, lower levels of aggressive humor were correlated with greater levels of personal enjoyment ($r = -.30$; p < .001), student appreciation ($r = -.27$; $p < .001$) and social enjoyment ($r = -.35$; $p < .001$). Self-defeating humor was unrelated to any of these indices of FLTE. These patterns similarly indicate that, as described in H2, FLTE is correlated with aggressive humor in the expected directions. However, there is no support for the relationship between FLTE and self-defeating humor (H3).

Figure 1
Hypothesized SEM
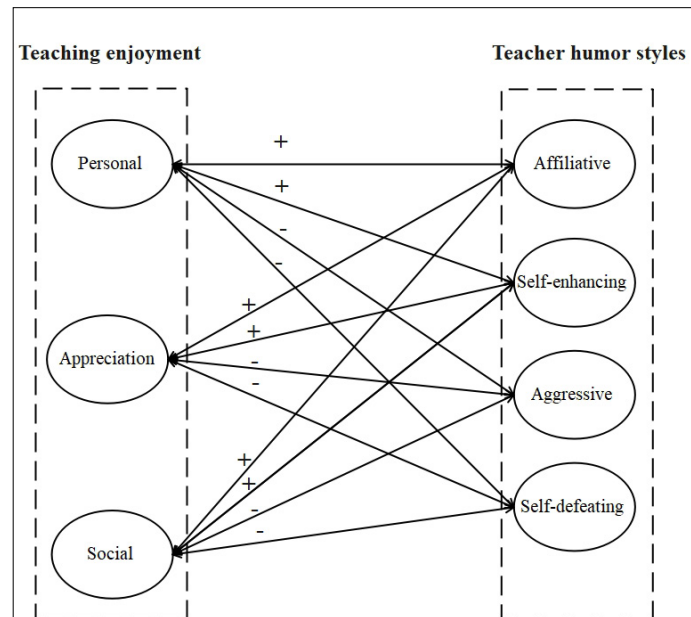
Table 1
Means, Standard Deviations, and Correlations for All Variables

Variable	M	SD	Personal	Appreciation	Social	Affiliative	Self-enhancing	Aggressive	Self-defeating
Personal	3.75	.51	—	.53***	.63***	-.09	-.13	-.31*	-.13
Appreciation	4.22	.44		—	.58**	.48**	.34**	-.28*	-.09
Social	4.34	.32			—	.42**	.54***	-.37**	-.13
Affiliative	5.8	.32				—	.40***	-.08	.06
Self-enhancing	5.87	.30					—	-.07	-.09
Aggressive	2.02	.37						—	.44**
Self-defeating	2.06	.32							—

*Note. *p < .05. **p < .01. ***p < .001.*

Test of Measurement Invariance across Genders

In order to examine the extent of invariance across genders, we performed measurement invariance tests for the two scales using a sample of 151 males and 93 females. The three models being investigated exhibited a good fit for the FLTE scale and all specified equality constraints demonstrated the stability of the measurement model (Table 2). We also considered the indices of fit model in our invariance measurement. The values of ΔCFI and ΔRMSEA indices were trivial across the models. In addition, the difference in NCI and Gamma hat did surpass the suggested values, indicating that the measurement model exhibited stability across gender for the FLTE scale.

Secondly, for the HSQ scale, the three models under investigation also indicated a good fit to the data. The *p*-value of the Δχ² across the models were nonsignificant (Table 3). Moreover, similar to the FLTE scale, the ΔRMSEA and ΔCFI values were trivial across the models. Nor did the differences in NCI and Gamma hat exceed the suggested values. Consequently, our results confirmed measurement invariance across genders for the HSQ scale.

