L1-Induced Grammatical Errors Affecting Saudi Female EFL Students' Academic Writing: A Cross-Linguistic Study of Arabic Language Interference

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Abstract

The influence of native language on second language learning has long been a hot topic in the fields of psychology and linguistics. Grammatical errors in EFL students' academic writing, specifically influenced by their mother tongue, are not a new phenomenon but rather an enduring one. This research examined the grammatical errors in Saudi EFL students' writing and evaluated whether these errors are daunting for learners due to L1 influence. Furthermore, it aimed to identify the underlying reasons for these errors and propose strategies for addressing this pinpointed issue. A mixed-methods approach was utilised in this study. An error analysis was conducted on thirty-two student essays, supplemented by a contrastive analysis to examine the distinctions between Arabic and English and to identify potential sources of interlanguage errors. A set of semi-structured interviews was conducted with six advanced female students to explore the extent to which L1 transfer influenced the errors predicted by the contrastive analysis. Results demonstrated that interlingual errors accounted for a higher percentage at 58.09% compared to intralingual errors at 41.91%, underscoring the significant impact of the mother tongue on L2 learning and writing. Interview analysis unveiled a noteworthy finding: the learners' mother tongue continues to have a pivotal impact on grammatical errors; L1-influenced grammatical errors could be attributed, at least in part, to a deficiency in Contrastive Linguistics (CL)-informed instruction.

Keywords: academic writing, contrastive analysis, error analysis, grammatical errors, interlanguage, intralanguage

I. Introduction

Academic writing is one of the most arduous skills for English as a Foreign Language (EFL) learners, since it involves several essential elements, such as sentence formation, organising ideas, and grammatical aspects. Grammar assumes a crucial role that must not be neglected, as it is an indispensable factor in producing exceptional academic writing and the comprehension of written texts (Atashian & Al-Bahri, 2018). Notwithstanding, many learners lack awareness of its importance and struggle when writing, which can impede their academic and professional success (Bhowmik, 2021).

Various reasons contribute to grammatical errors, including limited emphasis on discourse-based grammar instruction (Omar, 2019), reliance on technology and grammar correction apps that may reduce effort in producing accurate texts (Ismael et al., 2022), as well as learners' reliance on literal translation without having grammatical awareness of the differences between Arabic and English.

Numerous studies have highlighted the influence of L1 on the Target Language (TL), with students frequently thinking in their Mother Tongue (MT) and experiencing L1 interference (Alasfour, 2018; Albondoq, 2023; Xiashi & Lin, 2020; etc.). However, some research posits that thinking in L1 is not inherently flawed but can be a tool to enhance comprehension in L2 (Tanış et al., 2020). Language transfer can positively impact writing and various linguistic aspects, leaving a unique imprint on other languages.

VanPatten & Williams (2015) note that some learners are incognisant of the negative impact of L1 transfer on language learning. VanPatten & Williams (2015) suggest that the transfer could yield both beneficial and adverse consequences, with negative transfer resulting in errors due to structural differences between languages (p. 20). Hence, the greater the divergence between Arabic and English, the more pronounced the errors and challenges.

Motivated by a deep intrigue to investigate L1 interference, this research aims to examine L1 transfer and its potential negative impact in the EFL context, identifying causes and viable solutions that could effectively mitigate grammatical errors in students' academic writing. To achieve this, a comprehensive quantitative analysis of Saudi students' academic writing is conducted to identify grammatical errors caused by L1 interference, utilising Error Analysis (EA) and Contrastive Analysis (CA). Recognising the limitations of EA and CA in elucidating the mental processes underlying transfer, qualitative interviews with female students are also conducted to gain insights into their perceptions and experiences regarding L1 transfer. The findings are hoped to draw teachers' and learners' attention to the role of

Arabic in acquiring English grammatical rules and cognise them of the errors resulting from negative L1 transfer.

2. Literature Review

2.1 Errors in Grammar

English is recognised as an international language and a tool for communication across diverse contexts (Al Towity, 2021). Since language requires an understanding of its grammar (Alasfour, 2018), scholars such as Ur (2006) emphasise that "the implicit and explicit knowledge of grammatical rules is crucial for mastering a language" (p.4). Grammar consists of formal patterns that organise words to assist learners in communicating meaning accurately (Fuller & Gundel, 1987). Therefore, grammar is an essential component of any language-learning process (Enita, 2019). Grammatically speaking, learners often make errors, which are an inevitable part of the language-learning process (Corder, 1967).

The significance of errors in language learning was first advocated by Corder (1967), who demonstrated how error data could benefit teachers, researchers, and students and provide them with strategies to avoid them (Amara, 2018). Applied linguists agree that the primary types of errors are interlingual and intralingual errors (Gass & Selinker, 2008; Richards, 1974). Interlingual errors are those caused by negative transfer from the mother tongue, where learners rely on their prior knowledge while expressing themselves in L2 (Gass & Selinker, 2008; James, 1998). Intralingual errors stem from defective usage or incomplete acquisition of L2 and its grammar, known as developmental errors (Richards, 2014).

The term interlanguage, associated with L1 transfer, is divided into positive and negative transfer. When certain features of the MT and the TL are similar, positive transfer will occur, promoting Second Language Acquisition (SLA) (Lado, 1957). Conversely, negative transfer arises from the differences between the MT and the TL, leading to errors that hinder language learning (Dechert, 1989).

Linguists have designed two main approaches that complement each other when examining L1 interference, namely contrastive analysis and error analysis (Alasfour, 2018; Alhajailan, 2020). CA is based on the transfer theory, where standard features transfer from L1 to L2 (James, 1998). CA can be subdivided into five steps for conducting a systematic comparison of two languages: selection, description, comparison, prediction, and verification (Baghdadi, 2021).

Corder (1967) defines EA as an approach that examines errors to assess learners' progress. Likewise, David Crystal (2003) defines EA as a strategy for identifying, classifying, and systematically interpreting the unacceptable forms produced by a learner. Conducting EA on students' writing is a systematic process that requires researchers to follow specific procedures sequentially. There are five procedures to follow when conducting EA research: locating errors, identifying errors, describing errors, explaining errors, and evaluating errors (Corder, 1974; as cited in Ellis, 1994). However, not all studies include all five steps. Researchers have to choose a model and modify this basic pattern according to the specific focus of their studies. For example, Corder's (1967) pioneering work ignored the first stage (locating the students' errors in their contexts or categories) but employed the following three steps (identification, description, and explanation). Additionally, Gass and Selinker (2008) identified the two additional steps of quantifying and remediating errors, while James (2013) added the contextualisation of errors as an additional stage (as cited in Alhajailan, 2020).

Since this study adopts the EA approach, the research steps are those identified by Corder (1974) and Ellis (2008) and further explained by James (1998): collection, identification, classification, explanation, evaluation, and quantification. These steps will be elaborated upon in the 'Analysis Procedures' section (3.3.1).

This EA model is utilised and supplemented by a comparative analysis between Arabic and English to identify the sources of interlanguage errors. It was chosen for this study because it is more suitable for the research purpose and slightly more detailed than Corder's (1967), as it includes the three abovementioned steps. The final step involves quantifying the grammatical errors to gain insights into their nature, using the method outlined by Corder in Ellis and Barkhuizen's theory (2008) (see section 3.3.1 for further details).

Dulay et al. (1982) introduced the surface structure taxonomy, which describes how learner sentences diverge from what seems correct in the TL. They identified four types of errors: addition (including unnecessary items), omission (deleting essential elements), misordering (incorrect positioning of items), and misselection (using an incorrect structure). Corder (1981) argued that such a categorisation is superficial and insufficient, suggesting that errors should be classified more systematically by linguistic level (e.g., phonology, grammar, lexical) and grammatical system (e.g., tense, articles). By combining the Surface Structure Taxonomy (SST) and Linguistic Category Taxonomy (LCT), this study aims to provide a wholesome picture of learners' grammatical errors.

2.2 A Comparative Analysis of English and Arabic Grammatical Features

2.2.1 Prepositions

One grammatical feature that has been studied in the literature in relation to CA is prepositions. Badawi et al. (2013) define prepositions as particles that precede nouns and express relationships between two entities (p. 201). There are several distinctions between English and Arabic prepositions. Arabic prepositions are much fewer in number than their English counterparts (Al-Marrani, 2009). English has around 150 prepositions, including simple prepositions, such as *in, to, for, at, of, with, on,* and *by*, and complex prepositions, such as *according to* and *with regard to* (Ballard, 2013).

2.2.2 Auxiliary Verb (Be)

Another grammatical feature that is problematic for learners is the auxiliary verb "be." The verb "be" has eight different forms: present

(am, is, are), past (was, were), and participle (present participle: being; past participle: been) (Albondoq, 2023). It plays a fundamental role in English sentences. According to Tahir (2009), certain verbs have limited independent meaning and primarily link the subject with the complement, such as the verb "be" in English. Arab learners often struggle with acquiring auxiliary verbs due to the absence of the verb "be" in Arabic, leading to errors in writing and translation.

2.2.3 Articles

Arabic learners face significant challenges in acquiring articles (Albalawi, 2016). The definite and indefinite articles are grammatical features that have been extensively studied in Arabic (Alasfour, 2018). According to Leech (1994), as cited in Wang (2010), the English article functions as a determiner used before a noun, with three distinct forms: the definite article (the), the indefinite article (a/an), and the non-article, also known as the zero article (Ø). In Arabic, the definite prefix /al/ is frequently employed, while the English definite article is less commonly used (Alhaysony, 2012). Furthermore, the absence of indefinite articles (a/an) in Arabic is a notable grammatical feature, leading learners to commonly omit these articles in English (Momani & Altaher, 2015).

2.2.4 Word Order

Word order differences between Arabic and English present significant challenges for Arabic learners. English has a rigid word order, while Arabic is more flexible, which can be daunting for learners whose L1 allows such flexibility (Bukhari, 2022). Word order can be defined as the grammatical arrangement of words within a sentence and how the words regularly appear in sentences (Al-khresheh, 2010). The primary and fixed English word order is Subject-Verb-Object (SVO), whereas the Arabic word order is VSO and can employ the word order SVO in colloquial Arabic (Sabbah, 2015). Similarly, there are notable differences in word order concerning adjectives and adverbs between the two languages.

2.2.5 Verb Tenses

Tenses are one of the fundamental elements of sentence formation, yet many learners have difficulty utilising them in their writing (Atashian & Al-Bahri, 2018). According to Comrie (1985), tenses are a grammaticalised expression of time placement, indicating whether an action or situation occurred in the past, present, or future. In Arabic, there are three tenses (past, present, and future), while English has fourteen tenses (Albalawi, 2016). Learners often confuse the perfect tense, which lacks a direct Arabic equivalent, with the simple past. Additionally, the progressive tense can convey meanings similar to the present simple, leading to difficulties for Arab learners (Gibriel, 2020).

2.2.6 Subject-Verb Agreement

The subject-verb agreement is a challenging feature that confuses Arab students. Subjects and verbs must be equivalent in number; if the subject is singular, the verb should be singular, while if the subject is plural, the verb should be plural (Amara, 2018). Differences between Arabic and English cause learners to neglect adding (s/es) to singular subjects in the simple present tense, treating them as plural (Dweik & Othman, 2017). Moreover, agreement errors can arise when students are incognisant of the distinction between countable and uncountable nouns. English nouns are classified as countable and uncountable, with only countable nouns having singular and plural forms (Xiashi & Lin, 2020).

2.2.7 Pronouns

Pronouns are parts of speech that derive their meaning from other noun phrases in a sentence (Igaab & Tarrad, 2018). According to Amara (2018), pronouns are categorised into four types: personal, demonstrative, relative, and reflexive. Arabic pronouns are distinguished by person, number, gender, and case, and they can be either independent (standing alone) or dependent (appearing as prefixes or suffixes) (Shamsan & Attayib, 2015). Arabic features more second and third-person pronouns than English. For example, Arabic has five second-person pronouns, while English has only one (you). The Arabic pronouns include anta (singular masculine), anti (singular feminine), antumā (dual masculine/feminine), antum (plural masculine), and antun (plural feminine), which refer to different forms based on context (Sabbah, 2015). In addition, there is no neuter pronoun in Arabic (it), which causes students to commit errors in their writing.

2.3 Studies of Arabic L1 Transfer

Many previous studies generally explored grammatical errors among Arabic learners of English, emphasising the role of L1 interference. For example, Ahamed (2016) investigated writing errors among Saudi students, identifying the copula "be" and articles as key problem areas linked to L1 interference. Moreover, Al Jawad & Mansour (2021) analysed essays and found 205 errors across 10 grammatical categories, reinforcing that direct translation from Arabic significantly contributes to these issues. Al Shahrani (2018) and Albalawi (2016) examined the influence of MT interference on the English writing among Saudi students. Al Shahrani (2018) found that interlingual errors (60.9%) were more prevalent than intralingual errors (39.1%), using a questionnaire to support the study's findings. Similarly, Albalawi (2016) revealed that Arabic linguistic structures significantly impacted grammatical accuracy, resulting in significant errors across various categories, including passive voice, articles, and errors in subject-verb agreement, as a result of the effect of L1.

Other studies delved into specific linguistic branches, such as syntax or specific grammatical features. For instance, Alasfour (2018) examined L1 transfer's impact on relative clauses, passive voice, and definite articles, noting that while no significant differences were found between transfer and non-transfer errors, L1 transfer remained prevalent. Similarly, Alhajailan (2020) examined syntactic errors in English noun phrases and found that interlanguage errors were more frequent than intralanguage errors. Albondoq (2023) and Almaisari &

Rasure (2020) investigated the impact of L1 transfer on the omission of the auxiliary verb "be" among Arab students. These studies emphasised the significant influence of L1 transfer on the difficulties Arab students encounter with the auxiliary verb "be," highlighting the need for targeted instructional strategies to address these issues. Haddad (2018) examined the influence of L1 transfer on using English prepositions. Using an elicitation test, participants filled in gaps with appropriate prepositions indicating spatial or temporal meaning. The findings indicated that L1 transfer is a significant source of errors for Arab EFL students. The study indicated that students often struggle with specific English prepositions due to ineffective teaching strategies employed in educational institutions.

While the above literature review indicates that the field of error analysis-based research continues to evolve, it reveals that there are very few studies, particularly in the EFL Saudi context, that have focused on the possible causes and solutions to address these grammatical difficulties in students' writing. To address this gap, this study endeavours to uncover the reasons behind learners' grammatical errors and suggest strategies for handling this phenomenon. In addition, many previous studies have exclusively relied on EA or CA to examine grammatical error issues and the role of the L1 transfer without incorporating interviews as a tool to reveal learners' perspectives. Interviews can help learners discuss their experiences and views on the L1 transfer factor (Alasfour, 2018).

2.4 Purpose of the Current Study

This study is an extension of previous research and is intended to contribute to the current literature on Arabic interference in English by examining the impact of L1 transfer on female Saudi EFL learners' grammatical errors in their writing. Recognising a significant gap in understanding the causes of these errors, the research seeks to uncover the reasons for L1-related grammatical issues and propose strategies for addressing them. Ultimately, the findings have the potential to contribute to language teaching practices by highlighting the importance of CL instruction and raising awareness among educators and students regarding its role in improving grammatical awareness and overall proficiency in academic writing.