Finally, an independent t-test revealed no significant gender difference for affiliative t(242) = .30, *p* < .75 and self-enhancing humor t(242) = -.77, *p* < .44. Nor was there a significant gender difference for aggressive t(242) = -.34, *p* < .73 and self-defeating humor t(242) = 2.85, *p* < .65 , with the 151 female participants scoring non-significantly higher than the 93 male participants in aggressive (Mean = 2.03 versus

Figure 2
SEM Results
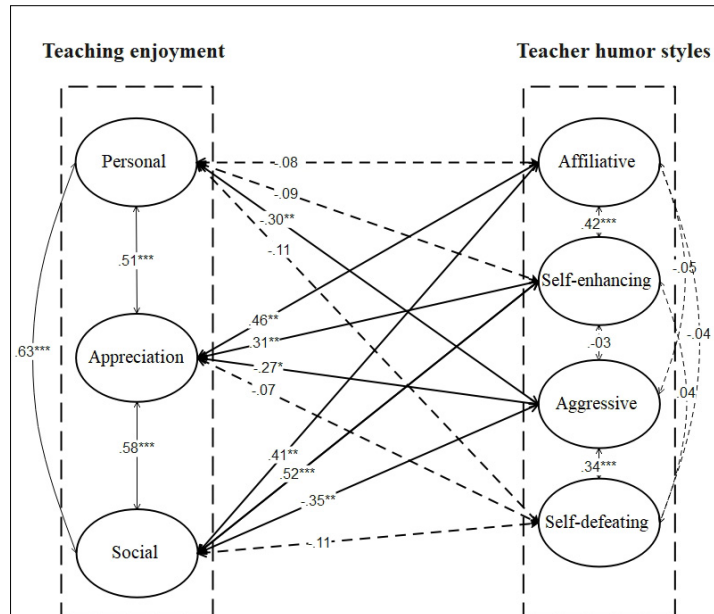
Note. ***p < .001 **p < .01 *p < .05

Mean = 2.01), with males scoring non-significantly higher than female in self-defeating humor (Mean = 2.13 versus Mean = 2.07). Therefore, the fourth hypothesis, which assumed a significant gender difference for FLTE and teacher humor styles was rejected. In sum, the suggested model was found to sufficiently match the data, and the majority of hypothesised correlations were verified. The model revealed a complex network between the three FLTE subfactors, each having distinct influences with the subfactors of teacher humour styles.

DISCUSSION

The purpose of the study was fourfold: we firstly looked at L2 teachers' level of FLTE and examined the correlation between L2 teacher's benign humor styles and their FLTE. L2 teachers exhibited the highest level of enjoyment in social enjoyment, while personal enjoyment was reported as the lowest level of enjoyment. In other words, L2 teachers self-evaluated their highest level of profession enjoyment in being together with their colleagues. Therefore, colleagues as a teacher-external factor had the most supporting role in teacher enjoyment in general. However, teacher-internal factors such as attitudes toward profession do not seem to possess a significant role as teacher-internal urges in FLTE. The findings are aligned with Jiang and Dewaele's (2019) study, in which L2 learners' FLTE was found to be more subject to peer and teacher factors than internal factors. Li et al. (2021) similarly identified that the impact of class setting as a learner-external factor was larger than that of trait emotional intelligence, as an internal-factor in learners' foreign

language enjoyment. Although these two studies were conducted with a cohort of L2 learners, they are aligned with the findings of the current study. They highlight that instructors' FLTE, akin to L2 learners' FLE, is a socially constructed phenomenon and is susceptible to contextual and external factors (e.g., colleagues and teaching environment) than individual characteristics (e.g., attitudes or emotional intelligence).

As already mentioned, it was hypothesized that L2 teachers with greater levels of FLTE are more likely to use benign humor so as to enhance their social bonds with the students and the self. Indeed, L2 teacher's psychological status and positive mindset might influence their preference in humor styles, and it can eventually influence their relationships with students. This hypothesis is echoed in the findings, indicating a strong association between FLTE and affiliative/self-enhancing humor styles. In different studies, these two benevolent humor types have also been indicated to be positively correlated with happiness, relationship satisfaction and emotional closeness (see Ford et al., 2016; Schneider et al., 2018).