In order to achieve the study objectives, research questions are posed as follows:

1) What kind of grammatical errors do Saudi female EFL students commit in their academic writing?

2) What are the most frequent grammatical errors that stem from L1 transfer in learners' academic writing?

3) What are learners' perspectives on the possible causes and solutions for their grammatical errors, with special reference to MT?

3. Methodology

3.1 Research Design

This study employs a multi-methodology that combines both qualitative and quantitative data collection and analysis in one study (Creswell, 2003). The qualitative method involves a grammatical analysis of learner errors (content analysis), where errors are identified, described, and classified, and their potential sources are explained through a systematic analysis of student samples. Complementing this, the quantitative method provides an overview of error frequencies and percentages across various grammatical features, offering statistical insights into the data. Additionally, qualitative interviews enrich the findings by adding depth and context, thus enhancing the overall understanding of the results.

The data are divided into two sets: cause-and-effect essays from the "Advanced Writing" course, corresponding to the B2-C1 level of the Common European Framework of Reference for Languages (CEFR), extracted from students' exams, and semi-structured interviews conducted with students. This approach is adopted to ensure that the limitations of one method are balanced by the other in answering the questions (Turpin & Finlayson, 2015).

3.2 Participants

This study focuses on EFL female students at the advanced writing level (Level 4) in the English Department of Qassim University, Saudi Arabia. The participants are enrolled in a bachelor's degree programme, with ages typically ranging from 20 to 24 years, and a proficiency level aligned with CEFR B2-C1. The decision to focus on this level is motivated by the fact that this stage represents the culmination of language writing in the programme, providing information that can be utilised for modification and development. Thirty-two academic papers are chosen, and six students are interviewed face-to-face. Given the nature and scope of the study, the researcher utilised the appropriate simple random sampling to ensure the study's validity and reliability, thereby enhancing the robustness of the research findings and strengthening the overall quality of this research.

3.3 Analysis Procedures

3.3.1 Written Analysis

The procedures for analysing the written data are divided into several steps, following the framework established by Corder (1974) and Ellis (2008), as further explained by James (1998):

- Data collection: Collecting students' writing samples.
- Error identification: Detecting and identifying all grammatical errors.
- Error classification: Classifying and locating the grammatical errors into their categories.
- Error explanation: Analysing the sources of the errors, whether interlingual or intralingual.

- Error evaluation and quantification: Evaluating and reviewing the error categories and examining their frequency.

After obtaining the necessary Institutional Review Board (IRB) approvals, the initial phase involved gathering essays from students enrolled in an advanced academic writing course CEFR Level B2-C1 in 2023. The English Department selected the set of essays to be analysed, tasking students with producing thoughtful responses that approximately spanned five paragraphs and consisted of roughly 200–250 words. The assigned topic centred around exploring the effects of exercise on health. To maintain confidentiality, all identifying markers, including names and ID numbers, were anonymised, using labels (e.g., P1, P2, etc.). Furthermore, physical copies of the essays were obtained via the Coordinator of the Writing Programme, following the necessary protocols.

In the second step, EA was conducted on the essays, with grammatical errors initially identified manually. In this step, the researcher examined the learners' sentence formation and created error categories (SST and LCT) based on the analysed data. To enhance the accuracy and validity of the analysis, an American ESL teacher with a PhD was engaged.

In the third step, the researcher delved into an analysis of the grammatical errors, distinguishing between interlingual and intralingual errors. The sources of errors qualifying as L1 transfers were explained by comparing the structural aspects of Arabic and English and making predictions based on this comparison. Additionally, CA literature was examined to further inform the analysis process. Following that, an Arabic-English bilingual teacher with a specialisation in linguistics was involved.

In the final step, the researcher quantified and tallied the grammatical errors, calculating:

- The overall percentage of L1-related errors out of total errors
- The overall percentage of intralingual errors out of total errors
- The percentage breakdown of specific grammatical error features, differentiating those originating from likely L1 transfer versus non-L1 transfer.

For this purpose, the researcher utilised the method outlined by Corder in Ellis and Barkhuizen's theory (2008) (as cited in Solihah, 2017) using the following formula:

$$P = \frac{F}{N} \times 100\ \%$$

P = percentage of L1-driven errors for an X feature

F = frequency of error stemming from the L1 transfer for an X feature

N = the total number of occurrences of all L1-related errors.

3.3.2 Interviews Analysis

Relying solely on paper analysis is insufficient to determine whether learners consciously or unconsciously rely on their MT when creating grammatical errors. Therefore, face-to-face, semi-structured interviews were conducted individually with six participants, lasting approximately 15 to 26 minutes. The researcher adopted a flexible approach, allowing additional questions as needed and aiming to create a relaxed atmosphere that encouraged participants to openly express their thoughts and experiences. The interviews consisted of approximately twelve questions (see Appendix), including follow-up inquiries, and they were not strictly limited to these predetermined questions. Additionally, participants were given the choice to express themselves either in Arabic or English, depending on their language preference, to ensure that they could articulate their ideas comfortably. The researcher provided the students with examples during the interviews, seeking to elicit a deeper understanding of their awareness regarding this issue.

The data analysis employed thematic analysis, a recognised technique for identifying patterns within qualitative data (Braun & Clarke, 2013). Before the analysis, participants approved the recording of conversations, and the initial step involved cleaning up the data. The recorded interviews were transcribed into notes to facilitate analysis (Dörnyei, 2009). To ensure anonymity, each interviewee was labelled (e.g., P1, P2). Following that, data familiarisation occurred, which entailed a comprehensive reading of all the data to assess coherence. Immersive reading, which aids in shaping ideas and identifying patterns (Bowen, 2009), was conducted before coding. Coding involved identifying and labelling segments and patterns within the data. Manual coding techniques were utilised in this process to facilitate the identification of relationships between themes and interpretations. This process revealed interesting themes. Although the sample size may limit the number of themes, some patterns were outlined during the analysis.

3.4 Data Processing for Written Analysis

3.4.1 Revising the Grammatical Errors

During this stage, the grammatical errors were independently reviewed and compared between the researcher's and the English native teacher's classifications. The comparison revealed that certain constructions in the learners' essays were deemed correct by the researcher but identified as errors by the English native teacher. While most errors were unanimously agreed upon, a few showed differences in interpretation.

Table 1. The Discrepancies between the Native Speaker and the Researcher

Grammatical Errors Category	Researcher		Native Speaker		Similarities		Differences	
	f	%	f	%	f	%	f	%
Articles	53	22.7%	54	22.4%	53	22.7%	1	12.5%
Prepositions	24	10.3%	26	10.8%	24	10.3%	2	25.0%
Auxiliary Verbs	15	6.4%	15	6.2%	15	6.4%	0	0.0%
Word Order	2	0.9%	3	1.2%	2	0.9%	1	12.5%
Verb Tenses/Forms	28	12.0%	28	11.6%	28	12.0%	0	0.0%
Subject-Verb Agreement	36	15.5%	36	14.9%	36	15.5%	0	0.0%
Pronouns	32	13.7%	34	14.1%	32	13.7%	2	25.0%
Noun Forms/Plurality	43	18.5%	45	18.7%	43	18.5%	2	25.0%

Table 1 presents an overview of the grammatical errors identified by both the researcher and the native English speaker. The analysis revealed a remarkable level of similarity, with 96.7% of errors consistent across both analyses. Only a small number of errors (3.3%) exhibited variations between the two analyses. To assess inter-rater reliability, Cohen's kappa coefficient, a specific reliability measure designed to evaluate agreement among analysts when classifying items into categories, was employed (Cohen, 1960). The inter-rater reliability using kappa = 0.976 (p < 0.001, 95% CI [0.804, 0.991]) indicated a robust agreement between the two raters. The following examples serve to illustrate some of the differences:

- Different Interpretations in Grammatical Errors

(1) Plural Nouns

"Good health has a direct impact on our personality."

In the analysis, the researcher considered "our personality" grammatically correct, viewing it as a unifying concept, emphasising the shared aspects of individuals' personalities. Therefore, both the singular and plural forms can be deemed acceptable. Nevertheless, it is essential to consider the writer's intended meaning, which may not be explicitly conveyed. However, the teacher's interpretation differs. According to the teacher, using the pronoun "our" implies that a plural form, "our personalities," should be utilised. Considering the teacher's perspective, the validity of this viewpoint is acknowledged based on contextual intuition and grammatical considerations.

(2) Pronouns

"Every person has to take care of exercise so that they don't lose their health."

From the teacher's perspective, the use of "they" as a singular pronoun to refer to a singular noun, such as "person," is viewed as grammatically incorrect. According to this perspective, gender-specific pronouns like "he or she" should be utilised instead. It is argued that the use of "they" as a gender-neutral singular pronoun is accepted; the student intends to refer to both "he" and "she" without specifying a particular gender. Therefore, "they" is utilised by the student to refer to "every person" in a general and inclusive manner. However, through discussions with the teacher, it became evident that this perspective aligns with grammatical books and guidelines.

The provided examples illuminate some variations in interpretation germane to certain grammatical constructions. It is imperative to acknowledge that such interpretations may inherently possess a subjective nature, thereby subject to variation among individuals. Despite these differences being relatively minor, they were subjected to discussions, ultimately leading to the attainment of a consensus, considering the native teacher's intuition as the fundamental basis for the analysis.

3.4.2 Revising the Classifications of Grammatical Errors

This subsequent stage involved classifying the grammatical errors into two categories: interlanguage and intralanguage. To ensure reliability, an Arabic-English bilingual teacher was consulted.

Table 2. The Discrepancies between the Bilingual Teacher and the Researcher

Interlingual and intralingual Errors	Researcher		Bilingual Teacher		Similarities		Differences	
	f	%	f	%	f	%	f	%
Articles	54	22.5%	52	22.4%	52	22.4%	2	20.0%
Prepositions	26	10.0%	23	10.8%	23	10.8%	3	30.0%
Auxiliary Verbs	15	6.5%	15	6.2%	15	6.2%	0	0.0%
Word Order	3	1.3%	3	1.2%	3	1.2%	0	0.0%
Verb Tenses/ Forms	28	12.1%	28	11.6%	28	11.6%	0	0.0%
Subject-Verb Agreements	36	15.6%	36	14.9%	36	14.9%	0	0.0%
Pronouns	34	12.6%	29	14.1%	29	14.1%	5	50.0%
Noun form	27	11.7%	27	11.2%	27	11.2%	0	0.0%
Plurality	18	7.8%	18	7.5%	18	7.5%	0	0.0%

Table 2 divulged a high level of similarity, as evidenced by the consistent classification of errors (95.9%) in both analyses. However, there were instances (4.2%) in which the classifications differed. Inter-rater reliability was assessed using Cohen's kappa coefficient, which was 0.916 (p < 0.001, 95% CI [0.744, 0.966]), indicating a very high level of agreement between the raters. The following examples present

some of the interpretations:

- Different Interpretations in Error Classification

(3) Articles

"Exercise therefore has many different effects <u>to human body</u>, that can be both harmful and helpful."

The bilingual teacher asserted that this error "to human body" stems from intralingual factors. According to the teacher, the student's tendency to add the definite article "the" is influenced by Arabic, as the students frequently use "al" in their MT. On the contrary, it can be posited that the student's omission of the article is due to the absence of a definite article in Arabic when referring to the human body. In Arabic, the phrase "human body" does not require a definite article, whereas in English, it is customary to use "the" before "human body."

(4) Prepositions

"<u>About 95% people</u> in the world are suffering from different kinds of illnesses."

From the teacher's perspective, this error "About 95% people" may be attributed to Arabic influence, whereby the omission of the preposition "of" could reflect a common usage in Arabic when expressing percentages. However, the researcher classified this as an intralingual error stemming from inadequate knowledge of English grammar rules, as the preposition "of" is essential in both English and Arabic to indicate the relationship between the percentage and the noun.

3.5 Trustworthiness

This study is keen to provide valid and reliable data and results. For writing samples, the researcher ensured that the students' writings were on the same topic and completed within the same time frame, conducting the tests in a classroom without external sources, seeking assistance, or using technology. As for error analysis, this research follows several techniques. In this study, the researcher is the primary instrument. The researcher utilised self-repetition/intra-rater reliability and the triangulation technique. According to Hikmah (2020), intra-rater means that the researcher reviews the data extensively and constantly. In addition, triangulation is a technique for determining the data's trustworthiness that uses something else to be compared (Moloeng, 1989). The type of triangulation that the researcher utilised is investigator triangulation, where data is examined by another investigator. The primary purpose of using multiple investigators is to decrease potential bias in analysing and reporting the data (Mitchell, 1986). Therefore, the researcher collaborates with two experts: a native-English speaker and an Arabic-English bilingual teacher. Additionally, to ensure ethical standards, this study obtained necessary approvals from the university and participants, adhering to established research ethics protocols, and protected participants' privacy by using codes instead of their names and numbers.

4. Reporting the Findings and Discussion

4.1 The Error Analysis Results

The findings of the current study divulged that Saudi female students exhibited a considerable number of diverse grammatical errors, with a total of 241 errors identified and categorised into eight subcategories.

Table 3. Grammatical Error Categories: Frequencies and Percentages

Category	Articles	Nouns	Subject-Verb Agreement	Pronouns	Verb Tenses-Forms	Prepositions	Auxiliary Verbs	Word Order	Total
f	54	45	36	34	28	26	15	3	241
%	22.4%	18.67%	14.94%	14.11%	11.62%	10.79%	6.22%	1.24%	100%

Table 3 shows a breakdown of grammatical errors and their frequency within each of the eight categories. The most prevalent category was articles, accounting for approximately 22.4% of the total errors, followed by nouns (18.67%), subject-verb agreement (14.94%), pronouns (14.11%), verb tenses and forms (11.62%), prepositions (10.79%), auxiliary verbs (6.22%), and word order (1.24%). These findings conclusively indicated that students struggled with various grammatical aspects of academic writing, emphasising the need for targeted instruction and focused attention in these areas to enhance students' grammatical accuracy. Notably, these findings align with previous studies solely focused on error analysis, such as those by Ahamed (2016), Al Towity (2021), and Khatter (2019), which identified similar challenges, including issues with tense/verb forms, subject-verb agreement, and difficulties with articles, prepositions, and pronouns.