Emotional crossover points to emotional transmissions from one person to another in the identical social context (Hartel & Page, 2009). In an educational environment, transmissions of emotions are inevitable in teacher-student interactions. A teacher's emotional status or flow of emotions can directly influence students' emotional orientations in the classroom environment. Indeed, L2 teacher enjoyment as an emotional phenomenon can beget L2 learner enjoyment through adopting benign humor styles. In studies on the influence of

Table 2

Test of Measurement Invariance between Male and Female for FLTE Scale

Model comparison	Δχ²	p	Df	ΔRMSEA	ΔCFI	ΔTLI	ΔGamma	ΔNCI
Configural x Metric	43.411	.38	7	.006	.009	.015	.000	.012
Metric x Scalar	21.752	.61	7	.003	.007	.008	.000	.014

Note. **Δ:** *dfiffrences*; *χ²: chi-square; df: degrees of freedom; TLI: Tucker–Lewis index; CFI: comparative fit index; RMSEA: root mean square error; SRMR: standardized root mean square residual; Gamma: Gamma hat; NCI = noncentrality index.*

Table 3

Test of Measurement Invariance between Male and Female for HSQ Scale

Model comparison	Δχ²	P	Df	ΔRMSEA	ΔCFI	ΔTLI	ΔGamma	ΔNCI
Configural x Metric	32.415	.41	9	.008	.008	.011	.000	.011
Metric x Scalar	23.187	.23	9	.004	.005	.009	.000	.013

Note. **Δ:** *differences*; *χ²: chi-square; df: degrees of freedom; TLI: Tucker–Lewis index; CFI: comparative fit index; RMSEA: root mean square error; SRMR: standardized root mean square residual; Gamma: Gamma hat; NCI = noncentrality index.*

teachers' enjoyment on learners' learning enjoyment, Frenzel et al. (2009) and Frenzel et al. (2018) indicated that teachers' professional enjoyment can be indirectly transmitted to learners through perceived teacher enthusiasm and enthusiastic teaching style. The emotional crossover theory posits that individuals' emotions are more likely to be transmitted to their social counterparts in prolonged class contacts. L2 teachers' higher levels of FLTE accompanying benign humor styles can result in the emotional transmission of teacher enjoyment, well-supported by self-enhancing and affiliative humor. This can eventually lead to social contagion of L2 teacher's FLTE. In a nutshell, enjoyment begets enjoyment. Aligned with the discussion on the emotional crossover theory, Talebzadeh et al.'s (2020) study indicated that the transmission enjoyment between students and teachers is influenced by the non-verbal signals exchanged during their interactions. Their study also revealed that the L2 teachers' enjoyment experience of enjoyment was unconsciously conveyed to the students, and vice versa, through their vocalization, movement, body language, and facial expressions. Proietti Ergün and Dewaele's (2021) study similarly indicated that resilient and happy teachers who enjoy their profession prove the bedrock for students' accomplishment. They advocate that the pleasant emotional environment created by teachers in the classroom is a prerequisite for psychological, as well as linguistic growth. All these studies highlight the prominence of teacher enjoyment in educational settings and the way in which it can pave the way for more effective education in the class.

Congruent with teacher enjoyment, a teacher's benign humor style can strengthen L2 teacher's social bonds with their colleagues and students and eventually result in higher levels of social enjoyment and student appreciations. Moreover, a teacher's perceived social enjoyment by virtue of his/her humor adaptation can boost the sense of belonging to the profession and contribute to the positive attitudes towards teaching profession. A positive attitude towards

teaching is one of the seven constructs that identify language teacher immunity (see Hiver & Dörnyei, 2017). A body of studies (e.g., McDonough et al., 2013; Tomlinson, 2010, 2013) also advocate the premise of affective engagement in language acquisition, stating that it is essential for effective and durable learning. The L2 teacher's benign humor can also result in a higher level of positive classroom affectivity, as a prerequisite for student as well as teacher wellbeing (see Hiver & Dörnyei, 2017).

In the study by Frenzel et al. (2016), teacher enjoyment had a strong positive correlation with appealing teaching practices, such as teacher support and caring, and clarity of instructional methods. Teaching enjoyment was also reported to be negatively correlated with more unpleasant teacher behavior such as teacher disrespect toward students. In congruence with Frenzel et al.'s (2016) argument, the present study indicated that FLTE is negatively correlated with an aggressive humor style which might be employed to belittle or ridicule students in the classroom. Indeed, L2 teachers who do not possess a higher level of enjoyment in their profession may employ aggressive humor resulting in teacher disrespect toward students. As already mentioned, the devastating outcomes of such misconduct could negatively influence learners' classroom enjoyment (see Jin & Zhang, 2018) while students' perception of teacher support could consequently fall into disfavor.