Table 4. Intralingual and Interlingual Error Categories: Frequencies and Percentages

Intralingual Error							
Category	Plural Nouns	Verb Tenses/ Forms	Pronouns	Articles	Noun Forms	Auxiliary Verbs	Prepositions	Total
f	27	17	15	13	13	9	7	101
%	26.73%	16.83%	14.85%	12.87%	12.87%	8.91%	6.93%	41.91%

Interlingual Error								
Category	Articles	Subject-Verb Agreement	Prepositions	Pronouns	Verb Tenses/ Forms	Auxiliary Verbs	Noun Forms	Word Order	Total
f	41	36	19	19	11	6	5	3	140
%	29.29%	25.71%	13.57%	13.57%	7.86%	4.29%	3.57%	2.14%	58.09%

Table 4 provides an analysis of the numerous grammatical errors made by students, classified into two types: interlingual and intralingual errors. The results revealed that interlanguage errors constituted a higher percentage of total errors (58.09%) compared to intralanguage or developmental errors (41.91%). The prevalence of interlingual errors suggested that students' MT influenced their L2 writing, while intralingual errors indicated challenges in L2 acquisition. These findings are consistent with previous research indicating a higher percentage of interlingual errors in syntactic or specific grammatical features (e.g., Al Shahrani, 2018; Alhajailan, 2020). The higher frequency of interlingual errors in this study underscored the impact of students' L1 on their L2 writing. However, these findings may vary from previous studies that reported a predominance of intralingual errors over interlingual ones (e.g., Abdelmohsen, 2022; Alasfour, 2018; Almahammed, 2016). These divergent findings underscored the complexity of language acquisition and the variability in error patterns among learner groups. Factors such as differences in proficiency levels and research focus—such as specific grammatical features, L1 influence, and instructional methods—may have contributed to these contradictions.

Table 4 further details the frequencies and percentages of both error types. The total number of intralingual errors was 101, categorised into seven subcategories: prepositions, auxiliary verbs, noun forms, articles, pronouns, verb tenses/forms, and plural nouns. Plural nouns had the highest frequency at 26.73%, indicating that Saudi students struggled with forming plural nouns correctly. Another notable error category was verb tenses/forms (16.83%). It appeared that students often used the base form of verbs to avoid errors and occasionally applied the past form after modal verbs, likely due to specific learning strategies employed by them.

In terms of interlingual errors, 140 instances were classified into eight subcategories. The table systematically illustrated the distribution of these errors, with the most frequent categories appearing first. The most frequent error categories were articles, subject-verb agreement, prepositions, and pronouns, accounting for 82.14% of these errors. Conversely, verb tenses/forms, auxiliary verbs, noun forms, and word order were the least frequent, constituting approximately 17.86%.

Before delving into the primary focus of this study, which revolves around interlingual errors, it is noteworthy to illustrate instances of intralingual errors, which arose from inaccuracies within the English language itself:

1) Plural Nouns

*"People who don't have personal diet plan, can get several health <u>problem</u> such as heart, liver disease and blood sugar."

Correct: "People who don't have a personal diet plan can have several health <u>problems</u>, such as heart and liver disease and high blood sugar."

In this sentence, the student omitted the plural morpheme "-s" in "problem," showing a deficiency in understanding plural forms intrinsic to English.

2) Verb Tenses/ Forms

*"A lot of people that's not doing exercise <u>will noticed</u> how important it is if they become 40."

Correct: "A lot of people who are not exercising <u>will notice</u> how important it is if they become 40."

The student used "noticed" instead of the proper future tense "will notice," demonstrating a misunderstanding and misapplication of English grammar.

3) Pronouns

*"The exercise effect on physical health by manging <u>you</u> wight."

Correct: "Exercise affects your physical health by managing <u>your</u> weight."

The student used the pronoun "you" incorrectly instead of the possessive "your," reflecting a lack of understanding of grammar within English itself.

4) Articles

* "On the other hand, over-exercising can have <u>a negative consequences</u>."

Correct: "On the other hand, over-exercising can have <u>negative consequences</u>."

In this sentence, the student incorrectly added the article "a" to the plural noun "consequences." This usage contradicts the rules governing article usage in English, demonstrating a misunderstanding of English grammar rather than L1 influence.

5) Noun Forms

*"And while it is true that exercising can have <u>negative affect</u> and be addictive, it could also have many benefits for your body and mind."

Correct: "And while it is true that exercising can have <u>negative effects</u> and be addictive, it could also have many benefits for your body and mind."

This error has been commonly observed in numerous students' writing. It appears that the students are perplexed by the distinction between the words "affect" and "effect," leading to a misunderstanding and misuse of noun forms within English itself.

6) Auxiliary Verbs

*_"First, the lifestyle is the most important thing that it is affects one's fitness level."_

Correct: "First, lifestyle is the most important thing that affects one's fitness level."

The student unnecessarily included the auxiliary verb "is" before the main verb "affects," resulting in redundancy and a lack of grammatical consistency, demonstrating an inappropriate use of auxiliary verbs within English grammar.

7) Prepositions

*_"One of the good steps for healthy life is exercising, and as we know it is a key for component of a healthy lifestyle."_

Correct: "One of the good steps for a healthy life is exercising, and as we know, it is a key component of a healthy lifestyle."

The learner unnecessarily inserted the preposition "for" before "component," indicating misuse of prepositions within English itself rather than a direct translation from Arabic.

4.1.1 Articles

In the SLA field, Arab learners face a significant challenge in mastering English articles, even for advanced learners (Albalawi, 2016; Elmejie & Msimeer, 2021). The analysis divulged that articles were the most prevalent category of interlingual errors, totalling 41 errors, encompassing both omission and addition subcategories. Table 5 summarises the frequencies of interlingual errors within the article subcategories, as identified by SST.

Table 5. Article Subcategories by SST

Articles	Indefinite Articles a/an	Definite Article The	
Subcategories	Omission	Addition	Omission
f	33	7	1
%	80.49%.	17.07%	2.44%

Table 5 shows that 33 errors were identified in the indefinite articles (a/an) subcategory, accounting for approximately 80.49%, primarily due to omission. In the definite article subcategory, 7 errors were identified as additions, accounting for 17.07%, while only one error was identified as an omission, representing 2.44%. To illustrate the most common error patterns, the following two examples are provided with explanations:

- Indefinite Articles, Omission

  * _"Having all of these above-mentioned bad habits are a cause of unhealthy lifestyle."_

  Correct: "Having all of these above-mentioned bad habits is a cause of an unhealthy lifestyle."

This sentence demonstrates a recurring pattern in the students' writing. In English, using indefinite articles before singular countable nouns indicates a non-specific reference, as seen when "an" is needed before "unhealthy." Notwithstanding, Arab learners tend to omit (a/an) due to their absence in Arabic as a grammatical feature (Momani & Altaher, 2015). This oversight reflects a transfer strategy learners employ, relying on patterns from their MT. This aligns with previous studies that identified the omission of these articles as a common issue in Arab learners' writing (Al Jawad & Mansour, 2021; Sabbah, 2015).

- Definite Article, Addition

  * _"The bad habits can impact on our health and we can fix that in many ways."_

  Correct: "Bad habits can impact our health, and we can fix them in many ways."

In this sentence, the definite article is unnecessary before "bad habits," as it refers to negative habits in general. This error is common among Saudi students, who often insert the definite article for the zero article, influenced by their L1. Arab students tend to overuse the Arabic definite article /al/, which negatively affects their use of English articles (Elmejie & Msimeer, 2021). This observation aligns with previous studies highlighting the overuse of definite articles in Arab learners' writing (Alasfour, 2018; Albalawi, 2016; Alhajailan, 2020).

4.1.2 Subject-Verb Agreement

The study found that subject-verb agreement constituted the second most prevalent category in students' essays (25.71%). It became apparent that even advanced students struggled to apply subject-verb agreement accurately. Igaab & Altai (2018) noted that while English achieves number agreement by adding -_s_ to the verb for the third person singular, Arabic encompasses case, number, gender, and person in its agreement rules, using verb modifications for singular, dual, and plural forms.

Table 6. Subject-Verb Agreement Subcategories by SST

Subject-Verb Agreement			
Subcategories	Omission	Addition	Misselection
f	16	13	7
%	44.44%	36.11%	19.44%

The analysis of interlingual errors within the subject-verb agreement subcategories, shown in Table 6, indicates that "omission" is the

most common subcategory, comprising 44.44%, followed by "addition" at 36.11% and "misselection" at 19.44%. Examples are provided to illustrate these patterns observed among Saudi learners:

- Omission and Addition of Subject-Verb Agreement

    *"_The doctor know_ the best daily routine to fat and skinny people."

    Correct: "_The doctor knows_ the best daily routine for fat and skinny people."

This sentence exemplifies a recurring pattern in students' writing, with 29 occurrences. The student omitted the required -s suffix after the verb "know," which is essential for standard English. Arab students often add -s for plural subjects and omit it for singular ones, unlike in English. Hourani (2008) highlighted this confusion stems from Arabic grammar, where verbs must match the subject in singular or plural. Therefore, these errors arise from L1 interference, as learners rely on Arabic patterns. This aligns with previous studies identifying inaccuracies in subject-verb agreement among Arab learners (Albalawi, 2016; Al Jawad & Mansour, 2021; Al Shahrani, 2018).

- Misselection of Subject-Verb Agreement

    *"Too much exercise have a negative impact on their physical health."

    Correct: "Too much exercise has a negative impact on their physical health."

This example highlights a subject-verb agreement error, using "have" instead of "has" with the singular subject "too much exercise." This error is influenced by the learner's L1, as Arabic does not distinguish between third-person singular and plural verb forms in the present tense. This aligns with findings from Amara (2018), Gibriel (2020), and Hourani (2008), which emphasised L1 interference on subject-verb agreement among Arab learners.

4.1.3 Prepositions

The use of English prepositions is widely recognised as one of the most challenging aspects, even for native speakers (Haddad, 2018). Ergo, it is not surprising that Arab students make errors in this area due to their nuanced nature. This study divulged that interlingual errors involving prepositions ranked third in frequency, constituting 13.57% of total interlingual errors.

Table 7. Prepositions Subcategories by SST

Prepositions			
Subcategories	Omission	Addition	Misselection
f	3	5	11
%	15.79%	26.32%	57.89%

According to the SST analysis, Table 7 summarises the three subcategories of preposition errors: misselection, addition, and omission. The most common error is misselection (57.89%), followed by addition (26.32%) and omission (15.79%) of total errors. The following examples illustrate patterns observed among Saudi learners:

- Misselection of Prepositions

    *"It is would probably have a lot of body health problem _in early age_."

    Correct: "It would probably have a lot of body health problems _at an early age._"

This sentence features a misselection error, using "in" instead of "at." The correct preposition, "at," indicates a specific point or time, while "in" refers to a broader timeframe. This error arises from L1 interference, as the Arabic preposition "/fi/" corresponds to multiple English prepositions like "in," "into," "at," "on," and "during" (Alhajailan, 2020; Sabbah, 2015). Thus, direct translation from Arabic to English can lead to such errors.

- Addition of Prepositions

    *"The bad habits can _impact on our health_ and we can fix that in many ways."

    Correct: "Bad habits can _impact our health_, and we can fix that in many ways."

In this sentence, one of the two languages requires a preposition while the other does not. The student inaccurately added the unnecessary preposition "on, "leading to a redundancy. This error likely stems from the student's perception of the need for the Arabic preposition "/ala/" during translation, even though no preposition is required in English for the equivalent context. This aligns with studies by Al-Zubeiry (2015) and Sabbah (2015), which noted similar patterns.

- Omission of Prepositions

    *"One of the benefit that every person wants _is improve body shape_, whether you want to losing or increasing your weight."

    Correct: "One of the benefits that every person wants _is to improve body shape_, whether (s)he wants to lose or increase his/her weight."

In this example, the student omits the preposition "to" before the verb "improve." This omission results from negative Arabic transfer, where the student overgeneralises an Arabic structure that doesn't require a preposition. Such differences often lead Arabic speakers to omit necessary prepositions when translating to English. This error pattern has been observed in previous studies (Gibriel, 2020; Khatter,

2019).

4.1.4 Pronouns

Pronouns pose challenges for Arab students due to differences between Arabic and English pronoun systems. Unlike English, Arabic features two forms of subject pronouns: independent (detached), such as "?na" (I), and pronominal suffixes (attached), which are integral parts of verbs, for example, "katab-tu" (I wrote) (Al-Jarf, 2010). In Arabic, the preference for attached pronouns over detached pronouns often leads to confusion when using pronouns in English. This study found that pronoun-related interlingual errors constituted 13.57% of the total.

Table 8. Pronouns Subcategories by SST

	Pronouns	
Subcategories	Omission	Addition
f	12	7
%	63.16%	36.84%

Table 8 presents subcategories of interlingual pronoun errors, showing that omission errors are more prevalent in 12 instances (63.16%), while addition errors account for 7 instances (36.84%). The following examples illustrate these patterns among Saudi learners, with explanations:

- Omission of Pronouns

  * *"Exercising regularly helps sleep better. Moreover, helps increase energy in the human body."*

  Correct: *"Exercising regularly helps you sleep better. Moreover, it helps increase energy in the human body."*

This error frequently appears in students' essays, where they often omit the dependent pronoun "it." This occurs when students think in Arabic or translate literally, utilising attached pronouns as an integral part of the verb, such as (yusa'id) for (it helps) by dropping "it." This aligns with studies demonstrating that Arabic is a 'pro-drop' language, allowing for the omission of subject pronouns when a verb and its embedded pronoun can form a single word, whereas, in English, two separate words can stand for one Arabic word (Al-Jarf, 2010; Khatter, 2019).

- Addition of Pronouns

  *"*People they don't* care to check or even exercise at all."*

  Correct: *"People don't care to check or even exercise at all."*

This error is also observed among students who use redundant pronouns, categorised as interlingual based on the CA. Studies note that Arab students incorporate personal pronouns into verbs in Arabic, with certain morphemes indicating the pronoun, leading them to use two subjects in sentences (Hourani, 2008; Sabbah, 2015). Likewise, Al-Zubeiry (2015) found that redundancy of subject pronouns was the highest type of error, indicating that students were influenced by Arabic structure and wrongly added the subject pronoun as a juxtaposed item to the main subject.

4.1.5 Verb Tenses and Forms

Arab learners often struggle with verb tenses due to significant differences between Arabic and English. While Arabic has only three tenses (past, present, future), English has multiple tenses with perfective and progressive aspects (Ali, 2007); ergo, learners face challenges in producing progressive and perfect tenses (Sabbah, 2015). Remarkably, in the students' essays, the perfect tense was rarely observed, often substituted with past and present tenses. Table 4 divulges that about 7.86% of the interlingual errors were related to verb tense and form, specifically falling under the misselection subcategory, indicating difficulties in forming the appropriate tense. The relatively small frequency could suggest that students consciously avoided complex structures. Examples of some patterns are provided below:

- Misselection of Verb Forms

  * *"Did you ever seen an old woman can jump and do everything that early adulthood can do?"*

  Correct: *"Have you ever seen an old woman jump and do everything that early adulthood can do?"*

  * *"That is the best choice you have ever make, is to do regular exercise for your body."*

  Correct: *"That is the best choice you have ever made to do regular exercise for your body."*

These sentences illustrate errors where students used the past or present simple tense instead of the present perfect tense. It was hypothesised that when a tense lacks a direct equivalent in Arabic, such as the perfect tense, students compensate for this gap through negative transfer from their MT (Alzahrani, 2020). Arabic speakers often use the past tense to describe past experiences without emphasising the connection to the present. Consequently, students often resort to simple past/present tenses instead of the present perfect (Alzahrani, 2020; Gibriel, 2020). These errors stem from L1 interference and are consistent with findings from various studies (Al Jawad & Mansour, 2021; Sabbah, 2015; etc.). The following example demonstrates another tense error in the misselection category:

  *"*Another positive result due to a person exercising is have a better state of mind."*

Correct: "Another positive result due to a person exercising <u>is having</u> a better state of mind."