The role of emotional teacher support during the students' learning process has been indicated to possess a major impact on learners' classroom enjoyment (Skinner & Belmont, 1993). It can influence varying emotional traits in the classroom (Van Ryzin et al., 2009). Indeed, being introduced as type of a positive academic emotion (Pekrun et al., 2002), enjoyment has been confirmed as positively relating with teacher support (Lei et al., 2018). A wealth of empirical research has similarly revealed that learners who receive greater support from their teachers tend to experience

greater levels of positive emotions, such as enjoyment (e.g., Aldridge et al., 2012: Birgani et al., 2015). Aligned with the present study findings, a teacher's aggressive humor may lead to L2 learners' dissatisfying perceptions toward teacher support and thereby result in lower levels of learner enjoyment in the class.

The findings also align with Chen and Martin's (2007) study, which indicated that there was no significant gender difference in four humor styles among the Chinese university students. However, in their study, the Canadian male sample reported more use of aggressive and self-defeating humor than females. Dyck and Holtzman's (2013) study similarly exhibited a significant gender difference for aggressive humor only. With regard to FLE, there is a relatively limited number of studies that specifically concern gender differences in FLE (Mierzwa-Kamińska, 2021). In an investigation that explored the association of FLE and gender variable, Mierzwa (2019) found no gender difference in ELTE.

According to Kuiper et al. (2016), greater identity development is more closely related to affiliative and self-enhancing humor styles. They add that self-defeating humor is is consistent with negative aspects of the self, such as emotional instability and low self-acceptance. Employing self-defeating humor, the self-offending joker (teacher) may be unaware of being face-threatening to himself and jeopardizing professional identity. Hence, teachers who fail to regulate their professional emotions are less likely to experience higher levels of enjoyment in the class, since they are void of a clear sense of self-definition. Given that there is an association between damaged self-esteem and self-defeating humor (Stieger et al., 2011), and since self-esteem is predictive of professional identity (Motallebzadeh & Kazemi, 2018), L2 instructors who excessively rely on self-defeating humor may fail to effectively engage in professional identity development process. In addition, deficient identity development is closely related with a preference for using self-defeating humor as this type of humor style aligns with the negative characteristics of the self that relate to increased confusion about one's role in a community (Kuiper et al., 2016). In fact, L2 teacher's poor self-acceptance, lack of emotional instability, and an unclear sense of self-definition are some negative self-relevant features which are closely related with excessive use of self-defeating humor (Kuiper et al., 2016).

CONCLUSION

The aim of this study was to investigate the extent to which FLTE and L2 teacher humor are associated in the context of higher education in Turkey. The findings indicated that Turkish EFL teachers' FLTE and both benign humor styles

were significantly and positively related. While there was no support for the association between FLTE and self-defeating humor, aggressive humor was negatively correlated with all indices of FLTE. Finally, no significant gender difference was identified for FLTE and L2 teacher humor styles. Based on the results, it can be concluded that joyous L2 teachers are more likely to adopt benevolent humor to enhance the self and maintain a benign relationship with learners and colleagues. However, aggressive humor can be injurious to L2 teacher's relationship with learners and colleagues by virtue of being harmful to the self and malignant to others.

Limitations and Suggestions for Future Research

Our results need to be considered with their limitations. Firstly, we examined self-reported EFL teachers' FLTE and humor style without considering learner perceptions. Future research may consider scrutinizing perceived correlation between FLTE and teacher humor styles through L2 learners' viewpoint, as well as the extent to which teacher enjoyment and teacher humor are likely to result in L2 learners' FLE. Secondly, we asked the participants to self-evaluate their emotional orientations during the holistic practice of teaching English. Considering the dynamicity of affective variables, future studies might consider adopting an experience sampling method to collect data from a sample of teachers and their students across different time intervals. This would more accurately measure the dynamic nature of humor and enjoyment and identify L2 teachers' real-time emotional experiences in the classroom. Emotional crossover studies on the transmission of enjoyment from teacher to student would also be a fruitful area of research.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Mehdi Solhi: Conceptualization; Investigation; Methodology; Project administration; Resources; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing

Majid Elahi Shirvan: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Software; Validation; Writing – original draft; Writing – review & editing

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