In this sentence, the student used the base form of the verb instead of the gerund form (-ing). Students often use and prefer the base form of verbs, likely because it is a fundamental form across languages, helping avoid errors and reducing the risk of incorrect conjugations. Therefore, this error reflects the limited use of the -ing form by Arab students, as Arabic lacks a direct equivalent (Al Jawad and Mansour, 2021; Hourani, 2008).

4.1.6 Auxiliary Verbs

Arab students often struggle with the auxiliary verb "be" in English, resulting in omissions, additions, and substitutions. This difficulty is heightened for students due to the absence of an explicit copula in Arabic, leading them to ignore its usage when translating (Albondoq, 2023). The analysis, as shown in Table 4, indicated that about 4.29% of the auxiliary verb errors were omissions and produced by six students. Other errors in the misselection subcategory were considered developmental errors, i.e., intralingual errors (Almaisari & Rasure, 2020). The provided example illustrates the pattern of omitting the copula "be":

- Omission of Auxiliary Verbs

  * *"<u>All the doctors around the world saying</u> that exercise so important for health."*

  Correct: "<u>All the doctors around the world are saying</u> that exercise <u>is</u> so important for health."

The sentence exhibits an omission of "are" and "is." This omission can be attributed to the lack of an explicit copula in Arabic, causing learners to overlook auxiliary verbs when translating or thinking in their L1, significantly affecting English sentence construction (Ahamed, 2016; Khatter, 2019).

4.1.7 Noun Forms

Noun forms significantly vary between languages (Xiashi & Lin, 2020), leading to confusion among students, particularly in distinguishing between countable and uncountable nouns and possessive nouns. In English, nouns are classified as countable or uncountable, with only countable nouns having singular and plural forms. Arabic speakers may treat certain uncountable nouns in English as countable. Additionally, English features a possessive noun construction using the apostrophe ('s), which has no equivalent in Arabic. Ergo, Arab learners often mix countable and uncountable nouns and omit noun possessive markings. This research indicates that noun forms account for about 3.57% of all interlingual errors, primarily in the misselection subcategory. The following example exemplifies some of the patterns:

- Misselection of Nouns

  * *"Health is the most important thing in <u>the person life</u>."*

  Correct: "Health is the most important thing in <u>a person's life</u>."

This error shows a common issue with noun form, specifically the misformation of possessive marking. The student failed to use the appropriate possessive form to indicate ownership, as standard English requires. This error often arises from L1 influence, as Arabic uses possessive constructs or pronouns instead of the English apostrophe ('s). This pattern aligns with findings from Alhajailan (2020) and Al Shahrani (2018), who noted that Saudi students frequently omit or misform the possessive "-s" due to L1 interference.

4.1.8 Word Order

Word order poses a significant challenge for students due to the negative transfer from Arabic (Momani & Altaher, 2015). English has a rigid word order, whereas Arabic allows for more flexibility, making it difficult for learners to adapt to English's stricter structure (Bukhari, 2022). Table 4 shows that word order errors are relatively infrequent, accounting for about 2.14% of all interlingual errors, primarily in the misordering subcategory. These errors indicate challenges in correctly arranging words in English sentences. An example illustrating one of these patterns is provided:

- Misordering

  "There is some people who exercise too much and <u>that affect badly</u> for their bodies."

  Correct 1: "There are some people who exercise too much, and <u>that badly affects</u> their bodies."

  Correct 2: "There are some people who exercise too much, and <u>that affects their bodies badly</u>."

This sentence contains a word order error in the placement of the manner adverb. A contrastive analysis shows that this is influenced by the negative transfer, where adverbials can occupy the same positions as in the speaker's L1. Although there is a lack of studies discussing the CA of adverbs, it is known that manner adverbs typically occur before the main verb or at the end of the sentence (Cambridge UP, 2019) and at the beginning for emphasis. In Arabic, adverbs are more flexible, appearing before, after, or in the middle of the verb (Al Aqad, 2013). In this case, placing the adverb directly after the verb is an interlingual error, as Arabic speakers commonly position the manner adverb after the main verb.

4.2 The Interview Results

The interviews provided valuable insights into students' transfer habits in writing, along with their perspectives on the potential causes and solutions for this phenomenon. Three distinct themes emerged from the interviews. As stated in the analysis procedures, interviewees

are identified using codes to maintain anonymity (P1, P2, ...).

4.2.1 Students' Writing Habits and L1 Transfer

Through semi-structured interviews with the students, it became apparent that Arabic thinking significantly influenced their L2 writing. The primary objective was to assess whether students are cognisant of potential L1 transfer effects leading to grammatical errors in their L2 writing. To unearth their writing processes, participants were asked a series of questions (see Appendix).

The participants unanimously acknowledged their reliance on Arabic brainstorming as a preliminary step before writing. For instance, (P6) elucidated her mental process, detailing:

> "... When I have an exam, I first write the entire essay in Arabic and then translate it into English; this helps me organise my thoughts ... I know that this is not the correct way, but because I struggle to generate ideas and my limited vocabulary, I resort to thinking in Arabic."

A close experience was expressed by one of the students, offering an insightful perspective on her writing process:

> "I practise writing daily, so I usually do not need to rely on Arabic thinking, but when I face difficulties during exams, [there must be an Arabic fingerprint] ... I understand that if I think in Arabic, there will be issues with the sentence structure, yet it is hard to identify the errors." (P2).

When asked about the challenges in their writing practice and whether they compared grammatical structures between the two languages, most participants expressed difficulties with grammar, referring to it as a complicated puzzle or resembling mathematics. They specifically highlighted the perfect and past tenses and prepositions as the most challenging aspects when writing in English. For instance, (P1) replied:

> "In my previous writing courses, I used to compare grammatical structures in Arabic and English as a memorisation aid, but over time, I realised that this technique was wrong and only confused me when writing."

Remarkably, when one student was asked about the most challenging aspect of her writing process, she confidently stated:

> "Nothing ... I am quite good at grammar and vocabulary ... I am fully aware of the grammatical differences between the two languages..."

However, when presented with some examples to identify grammatical errors, she faced challenges in recognising them and acknowledged the intricacy of the matter, particularly concerning articles and prepositions. Additionally, she candidly admitted:

> "While I do not directly compare structures between Arabic and English, there are times when I have difficulty applying the appropriate grammar rules... I modify the entire sentence structure, opting for simpler alternatives to avoid making errors." (P3).

The interviews provided significant insights into the students' cognitive processes, strongly supporting the claim that L1 transfer constitutes a primary factor influencing grammatical errors in their L2 writing.

4.2.2 Causes of L1 Grammatical Errors

These interviews revealed the extent to which the students were conscious of instructions on grammatical differences as a potential reason for their limited awareness. They also examined perspectives on possible causes of this phenomenon. Insights from the participants' responses indicated limited knowledge of the instructions germane to comparative linguistics. Notwithstanding, it is noteworthy that P2 and P3 shared the perspective that it is logical to establish a distinct separation between the two languages before pursuing studies in the English major. When asked about their perspectives, P2 noted the lack of exposure to CA instruction, emphasising that:

> "I think it is primarily the teacher's responsibility to inform us about the differences so that we can separate between the two languages... "

She highlighted the benefits of having teachers knowledgeable in both languages, especially for beginners, stating:

> " Some teachers who teach the writing courses may not have a background as native Arabic speakers, and even that is good for us, but for some beginner students, it is good that the teacher has a strong knowledge of both Arabic and English."

Another participant pointed out the absence of an essential course in comparative linguistics, suggesting:

> "... I would prefer it to be an obligatory subject...as future translators, we need to ensure that there are no grammatical errors in our writing." (P3).

P6 mentioned the reliance on technology for writing support, stating:

> "Nowadays, teachers prefer to give us homework through Blackboard, which is good for us... we do not prefer in-class writing ... I rely on Google Translator and grammar correction programmes, which may contribute to my errors."

While the influence of technology on grammatical errors is noteworthy, it falls outside the scope of this study.

The absence of explicit instructions on the differences between the two languages suggested a potential lack of awareness regarding the impact of contrastive linguistics instruction on students. Furthermore, the causes mentioned by the students may indeed contribute to L1 grammatical errors.

4.2.3 Solutions to Decrease L1 Grammatical Errors

It is worth noting that all participants concurred on the significance of practice in reducing errors while acknowledging that their English writing was primarily confined to the classroom and social media.

When asking about potential solutions, P1 emphasised the role of teachers in providing instructions on contrastive grammar and highlighting its significance. She expressed the following viewpoint:

> "...the teacher must provide explicit instructions on contrastive grammar... I also think that the teacher should assign extensive writing tasks in addition to midterms and final exams."

Another student suggested that a sole focus on grammar exercises could potentially contribute to the issue. She stated the following:

> "I think one of the solutions is not to make us just solve grammar exercises because we forget how to apply grammar rules when writing essays... so focusing on grammar within general writing tasks could be beneficial..." (P6).

These interviews yielded contrasting findings compared to Abdelmohsen's (2022) questionnaire, which indicated that students believed brainstorming in Arabic did not affect their L2 writing skills. Employing semi-structured interviews where participants can comfortably discuss their habits, this study suggests that students acknowledge the negative impact of L1 on their L2 writing and grammatical awareness. Furthermore, unlike Alasfour's (2018) study, which indicated that students' attitudes towards transfer were shaped by instructors' advice to avoid thinking in Arabic while writing, this research reveals a lack of explicit instructions on the distinctions between Arabic and English, particularly in grammar. The absence of CL instructions in participants' language learning likely contributed to the frequency of L1 transfer errors, highlighting its importance in the EFL teaching context. Nevertheless, it is crucial to acknowledge that this viewpoint may be subject to debate and varying perspectives.

5. Conclusion and Recommendations

5.1 Conclusion

The influence of Arabic on the acquisition of subsequent languages is undeniable. This study highlights the frequent occurrence of the negative transfer from the MT, especially in L2 writing. However, native language transfer can also have a positive impact, leaving a unique imprint on other languages and positively affecting various linguistic aspects. Thinking in Arabic can be seen as a powerful tool for manipulation and fostering creativity in other languages. Nevertheless, recent observations have revealed difficulties in L2 writing and grammar that hinder reader comprehension. It was hypothesised that this issue may stem from students' mental processes and their tendency to think in Arabic, given the significant structural differences between the two languages. Ergo, the idea to embark on this study is based on the desire to unearth how L1 interference affects students' academic writing.

To conclude, triangulation methods, including EA, CA, and interviews, provide meaningful insights into learners' error patterns and their causes. This research reveals that interlingual grammatical errors are more frequent than intralingual errors. Interviews also highlight a significant finding: the learners' mother tongue continues to play a crucial role in these errors. This research underscores the importance of Arabic in learning other languages, emphasising that immersion in the TL helps overcome language barriers and facilitates L2 learning while also positively leveraging the learners' L1. These findings emphasise the need for targeted instructional approaches and the importance of conducting additional research to gain a comprehensive understanding of this phenomenon and effectively address it.

5.2 Pedagogical Implications and Recommendations

The research findings highlight several implications and recommendations for EFL teachers, students' needs, and policymakers. For teachers, adopting a "holding space" approach is recommended, cultivating a supportive environment that encourages risk-taking and learning from mistakes, effectively addressing L1 grammatical errors. Fostering students' confidence and investing in their writing skills through constructive, personalised feedback and addressing high-frequency errors can enhance students' grammatical and cross-linguistic awareness. It is crucial to acknowledge that each student may face unique challenges stemming from their L1 grammatical background, and the feedback provided serves to not only enhance students' grammatical awareness but also deepen their understanding of L1 grammatical errors. Furthermore, educators should employ effective techniques that help learners recognise and apply diverse grammatical structures. This can be achieved through a concentration on both discourse-based grammar and individual sentences in academic writing. In addition, engaging in discussions and activities that highlight differences and promote accurate usage of the target language is essential. It is crucial to recognise the importance of addressing students' grammatical errors and diagnosing them in order to foster fruitful and robust academic writing. While some educators may prioritise creative ideas over grammar, maintaining a balance is key; teachers should acknowledge the significance of grammar and avoid dismissing grammatical errors as insignificant to promote robust academic writing.

For students, developing effective daily English learning habits, such as using English-English dictionaries and engaging with authentic materials, can help them to think in English and improve their writing. Furthermore, while having non-Arabic-speaking teachers can benefit advanced students, it is advantageous for beginners to have instructors fluent in both Arabic and English, as noted in P2's

observation.

Policymakers should support educator conferences and collaboration between school and higher education systems, enabling English teachers to keep abreast of the latest teaching techniques and share best practices for honing students' writing. Additionally, efforts at Saudi and various EFL universities can raise teachers' cognisance regarding interlanguage errors and equip them with effective strategies that emphasise the learning of linguistic structures based on the TL system. The research findings strongly advocate the integration of contrastive analysis sections in writing and grammar courses to enhance language curricula, help to recognise and rectify L1-influenced errors in L2 writing, and familiarise them with potential L1-L2 differences in language acquisition.

5.3 Limitations and Future Research Directions

Despite yielding insightful results, this study is subject to several limitations, primarily the restricted timeframe allocated for conducting the research. The collection of sample writings solely from thirty-two advanced learners and six interviewees limits the generalisability of the findings to all advanced or EFL learners. Therefore, more longitudinal studies with larger samples and more participants are necessary. Another limitation is gender bias, as all the essays were produced by female students. While no significant distinctions are anticipated between female and male learners (Almahammed, 2016), future research would benefit from gender-balanced samples to ensure a wholesome picture of this phenomenon. Finally, the study's inadequate consideration of infrequent L1 grammatical errors arising due to students' limited use of certain complex structures highlights the need for additional data collection techniques to obtain further understanding of interlingual grammatical occurrences.

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Appendix

Interview Questions

1) How often do you write in English? Do you write only in the classroom, or do you have other opportunities to practise writing?

- What is the most challenging aspect of English writing?

2) Could you describe the process you follow when writing an English essay?

- Have you ever found yourself thinking in Arabic when writing in English?

3) Which grammatical rule do you find the most challenging when writing an essay?

- Have you ever compared a grammar rule with Arabic grammar? Is it quite useful?

4) Have you ever received instructions or studied the difference between Arabic and English?

- What have you been told regarding the grammatical structure comparison?

5) Do you believe that there are external factors that may contribute to these grammatical errors?

- From your point of view, what are the causes that make learners commit grammatical errors, particularly those resulting from L1 transfer?

6) Do you believe there are ways to decrease grammatical errors, specifically those stemming from L1 transfer?

- In your opinion, what do you think are the possible solutions to this issue?